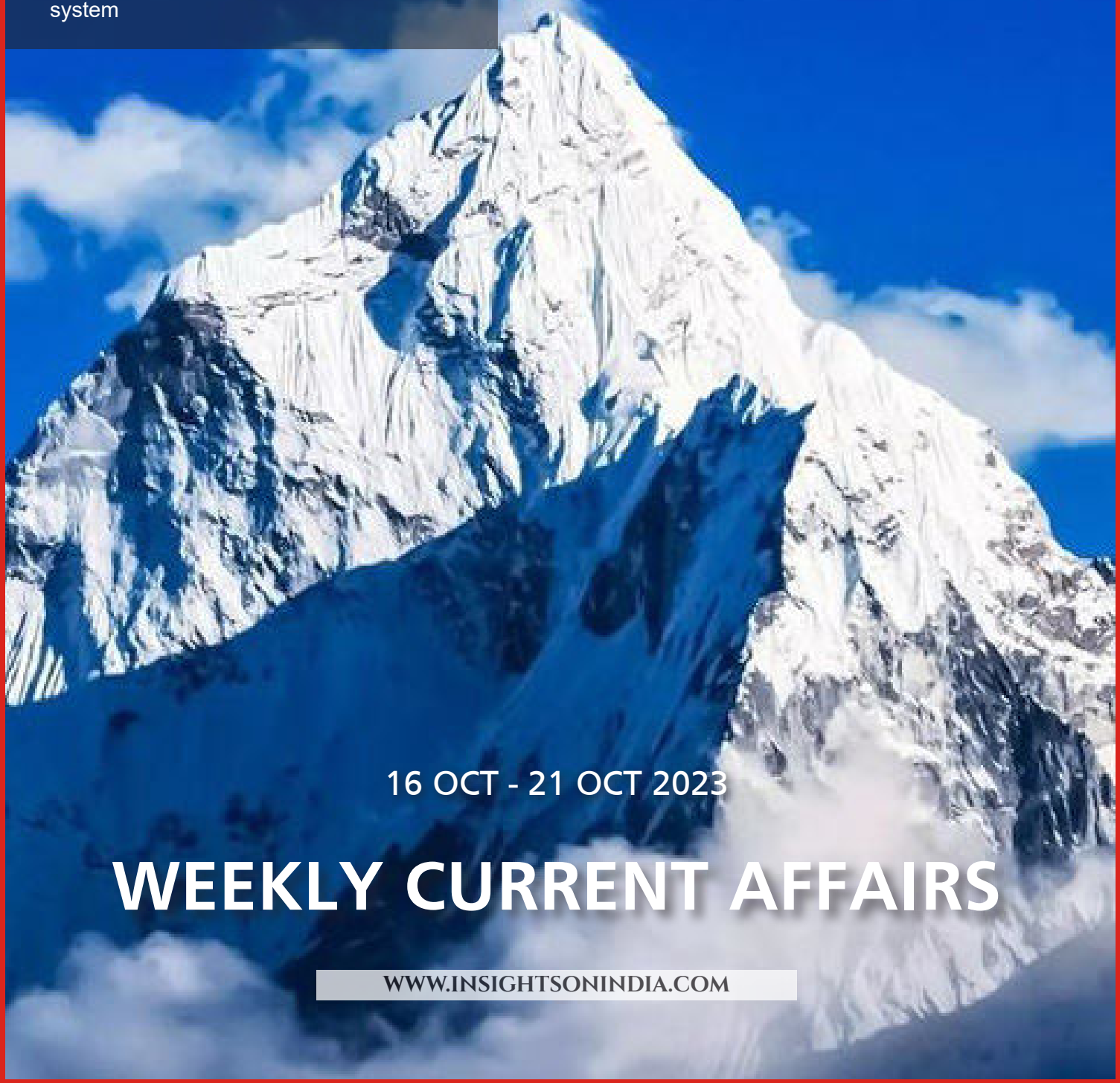
INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

HIMALAYAN REGION: NEED FOR EIA
This article discusses the importance of Environmental Impact Assessment (EIA) with respect to the fragile Himalayan eco-system



16 OCT - 21 OCT 2023

WEEKLY CURRENT AFFAIRS

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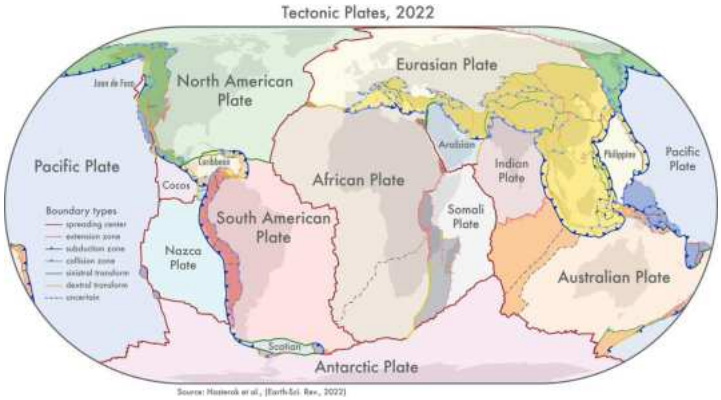

