



INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

NASA'S PSYCHE SPACECRAFT

NASA's Psyche spacecraft, en route to a metal-rich asteroid, is pioneering Deep Space Optical Communications (DSOC) using near-infrared laser signals for high-bandwidth communication.

20 NOV - 25 NOV 2023

WEEKLY CURRENT AFFAIRS

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GENERAL STUDIES – 1

Topics: Salient features of Indian Society, Diversity of India.

1. IMPACT OF VIOLENCE ON A CHILD’S RIGHTS

Context:

The provided text discusses the impact of violence on a child’s mind, particularly in the context of the Israeli-Palestinian conflict.

Recent examples of conflict affecting children:

- Current Gaza Crisis:** Children form the majority of people killed during the conflict
- Syrian Civil War:** The conflict in Syria has resulted in a humanitarian crisis, with millions of children affected by displacement, violence, and a lack of access to education and healthcare.
- Yemen Conflict:** The conflict in Yemen has impacted children through malnutrition, lack of medical care, and exposure to violence.
- Rohingya Crisis:** The persecution and displacement of the Rohingya population from Myanmar to Bangladesh have left many children in overcrowded refugee camps, facing inadequate living conditions and limited access to education.
- COVID-19 Pandemic:** Lockdowns, school closures, and economic challenges have disproportionately impacted vulnerable children.
- Natural Disasters** (e.g., Hurricanes, Earthquakes, Tsunamis): Events like hurricanes in the Caribbean, earthquakes in Nepal, and tsunamis in Southeast Asia have resulted in displacement, trauma, and disrupted access to basic necessities for children.
- Armed Conflict in Afghanistan:** Decades of conflict in Afghanistan have led to the displacement of families, disrupted education, and exposure of children to violence.
- Various Civil Wars in Africa:** E.g., The civil war in South Sudan has led to displacement, food insecurity, and disrupted access to education and healthcare for children.

Impact of conflict on children:

Aspect	Description
Cycle of Revenge	Children experiencing conflict <u>may harbour resentments and seek retribution.</u>
Resistance to Social Norms	Adolescents exposed to violence <u>may exhibit rebellious behaviour</u> against societal expectations.

Psychological Trauma	Survivors of conflict zones may develop anxiety, depression, and <u>post-traumatic stress disorder (PTSD).</u>
Impact on Education	Children in war zones may <u>face disruptions in schooling</u> , impacting academic performance and future prospects.
Long-term Consequences	Adults who experience <u>violence in childhood</u> may perpetuate violence or struggle with mental health challenges.
Recruitment and Use	Armed groups <u>exploit children by coercing</u> them into combat or support roles, compromising their well-being.
Sexual Violence and Exploitation	Conflict increases the <u>risk of sexual violence</u> , subjecting children to rape, trafficking, and other forms of exploitation. <u>Boys</u> continued to be more affected by recruitment and use, killing and maiming, and abduction, while <u>girls were disproportionately affected by conflict-related sexual violence.</u>

India’s Success in Protecting Children’s Rights:

For the first time since 2010, India has been removed from the 2023 United Nations Report on Children and Armed Conflict. This decision reflects the measures taken by the Indian government to safeguard children, particularly addressing previous accusations of recruiting and using boys in armed groups in Jammu and Kashmir (J&K).

Initiatives to Protect Children’s Rights

Initiatives	Details
Infrastructure Establishment	Establishment of Child Welfare Committees, Juvenile Justice Boards, and Child Care Homes under the Juvenile Justice Act, 2015 in J&K.
U N - R e c o m - m e n d e d M e a s u r e s	Implementation of UN-recommended measures, including <u>training programs for security forces on protecting children.</u> Suspension of pellet guns use in J&K
Enforcement of Acts	Active enforcement of the <u>Juvenile Justice Act, 2015</u> , and the <u>Protection of Children from Sexual Offences (POCSO) Act, 2012.</u>
Global Conventions Compliance	Compliance with global conventions such as the <u>UN Convention on the Rights of the Child (CRC)</u> , additional protocols to the <u>Geneva Conventions</u> , and the Optional Protocol on the involvement of children in armed conflict.

Rome Statute of the International Criminal Court (ICC)	Recognition of recruiting child soldiers as a war crime under the Rome Statute of the International Criminal Court (ICC).
	Recognition of the recruitment and use of child soldiers as one of six “grave violations” by the United Nations.
Indian Legal Framework	India’s status as a party to the CRC and accession to the Optional Protocol. Inclusion of most CRC rights in the Indian Constitution. IPC criminalizes the recruitment or use of persons under 18 in hostilities.

About UNCRC:
 The **United Nations Convention on the Rights of the Child (UNCRC)** is a globally recognized international agreement adopted in 1989 and enforced in 1990, with 54 articles outlining children’s rights and governmental responsibilities. Ratified by all UN members **except the United States**, it ensures children’s fundamental rights, including the **Right to life, education, protection from abuse, the right to be heard, and a relationship with parents.**

The **core principles** include **non-discrimination, the right to life, survival, and development**, the best interests of the child, and respect for the child’s views

Way Forward:
Trauma-Informed Responses: Countries should emphasize **understanding the impact of past experiences** on children in justice and protection systems. They should also encourage a comprehensive approach to **address trauma in children in conflict with the law**, using civil society organizations and Child groups.

Kailash Satyarthi, a Nobel Peace Prize winner known for his work in safeguarding children’s rights, condemns the harm inflicted on children in the conflict (the **present Israel-Palestine conflict** has profoundly affected both **Israeli and Palestinian children**)

WHO’s INSPIRE strategy against violence on children involves seven key strategies:

Strategy	Description
Implementation and enforcement of laws	Involves enacting and enforcing laws, such as banning violent discipline and restricting access to alcohol and firearms.
Norms and values change	Aims to change societal norms and values, particularly those that condone behaviours like the sexual abuse of girls or aggressive behaviour among boys.

Safe environments	Identifies and addresses specific local causes of violence, often employing strategies like problem-oriented policing.
Parental and caregiver support	Provides training to young, first-time parents to enhance their ability to care for and nurture children effectively.
Income and economic strengthening	Includes initiatives like microfinance and gender equity training to improve economic stability, addressing underlying factors contributing to violence.
Response services provision	Ensures that children exposed to violence have access to effective emergency care and receive appropriate psychosocial support.
Education and life skills	Focuses on promoting school attendance and providing life and social skills training for children, contributing to their overall well-being and resilience.

Conclusion:
 Montessori, in **“The Secret of Childhood” (1936)**, emphasized the importance of peaceful childhood circumstances, asserting that major individual and social issues originate from early years and therefore need concerted efforts to shield children from the effects of conflicts.

Insta Links:
[Children impacted by armed conflict](#)

GENERAL STUDIES – 2

Topics: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

1. HC VERDICT: LOCAL RESERVATION IN THE PRIVATE SECTOR

Context:

The Punjab and Haryana High Court invalidated a 2020 Haryana government law that reserved 75% of private-sector jobs for state residents.

What is a Local Reservation?

Local reservation typically refers to a policy or law that reserves a certain percentage of jobs, opportunities, or benefits for individuals who are local residents of a specific region or state.

What did Haryana State Employment of Local Candidates Act, 2020 say?

The law mandates that companies with 10 or more employees reserve 75% of jobs paying less than Rs. 30,000 per month for candidates from the state. Employers must register eligible employees on the Labor Department’s portal.

Similar domicile job reservation laws exist in other states like Andhra Pradesh, Madhya Pradesh, and Jharkhand

Why did the court invalidate the law?

- **Violation of Article 16:** The law violated constitutional rights by reserving 75% of private-sector jobs for Haryana residents, stating that a government cannot discriminate based on residence.
 - The Haryana government claimed authority under Article 16(4) (exceptions to Article 16) but was deemed unconstitutional by the court.
- **Violation of Article 19:** The court also criticized the law for imposing excessive control on private employers, creating an “Inspector Raj,” and impairing individuals’ rights under Article 19(1)(g) of the Constitution.
 - Private jobs are skill-based and analytical, and citizens have the fundamental right to work anywhere in India

What does the Constitution Say?

The Constitution of India guarantees freedom of movement and consequently employment within India through several provisions.

- **Article 14** provides for equality before the law irre-

spective of place of birth.

- **Article 15** guards against discrimination based on place of birth.
- **Article 16** guarantees no birthplace-based discrimination in public employment.
- **Article 19** ensures that citizens can move freely throughout the territory of India

Benefits of local reservation in the Private Sector:

Pros	Explanation
Exceptions in constitution	The reservation <u>based on domicile aligns with Article 16 of the Indian Constitution</u> . It provides opportunities to locals, who bear negative externalities from job creation.
Equality within society	Reservation in local jobs <u>promotes equality within society</u> , focusing on low-strata jobs, in line with the <u>Equal Protection of Law</u> spirit outlined in Article 14 of the Indian Constitution. Such policies <u>promote substantial equality</u> , especially as public sector job opportunities are limited.
Suitable Solution for Unemployment	In the face of unemployment and slow job creation, local job reservation is seen as a suitable solution to address these challenges.
Special Constitutional Provisions	E.g., <u>Andhra Pradesh and Telangana under Article 371 D</u> and E. Local job reservation aligns with these constitutional provisions.
Boost Local Economy	Local job reservation policies aim <u>to empower local youth, discourage migration</u> , and <u>address agrarian crises</u> and local unrest by reducing unemployment.
Cost Savings for Companies	Hiring local <u>employees reduces relocation costs for companies</u> , potentially lowering operational expenses. These cost savings may be passed on to customers through reduced prices.
Improved Productivity	Local employees are likely <u>more familiar with the local language, culture, and business environment</u> , enhancing their productivity and efficiency in the workplace.
Global Practice	These policies are in line with global practices where countries like the US, (<u>The US Civil Rights Act of 1964</u>) and Canada (<u>The Employment Equity Act</u>), provide reservations in private jobs.

Issues with the local Reservation in Private sector:

Cons	Explanation
Can Trigger Exodus of Investors	Local job reservations may lead to an exodus of domestic and multinational investors , especially in sectors like auto and IT that rely on highly skilled manpower. E.g., Haryana witnessed a 30% drop in investment in 2022 due to the local reservation law, impacting its ranking among states in terms of new investment projects.
Affect Existing Industries	The focus on the “son of the soil” and restrictions on the free movement of manpower can adversely affect existing industries in the state.
Extreme Talent Crunch	Imposing reservations on gig and platform companies may result in a severe talent crunch, affecting the availability of skilled individuals.
Legal Issues	It is beyond the power of states to create domicile as a condition for employment as the constitution provides this provision for public employment and only parliament is empowered to make such laws under Article 16(3) . 75% reservation also goes beyond the reservation ceiling of 50% . Public Employment (Requirement as to Residence) Act, 1957 abolished Residence as a criteria for a job . Few exceptions were made for Andhra Pradesh, Manipur, Tripura, and Himachal Pradesh
Promotes Regionalism	Local job reservation policies pose threats to unity in diversity , potentially creating local vs. non-local divisions .
Undermines Merit system	They undermine the merit system , affect economic efficiency, and may lead to a shortage of qualified workers, impacting economic development.
Promotes Vote Bank Politics among states	

Judicial Pronouncements:

Legal Cases	Key Points
Dr Pradeep Jain v Union of India, 1984	Legislation for “sons of the soil” deemed unconstitutional
Sunanda Reddy v State of Andhra Pradesh, 1995	Supreme Court affirmed the unconstitutionality of a state policy giving 5% extra weightage based on the medium of instruction.

2002 Rajasthan Case	Supreme Court invalidated the appointment of government teachers in Rajasthan, which favoured applicants from specific districts or rural areas .
2019 UP-Subordinate Service Selection Commission Case	Allahabad High Court struck down a UP recruitment notification that preferred women who are “original residents” of Uttar Pradesh alone .

Conclusion:

What is more important for states is to focus on skill training (capacity building of Youths), economic recovery and education to provide ample job opportunities, fostering competition in the free market. While local reservations **may offer short-term gains**, they could **hinder long-term economic development and national unity**.

Insta Links:

[Haryana private sector quota law](#)

Prelims Links:

Q. Consider the following statement: (UPSC 2023)

Statement-I: The Supreme Court of India has held in some judgements that the reservation policies made under Article 16(4) of the Constitution of India would be limited by Article 335 for maintenance of efficiency of administration.

Statement-II: Article 335 of the Constitution of India defines the term ‘efficiency of administration’.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
- (b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
- (c) Statement-I is correct but Statement-II is incorrect
- (d) Statement-I is incorrect but Statement-II is correct

Topics: [Important aspects of governance, transparency and accountability, e-governance applications, models, successes, limitations, and potential; citizens charters, transparency & accountability, and institutional and other measures.](#)

2. ROAD ACCIDENT IN INDIA

Context:

India faces a **significant road safety challenge** with an estimated 300,000 road-related deaths annually, contributing to **economic costs between 5% and 7%** of the national GDP.

Status

- In 2022, India reported **4,61,312 road accidents**, causing **1,68,491 deaths** and injuring 4,43,366 individuals—about **12% increase** in accidents compared to 2021 (As per the report on Road Accidents in India-2022 published by the Ministry of Road Transport and Highways)
- A maximum number of cases were **reported in Tamil Nadu**.
- **Reasons: Speeding** accounted for over half of all deaths, while **dangerous and careless driving** caused over 42000 deaths.
- According to WHO estimates, **approximately 3,00,000 people die on Indian roads** each year
- India has the **highest number of total persons killed** due to road accidents, followed by China and the United States.

Primary Reasons Behind Road Accidents in India:

Reasons	Description
Over speeding	According to the Road Accidents in India-2022 report, over-speeding accounted for over 72% of all accidents and two-thirds of deaths and injuries in India.
Drunk Driving	Drunk driving accounted for about 2% of road accidents in India in 2022.
Distracted Driving	Using mobile phones, eating, or engaging in activities while driving diverts attention.
Road Design	Potholes, poorly marked lanes, inadequate road signs , insufficient lighting, and lack of pedestrian facilities contribute to accidents.
Weather Conditions	Dense fog, excessive rainfall, and strong winds make driving challenging.
Mechanical Failures	Vehicle breakdowns or malfunctions compromise safety. Faulty brakes, tires, and other components contribute to accidents.
Non-Compliance with Traffic Rules	Lack of adherence to traffic rules significantly contributes to road accidents.
Non-Use of Seat Belts and Helmets	Nearly 83% of car occupants killed in accidents in 2021 were not wearing seat-belts.
Overloading of Vehicles	In 2020, overloaded trucks caused 10,000 deaths and 25,000 injuries on National Highways in India.
Low Awareness	According to a SaveLIFE study, over 37% believed wearing seat belts is not mandatory for rear-seat passengers, and only 27.7% were aware of the law.

Sundar Committee Recommendations on Road Safety:

1. **Creation of the National Road Safety & Traffic Management Board**, an apex body at the national level, with members from various fields, to promote road safety and traffic management.
2. Establishment of **State Road Safety & Traffic Management Boards** in each state and union territory with similar functions.
3. Development of a **National Road Safety Plan** with specific targets and action plans.
4. Improvement of **post-accident care, trauma management**, and establishment of a national road accident database.
5. Earmarking 1% of total proceeds of diesel and petrol cess for the **Road Safety Fund**.
6. Addressing issues like **decriminalization of road accidents, insurance**, and dedicated highway police.
7. Approval of the **National Road Safety Policy in 2010** based on these recommendations.

Global Initiatives:

- **Brasilia Declaration on Road Safety (2015)**: Signed at the second Global High-Level Conference on Road Safety, it aims to achieve **Sustainable Development Goal 3.6**, halving global deaths and injuries from road traffic accidents by 2030.
- **Decade of Action for Road Safety 2021-2030**: A UN initiative adopting a resolution to prevent at least 50% of road traffic deaths and injuries by 2030, aligned with the holistic approach outlined in the Stockholm Declaration.
- **International Road Assessment Programme (iRAP)**: A charity dedicated to saving lives through safer roads.

International Best Practices:

Netherlands' Sustainable Safety vision: It focuses on **preventing crashes and reducing crash** severity by creating a safe road system. **It is based on five principles**: functionality, homogeneity, predictability, forgivingness, and state awareness.

Japan: Japan has achieved a remarkable reduction in road traffic deaths, from 16,765 in 1990 to 3,215 in 2019. It has implemented various measures, such as **strict enforcement of traffic laws, improvement of road infrastructure**, promotion of seat belt and helmet use, road safety education and introduction of advanced safety technologies in vehicles.

India-Specific Initiatives:

1. **Motor Vehicles Amendment Act, 2019**: Increases penalties for traffic violations, addresses defective vehicles, and juvenile driving, and establishes a Motor Vehicle Accident Fund. It also proposes the creation of a National Road Safety Board.
2. **Carriage by Road Act, 2007**: Regulates common carriers, limiting their liability and determining liability for loss or damage to goods.

3. **Control of National Highways (Land and Traffic) Act, 2000:** Provides control over land within National Highways, right of way, and traffic movement. Addresses removal of unauthorized occupation.
4. **National Highways Authority of India Act, 1998:** Establishes an authority for the development, maintenance, and management of National Highways.
5. **Private sector initiatives** like Maruti Suzuki's **Drive Safe India campaign** and Mahindra & Mahindra's **Drive Safe, Drive Smart campaign**.

Other Measures to address Road accidents:

Measures	Details
Enforcement of Seatbelt and Helmet Use	A WHO report states that wearing a seatbelt reduces the risk of death by 45-50% , and for rear seat occupants by 25%.
Awareness Campaigns	E.g., the UN's #MakeASafetyStatement, to educate the public on road safety.
Speed Limit	Implement measures to reduce speeding, enhance traffic management systems , and enforce strict penalties for drunk driving .
Infrastructure Improvement	Enhance road infrastructure to ensure safe conditions , addressing issues contributing to accidents. Invest in ongoing government programs for rapid improvements.
Focus on Vulnerable Road Users	Prioritize the safety of vulnerable road users (pedestrians, cyclists, two-wheeler riders) through tailored infrastructure and awareness programs.
Emergency Care Services	Improve access to high-quality emergency care services and after-care for road crash victims.

India's road network status:

- **Road density:** 1,926 per 1,000 sq km in 2018-19, higher than many developed countries.
- **Surfaced/paved roads:** over 64% of the total road length, comparatively lower than in developed countries.
- **National Highways:** About 2% of total road length in 2019.
- **Other networks:** State Highways (about 3%), District Roads (about 10%), Rural Roads (about 7%)

Insta Links

[Editorial: Road Accidents](#)

Mains Links

Q. Road traffic accidents are a leading cause of death in India, and a major contributor to socio-economic losses, disability burden, and hospitalization. Discuss (15M)

[Topics: India and its neighbourhood- relations.](#)

3. 30 YEARS OF INDIA-CHINA BORDER PEACE AND TRANQUILITY AGREEMENT (BPTA)

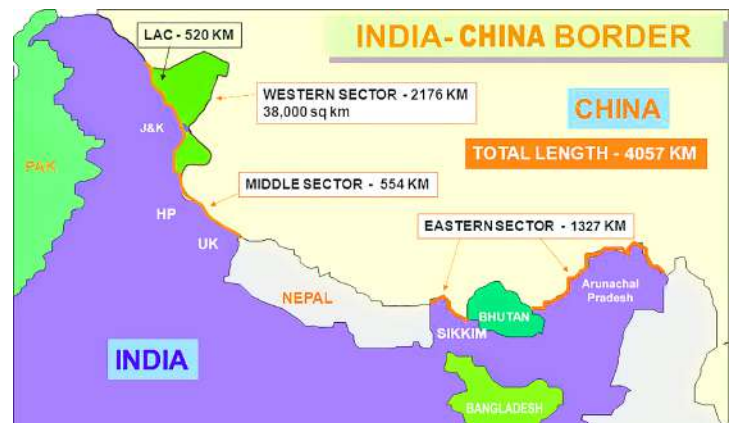
Context:

The [India-China](#) Border Peace and Tranquility Agreement (BPTA), signed in 1993, marked its **30th anniversary recently**, but its contested legacy reflects the fraying mechanisms built to maintain peace on the Line of Actual Control (LAC)

India-China Border:

The LAC separates Indian-controlled territory from Chinese-controlled territory. **It is divided into three sectors:**

1. Eastern Sector (Arunachal Pradesh and Sikkim)
2. Middle Sector (Uttarakhand and Himachal Pradesh)
3. Western Sector (Ladakh)



In the Eastern Sector

The alignment of the LAC is along the [McMahon Line](#), named after Sir Henry McMahon, foreign secretary of British India. He drew the **890-km line** as the border between British India and Tibet (a part of the 1914 Shimla Convention Between Great Britain, China, and Tibet).

China claims around 90,000 sq km of Arunachal Pradesh — the entire state — as its territory. It calls the area "**Zangnan**" in the Chinese language and makes repeated references to it as "South Tibet".

What is the origin of the border dispute with China?

After the communists took over in China (1949), they withdrew from all international agreements citing them to be "**unequal treaties**" imposed on it during its "**century of humiliation**" (when China was under colonial regulations) and demanded a **re-negotiation of all its borders**. China now doesn't comply with LAC and other border settlements done before 1949.

The India-China conflict is characterized by **cycles of conflict and cooperation over 75 years**, with recent serious episodes in **Galwan Valley (2020) and Tawang (2022)**.

Historical partnerships and a growing power gap contribute to strategic challenges, while infrastructure build-up, especially in Tibet, has intensified the security dilemma.

[For: Bhutan and China boundary talks: Click Here](#)

What is the India-China Border Peace and Tranquility Agreement (BPTA)?

It was signed in 1993 to **maintain peace on the Line of Actual Control (LAC)**. It committed both sides to respecting the status quo, reducing the risk of unplanned confrontations, and minimizing military forces along the LAC.

Other Agreements:

- **The Agreement on Confidence Building Measures in the Military Field** along the LAC:
 - It was signed in 1996, and laid down pledges on non-aggression, prior notification of large troop movements, and exchange of maps to resolve disagreements over the LAC.
- **The Border Defence Co-operation Agreement:** It was signed in 2013 following the Depsang Valley incident.

Reasons for Breakdown in Border Agreements:

Reasons
1. Lack of Clear Demarcation: Absence of a mutually agreed Line of Actual Control (LAC) along certain stretches of the border.
2. Increased Military Confrontations: Rise in serious military conflicts since 2013, including notable incidents in Galwan Valley (2020) and Tawang (2022).
3. Three-Sector Division: The India-China border is divided into Western (Ladakh), Middle (Himachal Pradesh and Uttarakhand), and Eastern (Arunachal Pradesh and Sikkim) sectors, each with its own challenges.
4. Historical Partnerships: Both nations' partnerships with each other's main enemies, limit strategic cooperation and hinder the development of a strategic partnership.
5. Power Gap: Growing power disparity, with China's GDP five times that of India's, makes accommodation challenging for India without seeming to surrender.
6. Infrastructure Build-Up: Intensified military infrastructure development, particularly in Tibet, leading to a security dilemma and potential escalation toward war.

Way forward for India:

Action	Description

Diplomatic Engagement	Maintain open channels of communication to prevent misunderstandings and de-escalate tensions.
Reassess Defence Plans	Evaluate defence acquisition plans for long-term sustainability and capability enhancement.
Prepare for Potential Conflict	Enhance military capabilities, especially in the Air Force, Army, and Navy, in anticipation of potential conflict.
Allocate Adequate Funds	Consider allocating 3% of GDP for defence , as recommended by the Parliamentary Standing Committee on Defence.
Emphasize Negotiations	Adopt a negotiating strategy that highlights India's strength and readiness to defend its interests.
Border Infrastructure Development	Develop border infrastructure, such as roads and bridges, to improve accessibility and reduce conflicts.

Conclusion:

Diplomatic dialogue, mutual trust-building, and transparent border negotiations are essential for resolving India-China conflicts. Establishing a clear and mutually agreed Line of Actual Control (LAC) and promoting cooperative measures can pave the way for lasting peace.

Insta Links:

[India China Relations](#)

Mains Link:

Q. 'China is using its economic relations and positive trade surplus as tools to develop potential military power status in Asia'. In light of this statement, discuss its impact on India as her neighbour. (UPSC – 2017)

Topics: [Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.](#)

4. INDIA AND JAPAN CONVERGE IN SOUTHEAST ASIA

Context: The Philippines is turning to Japan and India for development and security cooperation, **shifting focus from Chinese-led projects.**

Issues between the Philippines and China:

The Philippines and China have **ongoing disputes over the South China Sea**. Tensions have escalated due to **territorial claims and China's expansive maritime activities**, including the presence of Chinese vessels in Philippine waters. The Philippines has raised concerns about the **infringement of**

its sovereign rights and called for adherence to international law, particularly the [United Nations Convention on the Law of the Sea \(UNCLOS\)](#). Philippines successfully won **2016 Arbitral Award** on the South China Sea against China.