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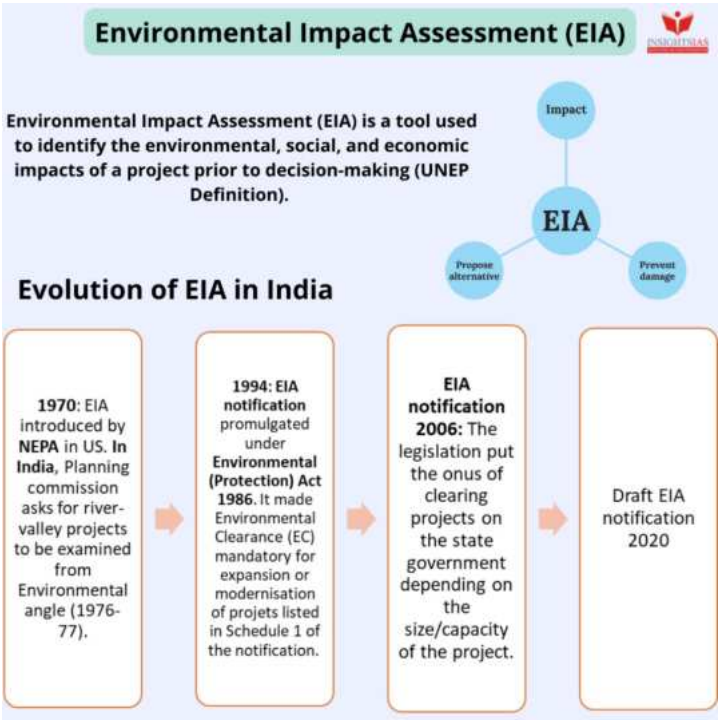

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GENERAL STUDIES – 1

Topics: Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc., geographical features and their location- changes in critical geographical features (including water-bodies and ice-caps) and in flora and fauna and the effects of such changes.

1. RECENT EARTHQUAKES IN AFGHANISTAN

Context:

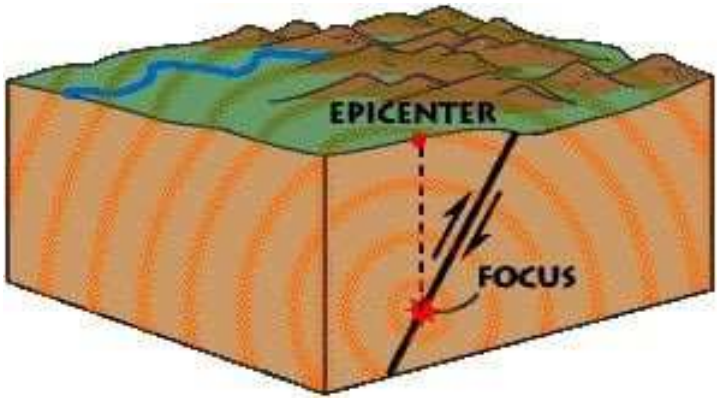
A powerful **6.3 magnitude** earthquake struck western Afghanistan just over a week after a series of strong quakes and aftershocks devastated the same region.

Some recent earthquakes in Afghanistan include:

- **A 6.1-magnitude** earthquake in 2002 killed about 1,000 people in northern Afghanistan.
- **In 2015**, a major earthquake that struck the country's northeast killed over 200 people in Afghanistan and neighbouring northern Pakistan.
- **A magnitude-6.0 earthquake** that struck the Afghanistan-Pakistan border in June 22, 2022
- **A 6.3 magnitude earthquake** struck near the historic city of Herat on October 7, 2023, leaving more than 1,000 people dead

Anatomy of an earthquake:

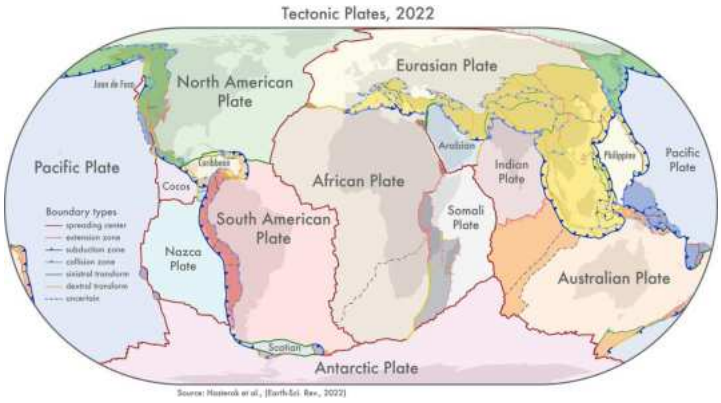
Earthquakes occur due to **the movement of tectonic plates**, large chunks of solid rock, along fault lines caused by tectonic forces and stress in the earth's lithosphere. When these plates **suddenly slip past each other**, they release energy, sending seismic waves through the ground. The **point of fault rupture** within the earth, where the earthquake begins, is called the **focus or hypocentre**, while the point directly above it on the earth's surface is the **epicentre**. Tectonic plates are **continually in motion** due to heat energy within the earth, and their edges, known as plate boundaries, are where most earthquakes occur.



Reasons for Frequent Earthquakes in Afghanistan:

Reason	Description
1. Tectonic Plate Collision	Afghanistan is situated at the convergence of the **Indian and Eurasian tectonic plates**, where these plates collide, resulting in significant tectonic activity.
2. Geological Complexity	Regions like the **Hindu Kush mountain range experience** geological complexity due to the collision and convergence of tectonic plates. This complexity contributes to earthquake occurrence.
3. Northward Plate	The ongoing **northward movement of the Indian Plate** towards the Eurasian Plate leads to compression, causing crustal deformation and the creation of faults and fractures, which can trigger earthquakes.
4. Plate Boundaries	The edges of tectonic plates, known as plate boundaries, are frequent sites of earthquakes. Afghanistan is located near such plate boundaries, enhancing seismic activity.
5. Active Fault Systems:	Afghanistan is intersected by active fault systems like the **Chaman Fault and the Main Pamir Thrust**, which serve as sources of earthquakes in the region.

Fault lines crossing Afghanistan



For How to make an India earthquake: Click Here

For 60% of India prone to earthquake: Click Here

Insta Links

- Turkey Earthquake

Mains Links:

Q. Discuss the factors that cause earthquakes. Why are Earthquakes more common in certain parts of the world than in others? (250 words)

Prelims Links:

Q. Which of the following earthquake waves is first recorded on the Seismograph?
(a) P-waves
(b) Rayleigh waves
(c) S-waves
(d) Love waves

Answer: (a)

GENERAL STUDIES – 2

Topics: Indian Constitution- historical underpinnings, evolution, features, amendments, significant provisions, and basic structure; Comparison of the Indian constitutional scheme with that of other countries.

1. SUPREME COURT'S VERDICT ON SAME-SEX MARRIAGE

Context:

The Supreme Court of India has rejected pleas seeking to legalize same-sex marriage,

What is Same-sex marriage?

Same-sex marriage, also known as gay marriage or LGBTQ+ marriage, is a legal union between two individuals of the same gender. It grants them the same legal rights, benefits, and responsibilities as opposite-sex marriages

What is SC Verdict on Same-Sex Marriage?

The Supreme Court, in a 3:2 verdict, denied constitutional validity to same-sex marriages, as it is a statutory right but not a fundamental right. Therefore, **it's a matter for Parliament** and **state legislatures** to address through legislation.

What are other observations?

- **The court can neither strike down nor read words** into the Special Marriage Act (SMA) 1954 to include same-sex members within the ambit of the SMA 1954, only the legislature can do that
- **The relationship of marriage** is not a static one: Queer persons have an equal right and freedom to enter into a "union"
- However, there is **no fundamental right to marry** under the Constitution.
- The court favoured the government's proposal of a **committee headed by Cabinet Secretary** to look into entitlements for same-sex couples.

Views of SC judgement:

Issue	Minority View	Majority View
Fundamental Right to Marry	**Marriage may not be a fundamental right in itself** but has attained significance due to state regulation	Marriage is **not a fundamental right**
Interpretation of Special Marriage Act (SMA)	CJI Chandrachud **was against an expansive reading of the SMA** and warned against the court entering the realm of the legislature.	**SMA couldn't be interpreted to include same-sex couples**, as it's intended for **heterosexual couples of different faiths**
Queer Couples' Right to Adopt a Child	CJI Chandrachud struck down certain **CARA regulations**, stating they reinforce the disadvantage faced by the queer community.	However, the Majority view upheld CARA regulation and said since **'Same-sex couples' marriage** is not recognised they are **not eligible for adoption**

Civil Unions for Queer Couples	The CJI saw the **right to form intimate associations** as part of **freedom of speech and expression** and suggested a committee to determine the rights available to queer couples in unions.	**However, the Majority view disagreed with prescribing a choice of civil unions** but suggested the state should facilitate this choice for those who wish to exercise it.