India-Philippines Relationship:

Aspect	Details
About	India and the Philippines are two democratic countries in the Indo-Pacific region that share a common approach towards the Indo-Pacific, emphasizing the importance of a free, open, and stable region .
Political Relations	Diplomatic relations were established on 26 November 1949, shortly after both countries gained independence (Philippines in 1946 and India in 1947)
	Intensification of relations with the Philippines resulted from India's Look East Policy (1992) and further diversified with the Act East Policy (2014) .
Economic Relations	India is currently the Philippines' fifteenth-largest trading partner . Bilateral trade worth approximately USD 3 billion in 2022. The Philippines is a net importer of goods trade with India.
Defence Cooperation	BrahMos missile deal ; opening of a resident Defense Attache office in Manila, consideration of India's offer for a concessional Line of Credit to meet the Philippines' defense requirements; cooperation on maritime domain awareness (MDA) , joint patrols, and information exchange

Japan and India's engagement in Southeast Asia:

- Free and Open Indo-Pacific (FOIP):** It is aimed at curbing China's growing assertiveness in the Indo-Pacific region. Japan's concept of FOIP is complementary to India's concept of the [Indo-Pacific Oceans Initiative \(IPOI\)](#)
- Partnership with ASEAN:** To enhance economic, political, and cultural ties with the member nations.
- Infrastructure Development:** Japan, through initiatives like the **Partnership for Quality Infrastructure**, has been involved in infrastructure development projects in Southeast Asia, including the construction of ports, roads, and energy facilities.
 - India has also expressed interest in infrastructure projects in the region.
- Connectivity Projects: Japan and India's** vision for a **free and open Indo-Pacific** includes promoting connectivity. India has been actively involved in enhancing connectivity through projects **like the Trilateral Highway** that connects India, Myanmar, and Thailand.
- Economic Assistance:** Both countries provide economic assistance and development aid to South-east Asian nations to support **their socio-economic growth**. This includes financial support, capacity building, and technology transfer.

- Security Cooperation:** Japan and India have engaged in security dialogues and joint military exercises with Southeast Asian countries to address common security challenges, including maritime security and counter-terrorism.
- Human Resource Development:** India and Japan have collaborated in human resource development programs, including scholarships and training opportunities, to enhance skills and knowledge in various sectors.
- Regional Forums:** Both countries actively participate in regional forums and organizations such as the **East Asia Summit (EAS)** and **ASEAN Regional Forum (ARF)** to address regional challenges and promote dialogue.

India-Japan Relations:

India-Japan	Examples	
Shared Values	Democracy, Freedom, and Rule of Law	
Defence and Security Cooperation	India and Japan Vision 2025: Work together for peace and prosperity in the Indo-Pacific region and the world	
	Relationship elevated to Special Strategic and Global Partnership (2014)	
	"2+2" Dialogue	
	Inclusive and Rule-based International order in Indo-Pacific	
	FOIP (Free and Open Indo-Pacific).	
	Acquisition and Cross-Servicing Agreement with India	
Strengthening India's Act East Policy	Military exercises: Dharma Guardian (army), Veer Guardian (Air Force), MILAN, JIMEX (Navy), and Malabar	
	Japan supports strategic connectivity linking South Asia to Southeast Asia through synergy between the "Act East" policy and "Partnership for Quality Infrastructure."	
	Economic Cooperation	Japanese help during India's Balance of Payments (BOP) crisis in 1991
	Bilateral trade over US \$20 billion (2022)	
	Japan was the 4th largest investor in India in FY2020.	
Culture	Industries Competitiveness Partnership	
	Comprehensive and Economic Partnership Agreement (CEPA) since 2011	
	Buddhism	

Healthcare	Narrative of AHWIN (Japan's) for AYUSHMAN Bharat.
Investment and ODA	India has been the largest recipient of Japanese Official Development Assistance (ODA) Loan for decades (e.g., Delhi Metro, Western Dedicated Freight Corridor, High-Speed Railways).
Global Partnership	Both are members of G4, Asia-Africa Growth Corridor, Supply chain resilience initiatives, and QUAD.
Space	LUPEX Mission (India's lunar lander and Japanese rover will explore the moon).
Nuclear Cooperation	India-Japan Nuclear Deal 2016 will help India build six nuclear reactors in southern India.
Digital Infrastructure Cooperation	Cooperation in promoting joint projects for digital transformation (5G, Open RAN, Telecom Network Security, submarine cable systems, Quantum Communications).
Challenges	Climate change and WTO talks (Japan siding with developed countries). Japan's frosty relations with Russia (Kuril Island dispute).
Conclusion	Relations between two powers can greatly support stability in the world. Japan can help in India's rise, e.g., India's quest to become a global semiconductor Chip Manufacturing hub .

Insta Links

[70 YEARS OF INDIA-JAPAN TIES](#)

Mains Links

Q. The India-Japan relationship is facing challenges due to the changing global geopolitical scenario. Analyse the challenges and suggest measures to address them. (250 Words)

Prelims Links

Consider the following countries: (UPSC 2018)

1. Australia
2. Canada
3. China
4. India
5. Japan
6. USA

Which of the above are among the 'free-trade partners' of ASEAN?

- (a) 1, 2, 4 and 5
- (b) 3, 4, 5 and 6
- (c) 1, 3, 4 and 5
- (d) 2, 3, 4 and 6

Ans: C

5. INDIA-APEC RELATIONS: WHY INDIA MUST ENGAGE WITH APEC

Context:

The 2023 Asia Pacific Economic Cooperation (APEC) summit, held in San Francisco, marked a significant diplomatic development as the U.S. and China resumed communications after nearly a year.

Major outcomes of the APEC 2023 summit:

- Theme: **“Creating a Resilient and Sustainable Future for All”**
- Emphasizing commitment to **free, fair, and open trade**, as well as **inclusive and sustainable growth**
- **Adoption of the Golden Gate Declaration:** For building resilience and sustainability across member economies.
- **The Golden Gate Statement from APEC** outlined goals such as a well-functioning WTO dispute settlement system by 2024 and the pursuit of a Free Trade Area of the Asia-Pacific
- **Endorsement of APEC Action Agenda** on Climate Change and Energy Security, outlining **specific actions and targets** to address the climate crisis and ensuring energy security through enhanced cooperation and coordination.
- The U.S. emphasized its **strategy of de-risking and diversifying from China** rather than complete decoupling.
- Taiwan seeking admission to the **Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)**

About APEC:



2023 APEC Summit



Aspect	About APEC
Backgrounds	Started in 1989 (informal) , (HQ: Singapore) formally established in 1993 with 12 members . Currently has 21 member economies. India, an observer since November 2011, has applied for membership .
Member Countries	Founding members: Australia, Brunei, Canada, Indonesia, Japan, Korea, Malaysia, New Zealand, the Philippines, Singapore, Thailand, United States. Joined later: China, Hong Kong, Chinese Taipei, Mexico, Papua New Guinea, Chile, Peru, Russia, Vietnam.
Goals	Primary goal: Support sustainable economic growth and prosperity.
Objectives	Objectives include free and open trade, regional economic integration , economic and technical cooperation, human security, and good business environment. Bogor's Goals were set in 1994 for free and open trade and investment.
Significance	Represents nearly 50% of world trade and about 57% of world GDP .
Functions	APEC projects provide digital skills training, support for indigenous women, and initiatives for energy efficiency. Adapts to new challenges, including disaster resilience, pandemic planning, and counter-terrorism.
Achievements	The region's real GDP increased from USD 19 trillion in 1989 to USD 42 trillion in 2015. Average tariffs were reduced from 17% in 1989 to 5.2% in 2012. Improved Ease of Doing Business by 14.8% (2009-2015).
Consensus	Operates as a cooperative, multilateral economic and trade forum. Decision-making is by consensus , with no binding commitments.
Challenges	Trade War, Shrinking Economy due to Covid, Rising Unemployment, Creation of Sub-Regional Agreements.
India and APEC	India aspired to become a member. But was Denied in 2007 due to reasons like lack of integration into the global system, fears about India's politics and policies.
Why APEC Needs India?	For economic growth, trade potential , labour force, and regional contribution. To know more Visit Insights IAS Daily CA
Advantages for India	Advantages for India include negotiating trade , integrating with the global economy, boosting growth, and economic reforms.
Way Forward	APEC countries should work together for sustainable and equitable growth . The inclusion of India is crucial for free and open trade in the Indo-Pacific region.

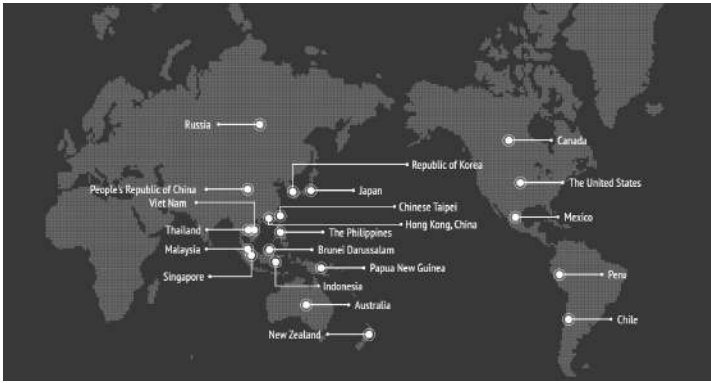


Fig: APEC countries

Engaging with APEC could be crucial for India’s economic goals and beating China:

Aspect	Importance for India
Economic Growth	APEC, representing 60% of global GDP , offers a vast market for India’s goods and services, fostering economic growth.
Trade Opportunities	Access to APEC economies enhances India’s trade prospects , providing opportunities for increased exports and market diversification.
Technology Transfer	Engagement with APEC facilitates technology transfers, crucial for India’s economic advancement and industrial development.
Global Integration	APEC membership integrates India into the global supply chains , making it a more attractive destination for foreign investment.
Strategic Positioning	Participation in APEC strengthens India’s strategic position in the Asia-Pacific region, crucial for geopolitical influence and stability .
Competing with China	APEC provides a platform to compete with China economically , allowing India to assert itself in the regional and global economic landscape.
Innovation and Best Practices	APEC’s focus on innovation and best practices aligns with India’s economic goals, fostering advancements in key sectors and policies.
Regional Stability	APEC engagement contributes to regional stability, reducing tensions and promoting collaborative economic development in the Asia-Pacific.

Challenges in India APEC relations:

- APEC’s moratorium:** India had previously expressed interest in joining APEC but APEC ceased **accepting new members in 1997**, thus preventing India’s entry

- Trade Liberalization Concerns:** Some APEC members perceive India as not fully supportive of trade liberalization and regional integration e.g., India not joining RCEP
- Bilateral Investment Treaties:** Concerns exist over India’s hesitancy in negotiating **ambitious bilateral investment treaties**, hindering smoother economic collaboration within APEC.
- Pace of Domestic Reforms:** India faces criticism regarding the pace of its domestic economic reforms, esp. related to FTAs and taxation policies
- Domestic Resistance:** Protectionist elements within India, spanning business, political, and bureaucratic spheres, create resistance to further opening up to international trade, complicating APEC negotiations.

Despite these challenges, APEC needs India:

Aspect	Importance for APEC
Economic Growth and Market Expansion	India, as the third-largest economy , contributes significantly to APEC’s goal of fostering economic growth and expanding markets.
Diverse Economic Opportunities	India’s inclusion adds diverse economic opportunities , leveraging its unique strengths and resources for the benefit of APEC economies.
Counterbalance to China	India serves as a natural counterbalance to China , promoting a more diversified and resilient economic landscape within APEC.
Global Trade and Investment Hub	India’s status as a global trade and investment hub augments APEC’s role in facilitating international trade and economic cooperation.

Insta Links:

- [Asia-Pacific Economic Cooperation \(APEC\)](#)

Prelims Links:

Q1. India is a member of which among the following? (UPSC 2015)

1. Asia-Pacific Economic Cooperation
2. Association of South-East Asian Nations
3. East Asia Summit

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 3 only
- (c) 1, 2 and 3
- (d) India is a member of none of them

Ans: B

Q2. Consider the following pairs: (UPSC 2009)

Organization	Location of Headquarters
--------------	--------------------------

- | | |
|--------------------------------------------|-----------|
| 1. Asian Development Bank | Tokyo |
| 2. Asia-Pacific Economic Cooperation | Singapore |
| 3. Association of South-east Asian Nations | Bangkok |

Which of the above pairs is/are correctly matched?

- (a) 1 and 2 only
- (b) 2 only
- (c) 2 and 3 only
- (d) 3 only

Ans: B

GENERAL STUDIES – 3

Topics: Conservation related issues, environmental pollution and degradation, environmental impact assessment.

1. OXFAM REPORT: CLIMATE EQUALITY: A PLANET FOR THE 99%

Context:

As per the recently released Oxfam report (**Climate Equality: A Planet for the 99%**), the **richest 1% of the global population emitted** carbon equivalent to the **poorest 66%**, leading to **1.3 million** heat-related deaths.

What is Climate inequality?

Climate inequality refers to the **unequal distribution of the impacts of climate change**, with vulnerable and marginalized communities experiencing disproportionate effects. It encompasses disparities in **exposure to climate-related risks**, access to resources for adaptation, and the contribution to greenhouse gas emissions.

Major findings of the Report:

- **In 2019, the wealthiest 1%** were responsible for 16% of global carbon emissions, equivalent to emissions from the poorest 66% of humanity
- **Since the 1990s, the top 1% emitted twice** the carbon budget of the poorest half
- **By 2030, emissions are projected to be over 22 times** the safe limit for staying below 1.5°C global warming.
- **Annual global emissions by the super-rich 1%** cancel out carbon savings for almost a million onshore wind turbines.
- **A tax of 60% on the incomes of the super-rich 1% of earners** globally would cut the carbon equivalent

of more than the total emissions of the UK and raise over US\$6 trillion to fund renewable energy and a transition away from fossil fuels.

Various impacts of Carbon Inequality:

Impact	Description
Emission Disparities	Since the 1990s, the top 1% has burned through twice as much of the carbon budget as the poorest half of humanity combined.
Heat-Related Deaths	The emissions of the super-rich 1% in 2019 are estimated to cause 1.3 million deaths due to heat. Heat-related deaths are expected to increase dramatically, and inequality shapes the experience of extreme temperatures within and between countries.
Impact on Agricultural Production	The global food system's inequality exacerbates the disparities in food access , as evidenced by soaring food prices that disproportionately affect impoverished populations, especially in the Global South.
Economic Inequalities	Countries least responsible for global warming, mainly in the Global South , suffer the worst consequences of climate change and are the least able to respond or recover. This exacerbates existing global economic disparities .
Climate Apartheid	The impacts of climate change contribute to a form of "climate apartheid," where the wealthy countries and individuals who are most responsible for carbon emissions are insulated from the worst consequences.
Gender Disparities	Climate change disproportionately affects women , particularly those with lower socio-economic status, who tend to have less access to relief and assistance and experience reduced life expectancy following climate-related disasters.
Living Conditions	Wealthier individuals with greater wealth are better insulated from the damaging impacts of climate change. E.g., the slums of Dharavi with no adequate protection against heat have over 6 degree C higher temperature than its neighbouring richer suburbs
Implications for Hunger and Malnutrition	Soaring food prices, exacerbated by extreme weather events, create a future of hunger and malnutrition for people living in or at risk of poverty. The poorest spend a significantly higher proportion of their income on food compared to the richest. This further underscores the link between carbon inequality and disparities in access to essential resources like food.

For Climate Inequality Report 2023: [Click Here](#)

Solutions to address the impact of climate inequality:

Solutions	Description
Vision, Political Will, and Commitment	The success of this Just and equal transformation depends on visionary leadership, political will, and a commitment to prioritizing the well-being of the majority.
Mitigate Extreme Weather Events	Invest in resilient infrastructure in vulnerable areas.
	Implement early warning systems for communities at risk.
	Ensure equitable distribution of resources for disaster response.
Marginalized Groups	Prioritize vulnerable populations in climate policies .
	Ensure inclusivity in decision-making processes.
	Provide targeted support for marginalized communities e.g., PDS, MGNREGA
Food security	Develop climate-resilient agriculture and food systems.
	Implement policies to address economic food inequalities .
	Support local food production and distribution.
Economic equalities	Advocate for fair global trade policies.
	Provide financial support to countries most affected e.g., PM KISAN
	Encourage technology transfer for sustainable development.
Compensation for Climate Debts	Strengthen commitments to climate finance, honouring promises .
	Explore mechanisms for reparations linked to historical harm .
Fast, Just Transition Away from Fossil Fuels	Use taxation on the wealthiest to generate trillions of dollars required for the transition and compensate for loss and damage.
Ending Non-Essential Overconsumption	The report advocates for ending non-essential overconsumption, particularly by the wealthiest individuals in global society. E.g., India's LIFE initiative

Conclusion:

Humanity has the potential to **break free from the climate and inequality trap** through an **equal transformation**. This transformation is achievable through **economic and social policies** that simultaneously address both **inequality and the climate crisis**.

Insta Links:

[Working towards climate justice in a non-ideal world](#)

Mains Links:

Q. 'Climate Change' is a global problem. How will India be affected by climate change? How Himalayan and coastal states of India are affected by climate change? (UPSC 2017)

GENERAL STUDIES – 4

1. INDIAN THEORY OF MATERIALISM

Context:

The [article](#) explores Indian Materialism, highlighting its historical roots and key philosophical tenets.

What is Philosophy ('Darshan' in Sanskrit)?

Philosophy seeks to **explain the universe and guide human actions** with a comprehensive worldview

What is Materialism (Bhautikvad)?

Materialism is a philosophical concept asserting that **the fundamental substance of reality is "matter."** It posits that everything that exists, including **thoughts and consciousness**, can be explained in **terms of physical entities**. In essence, it contends that the origin of all that exists is rooted in **tangible, physical substances** rather than abstract or spiritual elements.

Origin of Materialism?

- **In ancient India**, the **Lokāyata school**, also known as Carvaka, was one of the earliest materialist traditions, asserting that reality is composed solely of physical elements and rejecting metaphysical or supernatural entities.
- **In ancient Greece**, philosophers **like Democritus and Epicurus** embraced materialistic ideas, proposing that the basic constituents of the universe are material particles.

Various Schools of Indian Materialism:

Schools	Key Tenets	Figures
Lokāyata	Rejects the existence of a soul or afterlife. - Emphasizes perception as the only valid source of knowledge . Advocates hedonism and the pursuit of pleasure.	Brhaspati, Ajita Kesakambali, Jābāli

Charvaka	Asserts that only the perceptible world is real. - Denies the validity of inference and metaphysical concepts. - Advocates a naturalistic and pleasure-oriented life philosophy.	Brihaspati (attributed to the founder of Charvaka philosophy)
Bhautikavad	Stresses the material nature of reality (Bhautika). Considers physical elements as the fundamental constituents of the world.	
Jadavada	Focuses on investigating the material or inert (jada) aspect of existence. Emphasizes understanding the root or origin of things.	
Dehatmavada	Identifies the self (atman) with the body (deha). Rejects the duality of self and body , considering them as one entity.	

Earthly Heaven and Hell	Materialists redefined heaven and hell in earthly terms. Heaven is perceived as enjoying life's luxuries , akin to the gods' enjoyment in mythological heavens. Hell is seen as earthly suffering , such as diseases and hunger.
--------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Critics of Materialist theory

It oversimplifies the complexity of human experience by reducing everything to material phenomena. They contend that it **neglects the spiritual or transcendent aspects** of life, undermines **moral and ethical considerations**, and may lead to a hedonistic worldview. Additionally, opponents argue that materialism struggles to account for **consciousness, subjective experiences**, and aspects of reality beyond the physical realm.

Despite criticism, Materialism is important in present times: The materialist theory **remains relevant in present times** for its emphasis on **empirical evidence, rationality**, and a focus on improving the human condition without reliance on supernatural explanations. It provides a framework **for understanding the world**, promoting ethical conduct, and valuing the present life, aligning with modern principles of science, secularism, and humanism.

Insta Links:
[Lokayata / Charvaka](#)

Various applications of Materialism:

Materialist Views	Key Points
Perception as Knowledge Basis	Materialists consider perception as the foundational source of knowledge. Direct sensory experiences form the basis for understanding the world.
Use of Inference	Contrary to some misconceptions, materialists employed logical inference based on perceptual evidence .
Disregarding Divine Agency	Materialists rejected the notion of divine providence and supernatural realms.
Emphasis on Pleasure	The pursuit of happiness and pleasurable experiences is considered a valid and important aspect of human existence.
Living in the Present	The principle " yāvat jīvēt sukham jīvēt " advocates for living a fulfilling present life. Materialists valued the importance of enjoying life in the here and now without being overly concerned about an afterlife.
Human-Created Values	Materialists view values as human constructs , independent of divine morality. Ethics and values are seen as products of human experience and societal development , rather than imposed by a divine authority.
Action and Responsibility	Materialists stress the impact of one's actions on themselves and the world. Ethical conduct and responsibility for one's actions are emphasized as essential aspects of a meaningful and fulfilling life.

CONTENT FOR MAINS ENRICHMENT

1. AMAZON WOMEN OF THE WORLD (WOW) PROGRAMME

Amazon WoW is a **networking platform for women engineering students in India**, connecting them with **Amazon leaders and recruiters**. It offers skill-building sessions, career insights from alumni, and information about Amazon's culture.

Aim: It aims to foster **optimising resource utilisation, upskilling and promoting tech careers** among women in **STEM** (Science, Technology, Engineering, and Mathematics)

Usage: The example can be cited in women-related Qn/Essay as private CSR initiatives to encourage women in science.

2. INITIATIVES IN SCHOOL EDUCATION AND ENVIRONMENT

Initiatives in School Education	
Odisha Adarsha Vidyalyayas (OAV)	Provides English-medium education in rural and semi-urban areas, promoting social equity and achieving remarkable results in national-level exams.
'Mo School' Abhiyan	Engages alumni to contribute to school development.
5T-High School Transformation Programme	Focuses on technology-driven improvements in high schools, leading to a significant shift in enrolment patterns favouring government schools.

Initiatives for Cutting Down on Plastic Pollution:

Initiatives	
Plastic credits	Tradable credits are bought and sold by companies to offset their plastic waste, similar to carbon credits.
Plastic offsetting	A concept where companies and consumers can compensate for their plastic consumption by purchasing plastic credits.
Plastic neutrality	Achieved when a company purchases enough plastic credits to offset its entire plastic footprint for a set period.

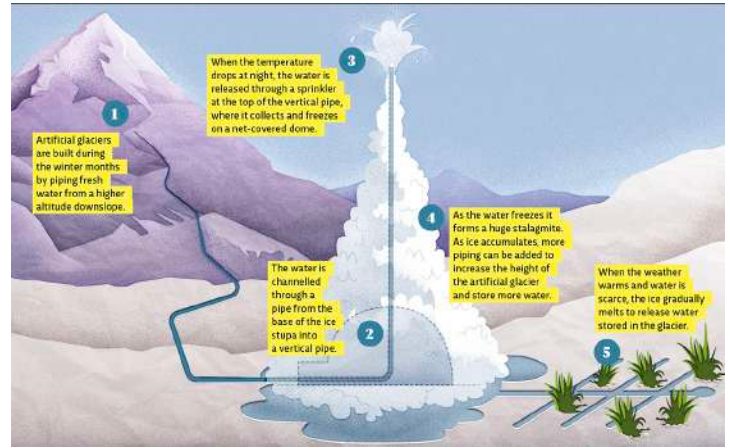
Usage: The examples can be used for Education, plastic-related questions in the main paper

3. ICE STUPAS

Context:

Ladakh is facing a water crisis, flash flooding, decrease in meadows (pasture for pashmina goats).

Despite these challenges, there is hope in the **form of "ice stupas,"** a solution devised by engineer Sonam Wangchuk. These structures, resembling Buddhist stupas, are created by freezing water in winter and **provide a water supply in spring.** They have gained popularity and become a source of entertainment in Ladakh.



Use: This is an example of adaptation to the effect of climate change

4. MITTI CAFÉ

Context:

Mitti Cafe, a social initiative by the **Mitti Social Initiative Foundation**, has opened a **750-square-foot cafe** within the premises of the Supreme Court of India. Inaugurated by Chief Justice DY Chandrachud, the cafe features decor and furniture made by **persons with disabilities and their caregivers.**

Mitti Cafe, dedicated to providing **employment to persons with disabilities**, operates 41 cafes across India and has sold over 11 million meals, employing 4,000 individuals with disabilities. The collaboration with the Supreme Court **aims to break stigmas** around disability and **promote diversity and inclusion.** The cafe's menu is **also available in Braille.**

Usage: The example of Mitti Cafe reflects ethical values such as **inclusivity, diversity, and social responsibility.**

5. JUSTICE M. FATHIMA BEEVI

Context:

Justice M. Fathima Beevi, the **first woman judge of the Supreme Court of India**, passed away recently.

Born in 1927 in Kerala, **she overcame challenges in the male-dominated legal field,** rising from advocate to Supreme Court Judge.

Justice M. Fathima Beevi's life imparts valuable lessons and embodies enduring values:

- 1. Perseverance and Determination:** Overcoming gender bias and societal challenges, she persevered in a male-dominated legal profession, showcasing resilience and determination.
- 2. Breaking Barriers:** Justice Beevi shattered the glass ceiling, becoming the first woman and Muslim woman

an in higher judiciary in Asia.