What is a 'Civil Union'?
A 'civil union' grants **legal rights and responsibilities to same-sex couples** similar to marriage but a civil union lacks the same recognition in personal law. US, Sweden, etc. had recognised **civil union until same-sex marriage** was legalised in their country

What is the Special Marriage Act (SMA) 1954?
Marriages in India can be registered under the respective personal laws (e.g., Hindu Marriage Act, 1955, Muslim Personal Law Application Act, 1937) or under the Special Marriage Act, 1954.

The Special Marriage Act, 1954 has provisions for **civil marriage for people of India and all Indian nationals in foreign countries**, irrespective of **religion or faith** followed by either party.

When a person solemnises marriage **under this law**, then the marriage is **not governed by personal laws but by the Special Marriage Act.**

Legal Status of Same-Sex Marriage in India:

In India, the **legality of same-sex marriages is not expressly recognized as a fundamental or constitutional right** but is governed **by statutory law**. In 2018, the Indian Supreme Court **decriminalized same-sex marriage**.

Earlier views of SC:

Case	Key Rulings
NALSA (2014)	Recognition of **transgenders as third gender**
K.S. Puttaswamy (2017)	Recognition of the **right to sexual orientation** as an **aspect of privacy**
Shafin Jahan v. Asokan K.M. (2018)	The right to marry a person of one's choice is **integral to Article 21** of the Constitution
	The right to marry is **intrinsic to the liberty guaranteed by the Constitution** as a fundamental right, allowing individuals to make decisions crucial to their pursuit of happiness.
Navjet Singh Johar Case (2018)	Decriminalized Homosexuality. Members of the LGBTQ community are entitled to the **full range of constitutional rights**, including liberties protected by the Constitution. They are entitled to **equal citizenship and "equal protection of law**."

Views of the Central Government

- **Only the legislature** (repository of democratic representation and reflects the will of the people) has the right to make such changes in the law.
- **Marriage is not confined to the private sphere** – The regulation of marriage is very much an issue of acceptance by society – This rationale is the very basis for state recognition of marriage.

Arguments in Favour of Same-Sex Marriage:

Arguments	Key Points
Equal Rights	Same-sex couples should have the same legal rights and protections as opposite-sex couples (under Fundamental Rights to Equality)
Non-recognition of same-sex marriage violates rights	**Articles 14** (right to equality before the law), **Article 15** (right against discrimination on grounds of religion, race, caste, sex, place of birth), **Article 19** (freedom of speech and expression), and **Article 21** (protection of life and personal liberty) of the Constitution
Strengthening Families	Marriage provides social and economic benefits to couples and their families, benefiting same-sex individuals as well.
Cohabitation as a Fundamental Right	Previously, several experts and the Chief Justice of India (CJI) acknowledged that **cohabitation is a fundamental right**, and it is the government's obligation to legally recognize the social impact of such relationships.
Biological Gender is not 'Absolute'	Since the **biological gender is not absolute**, and gender recognition is more complex than just one's genitals. There is **no absolute concept of a man or a woman**
Global Acceptance	There are **currently 34 countries** where same-sex marriage is legal including Australia, Finland, France, Germany, the United Kingdom, the United States of America

Arguments against Same-Sex Marriage

Arguments	Key Points
Beliefs	Many religious and cultural groups believe that **marriage should only be between a man and a woman**
Procreation	Some argue that the primary purpose of marriage is procreation, and same-sex couples cannot have biological children
Against Nature	Same-sex marriage is considered to **go against the natural order of things**
Legal Issues	Contentious issues from such a marriage such as inheritance, tax, and property rights
Adoption	Adoption by queer couples can lead to **societal stigma, and discrimination, thus negatively impacting a** child's psychological well-being (esp. in conservative societies)

For Ethical perspective on Same-Sex Marriage: Same-sex marriage: Morality vs equality: Click Here

Conclusion:

The way forward includes **raising awareness for LGBTQIA+ rights**, legal reforms like amending the Special Marriage Act, engaging in dialogue with religious leaders, legal challenges to current laws, and collaboration among all stakeholders for a more inclusive society.

Mains links

Q. Examine the scope of Fundamental Rights in light of the latest judgement of the Supreme Court on the Right to Privacy. (UPSC 2017)

Prelims Links

Q Which Article of the Constitution of India safeguards one's right to marry the person of one's choice? (UPSC 2019)
(a) Article 19
(b) Article 21
(c) Article 25
(d) Article 29
Ans: B

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. INDIA WILL BID FOR THE 2036 OLYMPICS

Context:

Prime Minister, Narendra Modi, announced India's bid to host the **2036** Olympic **and Paralympic Games**, expressing the nation's long-standing dream to do so.