3. **Commitment to Justice:** Throughout her career, she demonstrated an unwavering commitment to justice, evident in her notable judgments that **upheld principles of fairness and equality.**
4. **Advocacy for Women's Rights:** Beyond her legal role, Justice Beevi was a vocal advocate for women's rights, emphasizing **gender equality** and paving the way for future generations of women in law.

Usage: Her example can be used in Qn related to Women/Ethics and Essay

FACTS FOR PRELIMS

GS-1

1. E PRIME LAYER

Context:

A study led by an international team, including researchers from Arizona State University, has **unveiled a link between Earth's surface and its core**, indicating that **surface water has penetrated deep into the Earth**, forming a distinct layer known as the E prime layer.

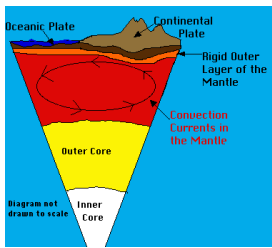
What is an E-Prime Layer?

The E-Prime Layer is a **distinct layer at the outermost part of Earth's core**, formed by surface water penetrating deep into the planet over billions of years. This layer is characterized by a **hydrogen-rich, silicon-depleted composition**, influenced by a chemical reaction with the core's silicon at the core-mantle boundary.

Previous Belief: Previously it was believed that **a minimal material exchange between the core and mantle**,

New findings suggest that tectonic plates have **transported surface water around 1,800 miles** below the surface to the **core-mantle boundary**. The water undergoes a chemical reaction with the **core's silicon, forming silica and creating a hydrogen-rich, silicon-depleted layer** at the outer core.

Significance: This discovery has significant implications **for understanding Earth's internal processes, magnetic field, heat generation**, and plate tectonics.

Earth's Layers	Discontinuities	
Crust	Mohorovičić Discontinuity (Moho)	
Mantle (Upper)	Repetti Discontinuity	
Mantle (Transition)	Lehmann Discontinuity	
Mantle (Lower)	Gutenberg Discontinuity	
Outer Core	Lehmann Discontinuity (at the core-mantle boundary)	
Inner Core	Bullen Discontinuity (at the inner core boundary)	

2. TANTALUM

Context:

Tantalum, **a rare metal, has recently been discovered in the Sutlej River** by an IIT Ropar team

More about News:

What is Tantalum?	It is a grey, heavy, and highly corrosion-resistant element with the atomic number 73
Discovery:	Tantalum is a rare metal which was first discovered in 1802 by Swedish chemist Anders Gustaf Ekenberg.
Properties:	<p>Grey, heavy, highly corrosion-resistant</p> <p>Forms an oxide layer when exposed to air</p> <p>Ductile, allowing stretching into thin wires</p> <p>Extremely resistant to chemical attack at temperatures below 150°C</p> <p>High melting point, exceeded only by tungsten and rhenium.</p>
Uses of Tantalum:	<p>Capacitors in the electronic sector for compact energy storage.</p> <p>Component in chemical plants, nuclear power plants, aircraft, and missiles.</p> <p>Substitute for platinum due to its high melting point.</p> <p>Used in medical applications for surgical equipment and implants.</p> <p>Composite with tantalum carbide (TaC) used in high-speed machine tool cutting edges.</p>


Significance of Discovery:	The discovery in the Sutlej River sand suggests a potential domestic source, reducing import dependence and benefiting India's electronics and semiconductor industry.
Reserve in India	India imports almost all of its Tantalum, mainly from the United States, the United Kingdom, and Germany. Democratic Republic of the Congo is the largest producer in the world.
About Satluj River:	It is the easternmost tributary of the Indus River and the longest of the five rivers in Punjab, northern India, and Pakistan (Jhelum, Chenab, Ravi, Beas and Satluj). It is also known as Satadree , an antecedent river maintaining its original course despite topographic changes. It rises on the north slope of the Himalayas in Lake La'nga in southwestern Tibet. Sutlej River meets the Beas River in Harike in the Ferozpur district before entering Pakistan. The combined rivers then form the Panjnad , the link between the Five Rivers and the Indus . It is home to Bhakra Dam and the Luhri Stage-I Hydro Electric Project Flows from Tibet to India, meeting the Beas River in Punjab.

The article is to be read in combination with the previous article: [Loneliness a Significant Global Health Threat](#)

4. KAMBALA



Kambala

Context: Bengaluru is set to host its **first-ever Kambala**, a popular buffalo racing contest from coastal Karnataka



Kambala featured in award winning Kantara movie

Significance: The Kambala races, traditionally held after the southwest monsoon, will bring the folk sport to the city for the first time.

About Kambala :		Information
Description	Kambala is a traditional buffalo race held in paddy fields filled with slush and mud. It primarily occurs in coastal Karnataka (Udupi and Dakshina Kannada) from November to March.	
Sponsorship	Traditionally sponsored by local Tuluva landlords and households in coastal districts.	
Race Dynamics	Tuluva people are an ethnic group native to Southern India, speaking the Tulu language.	
Tradition	Racers aim to control buffaloes by holding reins tight and using whips during the race.	
Concerns	Initially non-competitive, with buffalo pairs racing sequentially in paddy fields. Also observed as a thanksgiving to gods for protecting animals from diseases.	
Background	Animal activists criticize Kambala , alleging cruelty to animals not suited for racing. Violation of the Prevention of Cruelty to Animals (PCA) Act, 1960 , is argued, as it prevents unnecessary pain.	
Comparison with Jallikattu	Supreme Court's 2014 judgment banned Kambala , along with jallikattu and bullock-cart races, citing the Prevention of Cruelty to Animals Act, 1960. Karnataka later amended the law to allow Kambala.	

To know more Visit Insights IAS Daily CA

3. WHO'S COMMISSION ON SOCIAL CONNECTION (2024-2026)

Context:
The World Health Organization (WHO) has launched a Commission on Social Connection, co-chaired by **U.S. Surgeon General Dr. Vivek Murthy** and African Union Youth Envoy Chido Mpemba.

What is the Commission on Social Connection (2024-2026)?
It is a **3-year** initiative to **address loneliness as a global health threat**. The Commission consists of 11 policy-makers and advocates. It aims to analyse the role of **social connection in health, well-being, economic progress**, social development, and innovation.

The Commission seeks to **define a global agenda on social connection**, raise awareness, and collaborate on evidence-based solutions, with a focus on the impact of loneliness across various age groups and income levels.

5. KOLKALI

Context: Kolkali, performed by the mothers' grouping of the Thrissur Archdiocese in remembrance of St. Thomas' arrival in India.

About	Description
Origin	Kolkali is a traditional folk art form performed in the Malabar region of Kerala. Also, Known as Thattinmelkali when performed on wooden stages.
Performance Style	The dance involves moving in a circle, striking small sticks , and maintaining rhythm with special steps. The circle expands and contracts as the dance progresses.
Cultural Significance	Popular in the Kerala School Kaloosavam , considered the biggest cultural event in Asia.
Styles	Two styles: Actual Kolkali and Thekkan Koladi. Actual Kolkali includes Thacholikali, Rajasooyam, etc. Actual Kolkali is nearly on the verge of extinction.

GS-2

Occasions for Performance	Celebrations of joy, spreading happiness, and during the paddy harvest season.
Community Participation	Villagers, regardless of caste and creed, actively participate.
Inclusivity	Performed by troupes from Muslim, Christian, and Harijan communities.
About St. Thomas	St. Thomas, one of the twelve apostles of Jesus Christ , is believed to have arrived in India in the 1st century AD . According to tradition, he landed in the south-western state of Kerala . St. Thomas is credited with spreading Christianity in India , particularly in the Malabar Coast region

6. MADIGA COMMUNITY

Context:

The Prime Minister has initiated the formation of a committee to address the long-standing demand for **sub-categorization of the Madiga community** within the Scheduled Castes, just days before the Telangana Assembly election.

Why the need?

The Madiga community, **constituting about 50% of Telangana's SC population**, has long advocated for **equitable distribution of reservation benefits**, asserting that the benefits have **predominantly favoured the Mala community**. This move aims to ensure fair distribution of reservation benefits among all SC sub-castes, addressing historical disparities.

About Madiga Community:

Madiga is a Telugu caste, mainly living in the states of Andhra Pradesh, Telangana and Karnataka, with a small minority in Tamil Nadu. Madigas are historically associated with the **work of tannery, leatherwork and small handicrafts**. Today, most are agricultural labourers.

What is the sub-categorization of SC groups?

Sub-categorization involves classifying existing SC caste groups into further categories based on their historical dominance in availing government benefits meant for SCs.

Aim: It aims to ensure a **more equitable distribution of benefits among SC communities** by giving higher shares to historically marginalized groups and lesser shares to those that have traditionally dominated such benefits.

7. 2ND VOICE OF GLOBAL SOUTH SUMMIT (VOGSS)

Context:

The 2nd Voice of Global South Summit, hosted by India, focused on condemning the Hamas attacks of October 7 and called for **restraint, dialogue, and diplomacy** to resolve the Israel-Hamas conflict.

What is VOGSS?

Voice of Global South Summit is a platform where countries from the Global South, often described as **developing or less developed**, come together to share perspectives and priorities. The summit focuses on sustaining momentum toward a **more inclusive, representative, and progressive** world order.

The outcome of the summit:

Indian PM unveils **DAKSHIN** (Global South Centre of Excellence) and **calls for 5 'Cs'** for the Global South: Consultation, Cooperation, Communication, Creativity, and Capacity building.

What is the global south?

The term "Global South" refers to various countries **often described as "developing," "less developed" or "underdeveloped."** The concept of the Global South can be traced to the **Brandt report of 1980**.

India's initiatives for Global south:

India has taken several initiatives for South-South cooperation, including the induction of the **African Union into the G20 Grouping**, **International Solar Alliance**, **Global Biofuel Alliance**, and **Coalition for Disaster Resilient Infrastructure**. Initiatives such as **MAHARISHI** focus on global food security, while the **G20 Digital Public Infrastructure Framework** aim to enhance collaboration and address shared challenges among Global South

8. TREATY ON CONVENTIONAL ARMED FORCES IN EUROPE

Context:

NATO allies have condemned Russia's decision to withdraw from the Treaty on Conventional Armed Forces in Europe (CFE), a crucial post-Cold War agreement that limited certain categories of conventional armed forces.

- **Russia formally withdrew from the treaty**, blaming the United States for undermining post-Cold War security through the expansion of the NATO military alliance.

- In response, **NATO** announced the suspension of the **CFE Treaty's** operation, stating that the Russian move was part of a **series of actions undermining Euro-Atlantic security**

The **Treaty on Conventional Armed Forces in Europe (CFE)** was signed in Paris and it was negotiated **during the final years of the Cold War**. The treaty's main objective was to **reduce the possibility of a surprise armed attack in Europe**.

The treaty established limits on conventional military equipment in Europe, from the **Atlantic to the Urals**. It also mandated the destruction of excess weaponry.

- The CFE Treaty is often referred to as the **"cornerstone of European security"**.

9. UNITED SERVICE INSTITUTION OF INDIA (USI)

Context:

The United Service Institution of India (USI) is organizing its **Annual UN Forum 2023 in New Delhi**, focusing on **'International Humanitarian Law and Peacekeeping'**.

In collaboration with the International Committee of the Red Cross and the Centre for UN Peacekeeping Operations, the forum addresses challenges in applying International Humanitarian Law (IHL) principles in contemporary UN peacekeeping missions.

About United Service Institution of India (USI):

USI is the **India's oldest think-tank**, established in 1870. It serves as a platform for **research and debate** on national security and military affairs.

10. INTERNATIONAL TROPICAL TIMBER ORGANIZATION (ITTO)

Context:

The **59th International Tropical Timber Council (ITTC)** recently concluded its annual session, focusing on **sustainable tropical forest management** and the trade of sustainably produced tropical timber.

What is Timber?

Timber refers to **wood that has been processed and prepared for use** in various applications, such as construction, furniture, and other industries. It is obtained from trees and is a primary raw material in the wood industry.

About ITTO:

The International Tropical Timber Organization (**formed 1986; HQ: Yokohama, Japan**) is an **intergovernmental organization** that promotes the conservation of tropical forest

resources and their sustainable management, use and trade. **The International Tropical Timber Council (ITTC)** is the governing body of the International Tropical Timber Organization (ITTO). India has been the founding member of ITTO.

11. HOUTHİ REBELS

Context:

The **Houthi rebels** hijacked the **India-bound cargo ship Galaxy Leader** in the Red Sea, claiming it was Israeli.

- However, the Israeli government denied the claim, stating the ship is owned by a British company and operated by a Japanese firm.
- The incident marks an escalation in the Houthi threat against global maritime shipping, following their earlier failed missile attacks targeting Israel.

Houthi rebels are a **Shiite Muslim insurgent group based in Yemen**. The Houthis take their name from their founding leader, **Hussein Badreddin al-Houthi**. They adhere to a branch of Shia Islam known as Zaidism

12. KARMAYOGI PRARAMBH

Context:

Karmayogi Bharat, launched last year, celebrated the first anniversary of **Karmayogi Prarambh**, an **online orientation program on the iGOT Karmayogi Platform** for government appointees recruited through Rozgar Melas.

- The program, consisting of **eight curated courses**, aims to help new government employees **acclimatize to policies and transition smoothly into their roles**.
- The **iGOT Karmayogi** platform is a **comprehensive online learning portal for capacity-building** among government officials, with **over 26 lakh learners currently registered and access to 815+ courses**.
- The Karmayogi Prarambh courses cover topics such as **Code of Conduct for Government Employees, Prevention of Sexual Harassment of Women in the Workplace, Understanding Motivation, Self-Leadership, Stress Management, Effective Communication, MS Word for Beginners, and MS Excel for Beginners**.

Mission Karmayogi- Build Future Ready Civil Service

- with right Attitude, Skills and Knowledge, aligned to the Vision of New India



GS-3

1. TECHNOLOGY DEVELOPMENT BOARD (TDB)

Context:

The Technology Development Board (TDB) and the Small Industries Development Bank of India (SIDBI) have formed an alliance to support the Micro, Small, and Medium Enterprise (MSME) sector.

About Technology Development Board (TDB)

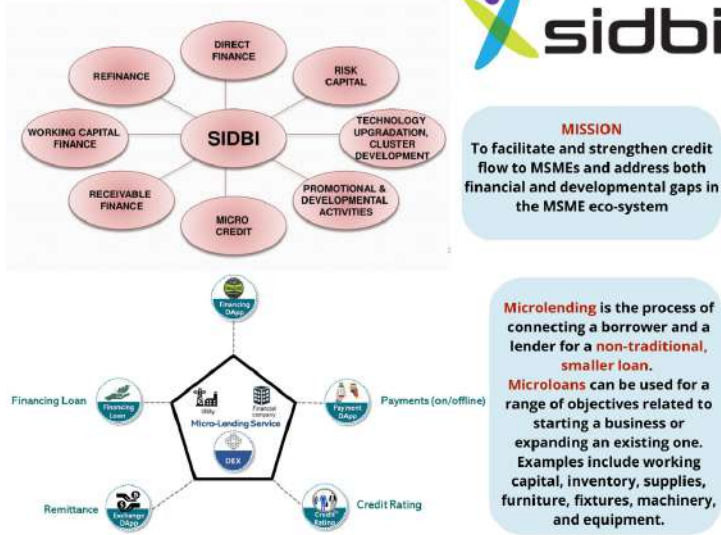
It is a statutory body established (in 1996; under the Department of Science and Technology) to promote the development and commercialization of indigenous and imported technology. It consists of 11 board members and provides equity capital or loans to industrial concerns and financial assistance to research and development institutions.

The TDB has supported the establishment of the Global Innovation & Technology Alliance (GITA) (a not-for-profit Public Private Partnership (PPP) company to encourage industrial investments in innovative technology solutions)

About SIDBI

SIDBI was set up on 2nd April 1990 under an Act of Indian Parliament, acts as the Principal Financial Institution for Promotion, Financing and Development of MSMEs.

SIDBI – Products & Services



2. NATIONAL ORGAN AND TISSUE TRANSPLANT ORGANISATION (NOTTO)

Context:

The National Organ and Tissue Transplant Organisation (NOTTO) data reveals that between 1995 and 2021, four out of five organ recipients in India were men, highlighting a

significant gender disparity in healthcare-seeking behavior.

What does the Data Show?

- The data suggests a disproportionately low number of women undergoing transplants, raising concerns about awareness and access to treatment for women in need.
- While studies show higher numbers of women donors, gender bias persists in both recipients and donors.

About National Organ and Tissue Transplant Organisation:

NOTTO operates under the Directorate General of Health Services, Ministry of Health and Family Welfare, in New Delhi. It oversees organ procurement, allotment, distribution, and registry of organs and tissue donation and transplantation in India.

About Organ Donation in India:

Despite being the world's second-largest in transplants in 2019, India lags behind Western nations in donation rates due to factors like low public awareness, religious beliefs, and strict laws.

The Transplantation of Human Organs and Tissues Act, 1994 regulates organ donation in India, allowing both deceased and living donors. Brain death is recognized as a form of death. The government launched the National Organ Transplant Programme in 2019 to promote deceased organ donation. Other law regulating transplantation in India is the Transplantation of Human Organs Act (THOA), 1994

3. UNUSUAL NITROGEN-9 ISOTOPE

Context:

Scientists have discovered “strong evidence” for the existence of the unusual nitrogen-9 isotope, challenging previous interpretations and offering a new perspective on sub-atomic structures.

What is an Isotope?

An isotope is a variant of a chemical element with the same number of protons but a different number of neutrons in its atomic nucleus. This gives the isotope a different atomic mass.

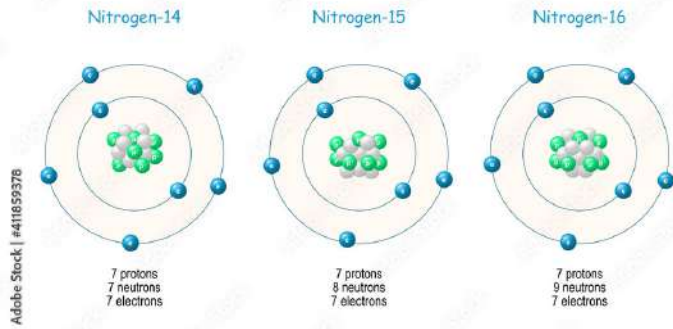
For example, carbon-12 and carbon-14 are isotopes of carbon. Both have six protons, but carbon-12 has six neutrons, while carbon-14 has eight neutrons, resulting in different atomic masses. Isotopes can have distinct properties and may be stable or radioactive, undergoing decay over time.

What is Nitrogen-9?

It is characterized by seven protons and two neutrons. A normal Nitrogen atom has an atomic number of 7 and an atomic mass of 14 (7proton and 7 Neutron)

Other isotopes of Nitrogen are:

Isotopes of nitrogen



What is Unusual about Nitrogen-9?

Nitrogen-9 is considered unusual **because it has an uncommon combination of seven protons and two neutrons** in its atomic nucleus. This creates an **unusually high ratio of protons to neutrons**. Typically, elements have a **balanced ratio for stability**, but Nitrogen-9's high proton content makes it **less stable**, challenging the conventional stability thresholds. This oddity raises questions about **its existence in this state** and how it maintains stability, introducing complexity to our understanding of atomic nuclei.

4. POLARIZED EMISSIONS FROM AN EXTRAGALACTIC BLACK HOLE

Context:

Researchers from the Indian Institute of Technology (IIT) Guwahati and the UR Rao Satellite Centre of ISRO have achieved a **groundbreaking discovery** by detecting **polarized emissions from an extragalactic black hole** (i.e., **outside our Milky Way Galaxy**) marking the first such observation beyond our Milky Way Galaxy.

The team **utilized X-ray polarimetry** to study the binary star system '**Large Magellanic Cloud X-3 (LMC X3)**,' consisting of a black hole and a massive star. The findings observed using **NASA's Imaging X-ray Polarimetry Explorer (IXPE)** and other missions, provide insights into understanding the **nature of astrophysical black hole sources**.

- IXPE was the **first mission of NASA** to study the polarization of X-rays from celestial objects
- ISRO's **upcoming X-ray Polarimeter Satellite (XPoSat) mission** will be the second satellite with this capability.

What is Polarized emissions?

Polarized emissions refer to electromagnetic waves, such as light or X-rays, whose electric field vectors oscillate predominantly in a specific direction. In astrophysics, detecting polarized emissions from celestial objects, like black holes, provides valuable information about the **object's physical**

properties and surrounding environment.

About XpoSat

Aspect	Information	
About	The X-ray Polarimeter Satellite (XPoSat) is an ISRO-planned space observatory to study the polarisation of cosmic X-rays	
Polarisation	Refers to the direction in which waves vibrate , particularly in the context of light.	
Explanation (Example)	Imagine a rope being shaken up and down to create waves. If you hold the rope straight and shake it side to side, the waves will also move in that direction. This is similar to linear polarization .	
Significance of Study	Studying how radiation is polarized reveals the nature of its source, including the strength and distribution of its magnetic fields . XPoSat focuses on studying 50 of the brightest known sources in the universe, providing insights into various astronomical phenomena.	
What are X-Rays?	Electromagnetic radiation with higher energy and shorter wavelengths than visible light. It originates from objects with millions of degrees Celsius, such as pulsars, galactic supernova remnants, and black holes.	
Payload of XPoSAT	POLIX (Polarimeter Instrument in X-rays) : Studies 40 bright astronomical sources of different categories XSPEC (X-ray Spectroscopy and Timing) : Studies X-ray pulsars, black hole binaries, low-magnetic field neutron stars, active galactic nuclei (AGNs), magnetars.	
Orbit	Circular low Earth orbit of 500–700 km and Planned lifetime of about 5 years	
Goals	Understand emission mechanisms from complex To know more Visit Insights IAS Daily CA valuable insights into the emission processes of X-ray sources.	
Other Missions	XPoSat is India's first and the world's second polarimetry mission . Another significant mission in this domain is NASA's Imaging X-ray Polarimetry Explorer (IXPE), launched in 2021.	

5. SEA BUCKTHORN

Context:

Ladakh has secured its fourth Geographical Indication (GI) tag, this time for "**Ladakh Sea Buckthorn.**"

- Sea Buckthorn is a highly profitable crop in Ladakh**, with 90% of its production coming from the region.

About Sea buckthorn:

- A shrub** which produces an **orange-yellow coloured edible berry**.
- In **India**, it is found in the **Himalayan region**, generally in dry areas such as the **cold deserts of Ladakh and Spiti**.
- The Sea Buckthorn Plantation has many **Ecological, Medicinal and Economical benefits**.



6. INDIA'S EDIBLE OIL SECTOR

Context:

India's edible oil **imports have increased by nearly 1.5 times** and more than doubled in rupee value over the past decade, reaching a record **over 16 million tonnes** in the year ending October 2023.

About Edible Oil Sector in India:

Edible Oil	
What is Edible Oil?	Edible oil refers to plant-based or animal fats that are liquid at room temperature and used for cooking or food preparation . Popular examples include olive oil, vegetable oil, and sunflower oil.
Sources of Edible Oil	Common sources include seeds (such as soybeans, sunflower, and sesame), nuts, fruits (like olives and coconuts), and certain animal fats.
Oils Used	Groundnut, mustard, rapeseed, sesame, safflower, linseed, niger seed, and castor are major traditionally cultivated oilseeds.
India's Status in Edible Oil	India is one of the largest producers of oilseeds globally. India is the world's second-largest consumer and primary importer of vegetable oil India currently fulfils approximately 55-60% of its edible oil demand through imports , emphasizing the need for increased domestic production. Major imports: Palm oil (62%) , mainly from Indonesia and Malaysia; Soybean oil (22%) from Argentina and Brazil; and Sunflower oil (15%) from Ukraine and Russia Import of edible oils is under an Open General License (OGL)
Reasons for volatility in Edible Oil prices	The war between Ukraine and Russia disrupted the global edible oilseed supply, with nearly 58% of production affected in 2021-22. The Black Sea Grain Initiative agreement , facilitated by the UN and Turkey, reopened Ukrainian ports for safe navigation, leading to a shipment surge. A decline in cotton output and yields , along with falling production of other oils like coconut, sesame, sunflower, and safflower, has increased reliance on imports.
Government Initiatives:	NMEO (OP) : The government launched the National Mission on Edible Oils-Oil Palm, a centrally-sponsored scheme , with a focus on the northeast region and the Andaman and Nicobar Islands Rashtriya Krishi Vikas Yojana- RAFTAAR (RKVY-RAFTAAR) supports state-level oilseed programs EVEGOILS : The Directorate of Sugar & Vegetable Oils has developed a web-based platform (evegoils.nic.in) for data management in the vegetable oil sector. National Food Security Mission – Oilseeds and Oil Palm (NFSM-OS and OP) : to increase the production and productivity of oilseeds
Other initiatives	Additional initiatives involve increasing the Minimum Support Price (MSP) , creating buffer stocks, and organizing cluster demonstrations for oilseed crops

7. EMISSIONS GAP REPORT

Context:

The **United Nations' annual Emissions Gap report** reveals that current emissions pledges by countries to address climate change are insufficient, and the world is on **track to warm by nearly 3 degrees Celsius this century**.