- Furthermore, India will also bid to host the **Youth Olympic Games in 2029**

Rules about Hosting City for the Olympics:

- **Bidding: National Olympic Committees select cities within their territories** to bid for hosting the Olympic Games, with the **Paralympic Games** automatically included in the bid.
    - The application to host the Games is made by the **chief authority of the city,** with the support of the national government.
- **Selection**: The host for future Olympic Games is chosen by the **members of the International Olympic Committee (IOC)** during their Session. through a **majority vote** by secret ballot, with each active member having **one vote**.
- **Elimination**: In case of no majority in the first round, the candidate with the fewest votes is eliminated, with further rounds if needed.
- **Selection Process**: Behind-the-scenes negotiations now determine hosts, as seen in Brisbane's selection for the 2032 Olympics.
- **2036 Host**: The 2036 host will be chosen not before 2026 or 2027.

More about Olympics Cities:

- To date, **51 different cities** have been chosen to host the **modern Olympics**, with a majority in Western Europe.
- **No cities from Central America**, Africa, Central Asia, the Middle East, South Asia, or Southeast Asia have hosted the Olympics.
- Host city decisions are made between **seven to eleven years before the Games**
- **2024 Summer Olympics: Paris;** 2028 Summer Olympics: Los Angeles

Significance of Hosting the Olympics for India:

- **Soft Power Showcase**: Hosting the Olympics serves as a soft-power tool, as seen in post-World War Europe, post-apartheid South Africa, and Brazil.
- **Positive Image**: India aims to create a positive image following issues during the 2010 Delhi Commonwealth Games.
- **Global Ambitions**: India's bid for the 2036 Olympics reflects its global ambitions, aligning with goals like a UN Security Council seat and G-20 Presidency.
- **Sporting Confidence:** Recent sporting achievements, like the 107 medals at the Asian Games, have boosted India's confidence, stemming from Abhinav Bindra's 2008 Olympic gold.

Challenges to Consider:

- **Multi-Challenges**: Hosting such a mega event involves various challenges, including high infrastruc-

ture costs, security, cost overruns, environmental impact, geopolitical tensions, and the ethical conduct of administrators.

- **Governance Issues**: India's hosting of the 2010 Commonwealth Games was mired in controversies and Corruption
- **High Costs:** Costs can be exorbitant, as seen in the cases of Rio 2016 and Tokyo 2020, with the latter exceeding initial estimates by a large margin.
    - **Recently,** Australia withdrew from hosting the **2026 Commonwealth Games** due to mounting expenditure, and Canada also withdrew its bid for the 2030 edition.

About Olympic Games:

Origin	The Olympic Games originated in **ancient Greece** as part of a religious festival in honour of Zeus, the Greek god of the sky, at Olympia.
Modern Olympics Games	The modern Olympic Games were revived in the **late 19th century**. The first modern Olympic Games were held in **1896 in Athens, Greece**.
	Pierre, Baron de Coubertin, is credited as the architect of the modern Olympic Games.
International Olympic Committee (IOC)	The International Olympic Committee (IOC) **(founded: 1894; HQ: Lausanne, Switzerland)** is a **non-governmental sports organization** responsible for organizing the Olympic Games and governs National Olympic Committees (NOCs).
	In 2009, the UN General Assembly granted the **IOC Permanent Observer status**.
	The IOC Session is **the annual meeting of IOC members** where each member has one vote, and its decisions are final.
Pattern of Olympic Games	Since 1948, the Olympics have been held **every four years**.
	The responsibility of hosting the Olympic Games is **given to a city**, not a country, and the choice of the city is determined solely by the IOC.

Previously in the News,

Insta Links:

- IOC amends the Olympic Charter to strengthen its human rights commitments

Prelims Links:

Q. Consider the following statements in respect of the 44th Chess Olympiad, 2022:

1. It was the first time that the Chess Olympiad was held in India.
2. The official mascot was named Thambi'.
3. The trophy for the winning team in the open section is the Vera Menchik Cup.
4. The trophy for the winning team in the women's section is the Hamilton-Russell Cup.

How many of the statements given above are correct?
(a) Only one
(b) Only two
(c) Only three
(d) All four

Q. Consider the following pairs with regard to sports awards : (UPSC 2022)

1. Major Dhyan Chand Khel Ratna Award: For the most spectacular and outstanding performance by a sportsperson over a period of the last four years
2. Arjuna Award: For the lifetime achievement by a sportsperson
3. Dronacharya Award: To honour eminent coaches who have successfully trained sportspersons or teams
4. Rashtriya Khel Protsahan Puraskar: To recognize the contribution made by sportspersons even after their retirement

How many of the above pairs are correctly matched?
(a) Only one
(b) Only two
(c) Only three
(d) All four

3. URBAN LOCAL BODIES: ASICS 2023 REPORT

Context:

The sixth edition of the Annual Survey of India's City-Systems (ASICS) 2023 report has been released by Janaagraha

What is ASICS?