Key Findings:

- The report emphasizes that **present trends are leading to a potentially catastrophic 3-degree temperature rise**, with scientists warning of consequences like the melting of ice sheets and the **drying out of the Amazon rainforest at this level of warming**.
- The report, states that the **world could face between 2.5 and 2.9 degrees Celsius** of warming above pre-industrial levels if more aggressive climate action is not taken.
- It suggests that **greenhouse gas emissions must decline by 42% by 2030** to **limit warming to 1.5 degrees Celsius**.
- The report indicates a **1.2% increase in global greenhouse gas emissions** from 2021 to 2022, reaching a record **57.4 gigatonnes of carbon dioxide equivalent**.
- It assesses **countries' Nationally Determined Con-**

tributions (NDCs), revealing that unconditional pledges would lead to a **2.9-degree temperature rise**, while conditional pledges **could limit warming to 2.5 degrees**.

8. KADALUNDI MUDFLAT

Context:

The **mudflat ecosystem in Kadalundi**, located on the south-west coast of India, is **shrinking rapidly due to natural and anthropogenic factors**, with sand sedimentation covering the once-abundant **inter-tidal mudflats**.

- In the early 2000s, Kadalundi had **approximately 8 hectares of nutrient-rich mudflats**, but now it has dwindled to **just about 1 hectare**.
- The mudflats provide essential prey, such as polychaetes and crustaceans, attracting a diverse range of migratory birds from places like Siberia, Ladakh, Mongolia, and Scotland

Mudflats, also known as **tidal flats**, are **coastal wetlands that form when tides or rivers deposit mud**. They are found in sheltered areas such as **bays, bayous, lagoons, and estuaries**.

9. GAMBUSIA FISH

Context:

The article discusses the **unintended consequences of introducing mosquitofish**, specifically *Gambusia affinis* and *Gambusia holbrooki*.

- Initially introduced in the **1960s as a biological control method to combat mosquito-borne diseases**, these fish have **proliferated beyond their intended habitats**, causing **severe ecological and environmental problems**.
- Mosquitofish**, originally from the U.S., was introduced in **India to prey on mosquito larvae**. However, their **adaptability and high tolerance for changing environmental conditions led to their widespread distribution**, displacing and preying on native fauna.
- Despite the **World Health Organization's withdrawal of the recommendation for Gambusia as a mosquito control agent in 1982** and its **designation as an invasive alien species by the National Biodiversity Authority of the Government of India in 2018**, both government and non-governmental organizations continue to **release these fish for mosquito control**.



10. CYPRUS CONFIDENTIAL

Context:

An investigative report (called Cyprus Confidential) by **The Indian Express and ICIJ**, exposes Cyprus as a **favoured location for global wealthy individuals** engaging in tax evasion and money laundering.

The investigation reveals how Cyprus attracts investors, including prominent Indians, through favourable conditions (such as Zero estate duty, No trust registration requirements etc.) and the **Golden Passport scheme**. Despite being an EU member, Cyprus is known to be a **financial hub for Russian oligarchs**, facilitating tax evasion and money laundering.

A tax haven is a **jurisdiction with very low tax rates**. Tax evasion is a criminal act involving individuals, corporations, and other entities using **illegal means to evade taxes** by misrepresenting or **concealing their true financial state**.

According to the **State of Tax Justice Report 2023**, countries across the world will lose \$ **4.8 trillion** to tax havens over the next **10 years** (equal to the GDP of Japan — the world’s third-largest economy)

For Global Tax Evasion Report 2024: [Click Here](#)

Previous Reports on Tax Havens:

1. Offshore Leaks in 2013
2. HSBC Swiss Leaks in 2015
3. Panama Papers in 2016
4. Paradise Papers in 2017
5. Pandora Papers in 2021

Tax Haven Leaked Papers

Panama Papers (2016) were a massive leak of financial files from the database of **Mossack Fonseca**, the fourth-biggest offshore law firm in the world. The documents were leaked anonymously to the German newspaper **Süddeutsche Zeitung (SZ)**.

Paradise Papers (2017) are leaked documents and of leaked data of offshore activities of national leaders, wealthy individuals, and companies. The leak originated from the **Bermudian offshore law firm Appleby** and given to the same German newspaper.

Pandora Papers (2021) leaked documents incriminating hundreds of global politicians and wealthy elite showing how they sheltered money in offshore accounts, shell companies, and real estate investments. The papers were compiled by the **International Consortium of Investigative Journalists (ICIJ)** (same group which provided Panama Papers and the Paradise Papers, exposing similar dealings)

Cyprus is an island country located in the **eastern Mediterranean Sea**, south of the **Anatolian Peninsula** and **east of the Levant**. It is geographically in **Western Asia**, but its cultural ties and geopolitics are overwhelmingly **South-eastern European**.



11. EXERCISE MITRA SHAKTI-2023

Context:

The ninth edition of the joint **military exercise “Exercise MITRA SHAKTI-2023”** between India and Sri Lanka began in Aundh (Pune).

Other Major Exercises:

Exercise Name	Countries Involved
Military Exercises	
Indra	India-Russia
Yudh Abhyas	India-USA
Hand-in-Hand	India-China
Shakti	India-France
Mitra Shakti	India-Sri Lanka
Sampriti	India-Bangladesh
Surya Kiran	India-Nepal
Air Force Exercises	
Indradhanush	India-UK
Garuda	India-France
Cope India	India-USA
SINDEX	India-Singapore
Blue Flag	Multinational (includes India)
Red Flag	Multinational (includes India)
Naval Exercises	
Malabar	India-USA-Japan-Australia
Varuna	India-France
SIMBEX	India-Singapore

IBSAMAR	India-Brazil-South Africa
Naseem-Al-Bahr	India-Oman
SLINEX	India-Sri Lanka

12. LANGLANDS PROGRAM

Context:

The Langlands Program, initiated in 1967 by mathematician **Robert Langlands** and awarded the **Abel Prize in 2018**, is the world's largest mathematics project.

What is the Langlands Program?

The Langlands Program is a **comprehensive and influential research initiative** in mathematics that aims to **establish deep connections** between two seemingly unrelated areas of mathematics: number theory and harmonic analysis.

Significance: The Langlands Program has had a profound impact on various branches of mathematics, leading to significant **breakthroughs and applications in solving long-standing mathematical problems**.



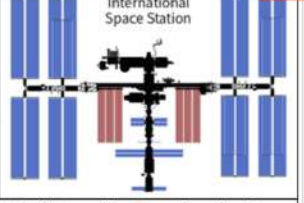
What is the Abel Prize?

The Abel Prize is a **prestigious award in mathematics**, named after Norwegian mathematician **Niels Henrik Abel**. Established by the **Norwegian Parliament in 2002**, the prize recognizes outstanding scientific achievements in **mathematics**. The **2023 Abel Prize was awarded to Luis Caffarelli** for his contributions to regularity theory for nonlinear partial differential equations.

13. ISS MARKED ITS 25TH ANNIVERSARY

Context:

The Expedition 70 crew on the **International Space Station (ISS)** focused on space biology and Dragon spacecraft activities as the **ISS marked its 25th anniversary**.

ISS marked its 25th anniversary	
 <p>What is the ISS?</p>	<p>The ISS is a complex international scientific and engineering project, the largest human-made structure in space, serving as a laboratory for new technologies and an observation platform for various research.</p>
 <p>Orbit</p>	<p>It orbits Earth at an average altitude of 400 kilometres and circles the globe every 90 minutes at a speed of 28,000 kph.</p>
 <p>International Space Station</p>	
<p>Construction and Components</p>	<p>The ISS was constructed piece by piece in orbit (first module, Zarya, launched in 1998). It was built by five space agencies representing 15 countries, including NASA (USA), Roscosmos (Russia), JAXA (Japan), Canadian Space Agency, and the European Space Agency.</p>
<p>Size</p>	<p>ISS weighs almost 400 tonnes and covers an area as big as a football pitch.</p>
<p>Russia's Role in Maintaining ISS</p>	<p>Russia is responsible for making course corrections to the station's orbit, ensuring it avoids space debris, and facilitates the transport of astronauts to and from the ISS. Last year Russia withdrew its support from ISS, as US sanctioned Russian invasion on Ukraine</p>
<p>Importance</p>	<p>ISS allow crew members to do research in critical fields such as fluids, combustion, Microgravity Research, life support systems and radiation environment, which is needed for future human space exploration</p>
<p>Notable Success</p>	<p>Medical Discoveries: Research on the ISS has led to the advancements in osteoporosis treatments and understanding muscle atrophy</p> <p>Technological Advancements: The construction of the ISS have led to technological advancements in space exploration, robotics, and life support systems.</p>
<p>Mission Life</p>	<p>ISS is expected to operate until 2030. NASA plans to decommission it in 2031</p>
<p>China's mission</p>	<p>Tiangong space station is China's permanently crewed space station (launched in 2021) and operated by China Manned Space Agency in low Earth orbit between 340 and 450 km above the surface.</p>
<p>India's Mission</p>	<p>India plans to have its own space station by 2035, weighing 20 tonnes and serving as a facility where astronauts can stay for 15-20 days, and would be placed in an orbit 400 km above earth</p>

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14. ATMOSPHERIC WAVES EXPERIMENT

Context:

NASA's **Atmospheric Waves Experiment (AWE)** is a ground-breaking mission designed to **study the interactions between terrestrial and space weather**.

- It aims to investigate **one of the key drivers of space weather – Earth's weather**.
- The study is **crucial due to the increasing reliance on satellite-based services** for navigation and communication, **making forecasts and data on space weather vital**.

About Atmospheric Waves Experiment:

- The AWE mission will focus on **studying Atmospheric Gravity Waves (AGW)**, a type of vertical wave generated by **extreme weather events or sudden disturbances** causing a **vertical displacement of stable air**.
- These waves, including AGWs, **play a role in space weather, affecting the overall weather, climate, and space conditions**.
- It will **measure airglow at the mesopause (85 to 87 km above Earth)**, capturing faint airglow in the **infrared bandwidth**.
- The mission will use an **Advanced Mesospheric Temperature Mapper (ATMT)** to scan the mesopause, **mapping the brightness of light at specific wavelengths**

About Space Weather:

Space weather refers to the **environmental conditions around Earth and other planets influenced by the Sun's activities**, such as solar flares and emissions, as well as the prevailing matter in space.

Severe space weather events can **impact critical Earth installations** like satellite-based communication, radio communication, navigation systems, and power grids

15. GHOL AS THE GUJRAT'S STATE FISH

Context:

The Gujarat government recently declared the **ghol as the state fish**, citing its economic value and uniqueness.

Ghol Fish	Details	
About Ghol Fish	The Ghol fish is a rare and expensive marine species found in the Indo-Pacific region (from the Persian Gulf to the Pacific Ocean), primarily in the marine areas of Gujarat and Maharashtra in India	
Nutrients	It is loaded with rich nutrients such as iodine, omega-3, DHA, EPA , iron, taurine, magnesium, fluoride, and selenium.	
Length	Around one-and-a-half meters. Price increases with length, reaching up to Rs 5 lakh per unit length .	
In India	One of the largest fish found in India, primarily in marine areas of Gujarat and Maharashtra. Often referred to as 'Sea Gold.' (or known as the "fisherman's lottery") Recognized for a pouch in its stomach with potent medicinal properties .	
Benefits	Good for eye health , and contains vitamins and minerals. Prevents ageing and wrinkles due to collagen content. Improves infant IQ with Omega-3 , stimulating brain cell growth.	
Economic Value	Demand for both meat and air bladder . Used in beer and winemaking. Air bladder has pharmaceutical applications. Highly valued in overseas markets, especially China.	

16. NEAR-SPACE COMMAND

Context:

China has reportedly established the **world's first 'near-space command,'** forming the **People's Liberation Army's fifth force alongside the Army, Navy, Air Force, and Rocket Force.**

- Chinese researchers **see near-space as the next battleground** and assert that it is a crucial zone that could **determine the outcome of future battles.**
- The near-space command will **utilize modern hyper-**

sonic missiles for precise and swift attacks on enemy military assets.

- Equipped with **automated drones and spy balloons**, it aims for **high-altitude surveillance globally.**
- The space command is expected to have **spy balloons, solar-powered drones, and supporting equipment**, raising concerns about potential political and military repercussions.

Operating in the **'near-space' area**, the command **relies on hypersonic weapons** that can operate at **more than five times the speed of sound and out-maneuvre air defence systems**

What is Near Space ?

Near space is the region between **75,000 feet (23 km) and 62.5 miles (100 km).** It's also defined as the area between airspace **Flight Level 600 (18 km) and 160 km above sea level.**

Near space is **too thin for planes to fly in**, so military planes avoid it.

17. AGNI – 'AYURVEDA GYAN NAIPUNYA INITIATIVE'

Context:

The **Central Council for Research in Ayurveda Sciences (CCRAS)**, under the **Ministry of Ayush**, has launched the **"Ayurveda Gyan Naipunya Initiative" (AGNI)** to promote research and mainstream **pragmatic practices in Ayurveda.**

- AGNI aims to provide a **platform for Ayurveda practitioners to report innovative practices and experiences in various disease conditions**, fostering a **culture of evidence-based practice.**
- The initiative also seeks to identify **interested practitioners for collaboration in creating a database and offers training in research methods.**

The initiative aligns with CCRAS's commitment to research on scientific lines in Ayurveda, and it complements other programs initiated by the organization, **such as SPARK, PG-STAR, and SMART, aimed at promoting scientific research in Ayurveda.**

18. AMYLOIDOSIS

Context:

Scientists from the **Institute of Advanced Studies in Science and Technology** have successfully fabricated a **2D protein monolayer using lysozyme molecules**, a model protein for studying diseases like **Amyloidosis.**

- Amyloidosis is a **rare condition where the accumulation of amyloid protein** in organs leads to **dysfunction in vital organs** such as the heart, kidneys, liver, spleen, nervous system, and digestive tract.
- The study investigated the **physical properties of lysozyme molecules** at the **air-water interface under**

varying surface pressure and subphase pH conditions.

- The compressible behaviour of **lysozyme monolayers** was correlated with the formation of stripe-like domains with increasing surface pressure.

Lysozyme is a **naturally occurring enzyme** that protects against bacteria, viruses, and fungi. It's found in many bodily secretions, including:

Tears, Saliva, Milk, Sweat, Mucus, Egg white, Nasal mucus, Gastric secretions

19. MUSIC FROG

Context:

Scientists have identified a **new species of 'music frog,' named Nidirana noadihing**, in Arunachal Pradesh.

- This unique discovery is marked by the **distinct feature that both male and female frogs are vocal**.
- The frogs **emit a distinctive call pattern** consisting of **two to three notes**, resembling the sounds of **wild duck species**.
- The male frogs, characterized by their robust bodies, **were observed calling loudly in various locations, including marshy areas**, the edges of a newly constructed pond, and along a nearby road.
- The frog is named after the Noa-Dihing River where it was found.**

The findings confirm the presence of the **Nidirana genus** in India for the first time, with previous known occurrences in Japan, Taiwan, China, Vietnam, Laos, and Thailand.



20. INVESTOR RISK REDUCTION ACCESS (IRRA) PLATFORM

Context:

The **Investor Risk Reduction Access (IRRA) platform** has been jointly developed by major stock exchanges in India, including BSE, NSE, NCDEX, MCX, and MSE.

Aspect	Details
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About	Investor Risk Reduction Access (IRRA) is a platform that acts as a safety net for investors in the event of technical glitches at a trading member's end , allowing them to close open positions and cancel pending orders during disruptions.
Purpose	The platform is designed to mitigate risks associated with trading interruptions and is available for internet-based and wireless technology-supported trading
Availability	It is available to trading members supporting internet-based trading and security trading through wireless technology for their investors.
Development	Jointly developed by all major stock exchanges in India – BSE, NSE, NCDEX, MCX, and Metropolitan Stock Exchange of India.
Launch Authority	Launched by the Securities and Exchange Board of India (SEBI) .
Invocation Process	Trading members can invoke IRRA during technical glitches at their end across exchanges from both the primary and disaster recovery sites . Stock exchanges can also initiate it suo moto.

21. NASA'S PSYCHE SPACECRAFT

Context:

NASA's **Psyche** spacecraft, en route to a **metal-rich asteroid**, is pioneering **Deep Space Optical Communications (DSOC)** using **near-infrared laser signals** for high-bandwidth communication.

What is Deep Space Optical Communication (DSOC) and how it is different from traditional radio wave communication?

Deep Space Optical Communication (DSOC) is a pioneering technology used in space communication that **utilizes near-infrared laser signals** instead of **traditional radio waves**. Unlike radio waves, DSOC enables **higher bandwidths**, allowing for data rates at least **10 times higher than current radio systems**.

Working?

DSOC encodes **data in photons at near-infrared wavelengths** (rather than radio waves) to communicate between a probe in deep space and Earth. **Using light instead of radio** allows the spacecraft to communicate more data in a given

amount of time.

DSOC achieves **precise pointing through the use of near-infrared lasers**, isolation from spacecraft vibrations, and adaptive systems to compensate for changing positions, making it a revolutionary approach for deep space missions.

Significance: This DSOC advancement is crucial for communicating with spacecraft over long distances (like human exploration of Mars), offering **benefits such as higher resolution images**, increased data transfer rates, and the potential for streaming video.

SPORTS CORNER

1. TRANSGENDER IN CRICKET

Context:

The ICC has implemented a significant change to its **gender eligibility regulations**, **prohibiting any player who has transitioned from male to female** and undergone **any form of male puberty** from participating in **women’s international cricket**.

Why the prohibition?

ICC’s new policy is to protect the **integrity of the women’s game, safety, fairness, and inclusion**. Also, **Physiological differences established during puberty** can create significant performance advantages. **Testosterone** boosts athletic performance by increasing muscle mass, strength, and haemoglobin levels.

What does other sports body do?

- **World Athletics (WA):** Differences in sex development (DSD) athletes must keep their Testosterone below 2.5 nmol/L for 24 months to participate in the female category across events.
- **World governing bodies for cycling (UCI) and swimming (FINA) and World Rugby barred trans women from competing in women’s events.**
- **As per the International Olympic Committee (IOC)**, it is the responsibility of individual federations to determine eligibility criteria in their sport for transgender people.

Impact of the ruling?

This ruling affects **Danielle McGahey**, the **first transgender player** in international cricket, who will no longer be able to compete in women’s international games. The policy will be **reviewed within two years**.

About ICC

The International Cricket Council (HQ: Dubai) is the **global governing body of cricket**. It was founded as the **Imperial Cricket Conference in 1909** by representatives from **Australia, England, and South Africa**. It was renamed as the **International Cricket Conference in 1965** and adopted its current name in 1987

MAPPING

1. MYANMAR

Context:

There had been an **influx of Myanmar nationals into Mizoram**, India, due to the ongoing civil war in Myanmar (between the Myanmar Army and pro-democracy militias in the western Chin State)

The civil war in Myanmar **originated from a military coup in February 2021**, overthrowing the civilian government and leading to widespread protests and resistance. **Ethnic armed groups in Myanmar** have varied responses to the coup, with some supporting the pro-democracy movement, while others maintain ceasefire status with the junta.

About Myanmar (formerly Burma):

It is a Southeast Asian nation of **more than 100 ethnic groups, bordering India, Bangladesh, China, Laos and Thailand**. Yangon (formerly Rangoon), the country’s largest city, is home to the gilded **Shwedagon Pagoda**, which con-

tains Buddhist relics and dates to the **6th century**



2. 'OPERATION KARUNA' (MYANMAR)

'Operation Karuna' (Myanmar)

Context: India has initiated 'Operation Karuna' to aid Myanmar in the aftermath of Cyclone Mocha. Three Indian Navy ships, carrying essential relief materials, have reached Yangon, with a fourth ship expected to arrive soon.

Why Bangladesh and Myanmar are often struck by tropical cyclone?

Bangladesh and Myanmar are situated in the **path of the North Indian Ocean tropical cyclone basin**, making them vulnerable to cyclonic storms originating from the warm waters of the Bay of Bengal.



The Bay of Bengal is known for its **high sea surface temperatures**, which provide the necessary energy for the intensification of tropical cyclones.

Other Operations by India:

Operation Name	Year	Reason for Evacuation
Operation Ajay	2023	To evacuate its citizens from conflict-stricken Israel
Operation Dost	2023	Evacuation during Turkey-Syria earthquake
Operation Ganga	2022	Tensions between Russia and Ukraine
Operation Vande Bharat	2020	Covid-19 pandemic
Operation Samudra Setu	2020	Covid-19 pandemic
Evacuation from Brussels	2016	Terrorist strikes
Operation Raahat	2015	Conflict in Yemen
Operation Maitri	2015	Nepal earthquake
Operation Safe Homecoming	2011	Conflict in Libya
Operation Sukoon	2006	Conflict in Lebanon
1990 Kuwait Airlift	1990	Invasion of Kuwait by Iraq

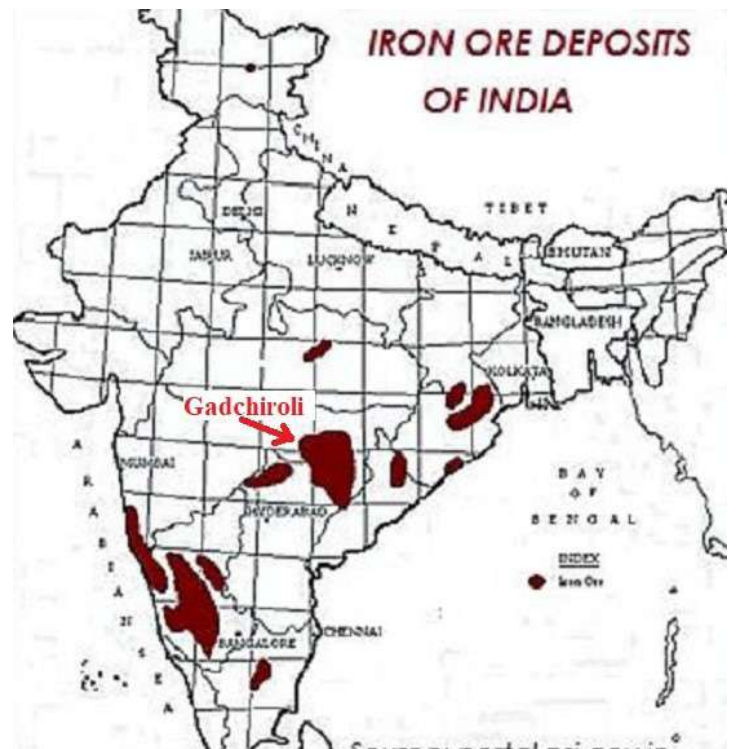
In Myanmar, **Rakhine state** is the worst-hit while in Bangladesh the cyclone destroyed shelters in the **world's largest**

refugee camp at Cox's Bazar which houses a million Rohingya refugees from Myanmar.

3. SURJAGARH HILL RANGE (GADCHIROLI, MAHARASHTRA)

Context:

The Maharashtra Police arrested prominent Adivasi leaders who were involved in a **250-day-long anti-mining agitation** against six proposed iron mines in the Surjagarh hill range in the Gadchiroli district. The mines are owned by companies such as Jindal Steel and Lloyd Steel.



4. NORDIC-BALTIC (NB8) COUNTRIES

Context:

India's External Affairs Minister commended the CII for hosting the **2nd India Nordic Baltic Business Conclave**, highlighting the increasing collaboration between India and the **Nordic-Baltic (NB8) countries**.

What is NB8?

The Nordic-Baltic (NB8) countries refer to a group of **eight nations in Northern Europe**, comprising the **Nordic countries** (Denmark, Finland, Iceland, Norway, and Sweden) and the **Baltic states** (states along the Baltic Sea) (Estonia, Latvia, and Lithuania). These countries collaborate on various economic, diplomatic, and strategic initiatives to promote regional cooperation and address shared challenges.

This region is characterized by close **geographical proximity and shared historical, cultural, and economic ties**. It serves as a platform for collaboration and partnership among the countries in areas such as trade, innovation, and diplomatic relations.



5. CHEBROLU (GUNTUR DISTRICT OF ANDHRA PRADESH)

Chebrolu, a town in the Guntur district of Andhra Pradesh is recognized for its rich history, culture, and heritage. Referred to as the **“land of temples,”** Chebrolu bears the imprints of various dynasties, including the **Eastern Chalukya, Velanati Choda, Kakatiya, Pota Rajulu, and Paristchedi**, spanning centuries.

The town is home **to over 100 small and large temples**, with some dating back to the 9th to 12th centuries A.D. Notable among them are the **Chaturmukha Brahmeswara, Bhimeswara, Adikesava, and Nageswara temples**.

The **Chaturmukha Brahmeswara temple**, situated in the middle of a pond, is unique for having a Sivalinga and the **four faces of Lord Brahma**. The Bhimeswara temple, built by the **Eastern Chalukyan King Chalukya Bhima**, stands out with its two floors and distinctive design.

Previously in 2019, the **Archaeological Survey of India (ASI)** had **uncovered South India’s earliest Sanskrit inscription at Chebrolu**, a significant discovery providing the **earliest epigraphic evidence for the Saptamatrika cult**, worshipping seven female deities representing the energy of their consorts in Hinduism.