The **Annual Survey of India's City-Systems (ASICS)** is a comprehensive evaluation of the quality of governance in Indian cities. It was published **after a gap of five years (the last was in 2017). T**he ASICS report this time focused on the **state as a unit instead** of ranking cities as they did in the past.

About Janaagraha

Janaagraha Centre for Citizenship and Democracy (HQ: Bengaluru; founded in 2001) is a non-profit trust, working towards the mission of transforming the quality of life in India's cities and towns

Key highlights of the Report:

Key Insights	Highlights
Purpose of the Report	 City-Systems are the root causes underlying quality of life in cities. A nationwide analysis of local governance in Indian cities from a citizen-centric perspective. ASICS focuses on **four key components (as shown in Diagram):**
Key findings	
Pace of Urbanization	Outlays to the Ministry of Housing and Urban Affairs have increased significantly, but **urbanization is outpacing reform efforts**, leading to persistent quality-of-life challenges.
Urban Legislations	51% of states/union territories **lack accessible urban legislation** in the public domain.
Master Plans	39% of India's capital cities **do not have an active master plan**.
Regional Variations	**Eastern states have better urban legislation**, followed by Southern states.
Urban Planning Performance	**Highly urbanized and large states** perform better in urban planning.
Key challenges in India's city systems	
Discrepancy in Population estimation	Different data sources provide varying estimates of India's urban population
Fiscal Decentralization **Challenges**	Adequate revenue sources are lacking, and **only one state** has devolved essential tax powers to municipal corporations.
Poor Property Tax Efficiency	**Only About 20% of municipal expenditure** is covered by property tax, suggesting the need for revenue optimization and efficiency measures.
Mayors and Councillors	**Mayors and councillors have limited powers**, hindering their ability to address delivery issues, and devolution of funds and functions needs improvement.
Implementation of 74th CAA	**Only 42% of the 74th CAA has been implemented by states**, and the law should be **updated to reflect modern urban realities** and empower mayors and enhance governance functions
Other Issues	**Absence of systematic citizen** participation and transparency.
	Lack of contemporary spatial planning and design standards for public utilities.
Recommendations of the report	
Reforms in Urban Governance	Indian cities must **reform their institutional and financial capacities** to benefit from central government investments in urban infrastructure and services.
Instruments of Change	The report suggests **ten "instruments of change"** for urban reform, including **constitutional amendments**, **metropolitan governance**, **empowered mayor-in-council**, and **participatory governance**
Finance	Increase in Urban Infrastructure Investment and arrange alternative city finances
	Previously, **Isher Judge Ahluwalia reported** that by 2030, nearly ₹39 lakh crore would be required

Urbanization Estimation Methods	Urbanization should be estimated using data on **mobility, labour markets, density, built-up forms,** and night-time data, rather than relying solely on statutory town definitions.
Devolution and Urban Planning	Development authorities lead planning, but cities should take the lead, requiring more **trained urban planners**.
Responsibility for Urban Governance Reform	The responsibility for implementing urban governance reform **lies with state governments,** with the union government providing support through constitutional amendments and leadership.

Suggestions by the national task force that reviewed the 74th Constitutional Amendment, (chaired by K.C. Sivaramakrishnan):

- Empowering the people
- Transferring subjects to the city governments
- **10% of the income tax collected** from cities should be given back to them
    - **Corpus fund**: ensure that this corpus fund is utilized only for infrastructure building.

Other Recommendations for Urban Local Bodies (other than those mentioned in the Report)

Measures	Key Points
Making ULBs Financially Independent	Fiscal decentralization is crucial for the financial independence of Urban Local Bodies (ULBs).
Strengthening Municipal Revenue	Using tools like GIS and digitization to enhance property tax administration, with the support of **State Property Tax Boards** (recommended by 12th and 13 FC respectively)
	The **14th FC** recommended that municipalities be enabled to levy **vacant land tax**
Better Financial Database	Maintenance and audit of accounts at the local level are essential for accessing performance grants.
	Both the 13th and the 14th Finance Commissions included better data availability as a conditionality for accessing performance grants.
Ensuring Active Citizen Participation	Promoting active citizen participation through decentralized platforms like **Area sabhas and ward committees**.
Grievance Redressal	Establishing technology-enabled complaint registration systems and feedback mechanisms for responsive city governance.
Addressing Governance Issues	Tackling structural and architectural problems in urban governance to improve service delivery and citizens' quality of life.

For People's Manifesto and Datajam: Click Here

India's Urbanization Initiatives:

- **For Urban Development**: Smart Cities, AMRUT Mission, Swachh Bharat Mission-Urban, HRIDAY, and Pradhan Mantri Awas Yojana-Urban
- **For slum dwellers and the urban poor**: Pradhan Mantri Garib Kalyan Yojana and Atmanirbhar Bharat Abhiyan, promoting self-reliance.

Conclusion:

To enhance urban governance, plans should start from the grassroots, involving the community to identify their specific needs. Empowering both city governments and the general population is crucial. This empowerment can be achieved through regular elections in cities, accompanied by the transfer of the three Fs: finances, functions, and functionaries.

Mains Links

Q. To what extent, in your opinion, has the decentralization of power in India changed the governance landscape at the grassroots? (UPSC 2022) (200 WORDS, 10 MARKS)

Prelims Links:

Q. Local self-government can be best explained as an exercise in (UPSC 2017)
(a) Federalism
(b) Democratic decentralisation
(c) Administrative delegation
(d) Direct democracy
Ans: B

Topics: India and its neighbourhood- relations.

4. 10 YEARS OF BELT AND ROAD INITIATIVE (BRI)

Context:

The Belt and Road Initiative (BRI), led by **Chinese President Xi Jinping**, marked its **10th anniversary.**

What is the Belt and Road Initiative (BRI)?

The **Belt and Road Initiative (BRI) is** a global infrastructure development strategy launched by **China in 2013**. It aims to invest in **over 150 countries and international organizations**, creating **road, rail, and sea routes** for trade and connectivity. The initiative, often referred to as **"One Belt One Road" (OBOR),** is a key part of China's foreign policy and has

been compared to the **American Marshall Plan**.

Objective of BRI:

The BRI is seen as a way for **China to transition to a global power and reshape** the global economic order. It further aims to enhance **global connectivity through infrastructure development** and economic cooperation.

BRI includes various **infrastructure projects like ports, railways, roads, and power stations**. It is set to be **completed by 2049**, coinciding with the centennial of the People's Republic of China. The initiative includes two principal components: **the Silk Road Economic Belt and the Maritime Silk Road.**

Geographic Corridors for BRI Development:

- China-Pakistan Economic Corridor (CPEC)
- New Eurasian Land Bridge Economic Corridor
- China-Indochina Peninsula Economic Corridor
- China-Mongolia-Russia Economic Corridor
- China-Central Asia-West Asia Economic Corridor
- **China-Myanmar Economic Corridor** (Initially, BRI involved the BCIM Economic Corridor, but India's opposition to the CPEC led to its withdrawal from BRI and later BCIM was replaced by the China-Myanmar Economic Corridor)

India's Objection to BRI:

India opposes the BRI due to **sovereignty and transparency concerns**. It boycotted BRI summits in **2017 and 2019** and hasn't endorsed **BRI joint statements by the SCO**. The main objection is the China-Pakistan Economic Corridor **(CPEC)** passing through the Gilgit Baltistan region of India, which India claims.

Benefits of BRI for China and Other Countries:

Benefit	Description
Enhanced trade and economic influence	BRI expands China's trade networks and bolsters its role in global economic affairs.
	Countries participating in the BRI have witnessed growth in trade and investments with China, leading to preferential treatment and policy benefits.
Outlet for excess capacity	BRI projects provide markets for **Chinese industries**, particularly in construction.
Geopolitical and strategic influence	BRI **increases China's influence** in participating countries and on the world stage.
Currency internationalization	Promotes the use of the **Chinese yuan (RMB)** in international trade and finance.
Energy security	BRI projects secure access to **crucial energy resources** for China.
Technological innovation and knowledge sharing	BRI facilitates **technology transfer and knowledge exchange** between China and its partners.
Examples	**Pakistan**: China-Pakistan Economic Corridor (CPEC)
	Kenya: Standard Gauge Railway project
	Greece: The Piraeus Port project has turned Greece into a major transport hub, increasing trade and creating jobs.
	Laos: The China-Laos Railway
	Sri Lanka: Hambantota Port
	Egypt: Suez Canal Economic Zone

Concerns Related to the Belt and Road Initiative (BRI):

Concern	Description
Sovereignty concern	India and other countries express sovereignty concerns over BRI projects like the China-Pakistan Economic Corridor **(CPEC)**.
Strategic concern	India is worried about the strategic implications of BRI, including the **impact on its maritime capabilities and regional influence**.
Lack of Transparency	Concerns have arisen due to **the lack of transparency in BRI projects**, particularly related to **debt and loan conditions**.
	BRI infrastructure project has encountered **major implementation problems, such as corruption scandals, labour violations**, environmental hazards, and public protests.
Project Monopoly concern	**Chinese state-owned enterprises** dominate BRI investments, limiting competition and opportunities for other companies.
Economic Viability	The lack of **competition and high interest rates** on loans have raised concerns about corruption and **economic viability**.
Delays in Project	Some BRI projects **face delays and challenges**, leading to questions about the feasibility and impact of China's ambitious strategy.

Debt Trap	China is criticized for practising **"**debt-trap diplomacy," where it lends money to countries like **Sri Lanka and Zambia,** who struggle to repay, leading to China acquiring strategic assets or political concessions.
Multilateral Governance	Unlike initiatives like the **Asian Infrastructure Investment Bank (AIIB), the BRI** lacks a centralized governing structure, making it difficult to address issues collectively.
Political Tensions	Geopolitical rivalries and disputes have affected BRI project implementation, potentially undermining progress.
Environmental Concerns	BRI infrastructure projects have faced **criticism for their environmental and social impacts**, requiring sustainable development.
Geostrategic Concerns	BRI projects **will enhance China's stature and undermine India's influence** over smaller South Asian countries and Indian Ocean littoral states.

Alternatives to address concerns about BRI:

Initiative	Description
B3W Initiative	Led by G7 countries, it aims to address the infrastructure deficit in developing and lower-income countries.
Blue Dot Network (BDN)	A multi-stakeholder initiative by the US, Japan, and Australia to promote high-quality standards for global infrastructure development.
India's Efforts	**India's "IDEAS" plan**: India's counter to BRI, supported by Lines of Credit (LOCs) to countries in Asia, Africa, CIS, and Latin America. It includes initiatives like IMEC and INSTC.
	India-Middle East-Europe Economic Corridor **(IMEC)** initiative during the recent G20 summit
	International North-South Transport Corridor **(INSTC**) for connecting India to the Middle East and Russia
Global Gateway	Launched by the European Union to compete with BRI, focusing on various sectors, including climate change, digitalization, health, and education.
Partnership for Global Infrastructure and Investment (PGII)	A repackaged version of B3W. It is a G7 effort to fund infrastructure projects in developing nations. India supports it.

Conclusion

China, in order to go ahead and protect its own interests, has put in place a network of investments which has led to several low- and middle-income countries in severe debt hence the global initiatives have provided a counter block for monopoly and taken steps to focus on more inclusive and sustainable development.

Insta Links:

Belt and Road initiative

Mains Links:

Q1. The China-Pakistan Economic Corridor (CPEC) is viewed as a cardinal subset of China's larger 'One Belt One Road' initiative. Give a brief description of CPEC and enumerate the reasons why India has distanced itself from the same. (UPSC 2018)

Q2. "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)

Prelims Links:

Q. Belt and Road Initiative' is sometimes mentioned in the news in the context of the affairs of (UPSC 2016)
(a) African Union
(b) Brazil
(c) European Union
(d) China
Ans: D

GENERAL STUDIES – 3

Topics: Major crops cropping patterns in various parts of the country, different types of irrigation and irrigation systems storage, transport and marketing of agricultural produce and issues and related constraints; e-technology in the aid of farmers.

1. WATER USE IN INDIAN AGRICULTURE

Context:

The article discusses India's progress in food security and its water usage in agriculture

India's food production improvements:

- Exports Surge**:** India exported 85 million tonnes of cereals, including staples like rice, wheat, and corn, from 2020 to 2023.
- **Domestic Support:** The PM Garib Kalyan Yojana provided free rice or wheat to over 800 million people, demonstrating the country's ability to support its population while being a major exporter.

- **Milk Production Growth:** India's milk production increased from 17 MT in 1951 to 222 MT in 2022-23, making it the world's largest milk producer.
- **Diversified Production**: India has witnessed rapid growth in poultry and fishery sectors since the 2000s, signifying a shift beyond traditional staples into what's known as the pink (poultry) and blue (fishery) revolutions.

How India Uses Water for Agriculture?

Aspect	Description
Agricultural Dependency	India, with **18% of the world's population**, only possesses 4% of its freshwater resources.
	India's heavy reliance on water for agriculture is evident, with estimates varying from **78% to 90% of water usage for farming**
Irrigation Status	Currently, **approximately 50% of India's gross cropped area** is irrigated, with plans to increase this to 75% to manage climate-related uncertainties.
Inefficient usage of water	Groundwater is the **primary source of irrigation**. Various subsidies and incentives are given to support it. However, it has led to over-exploitation of water, especially in the north-west region.
Economic Constraints	**Extensive subsidies**, including food and fertilizers, make it challenging to invest in water management.
Two Crops use maximum water	As per a **NABARD-ICRIER study** on Water Productivity Mapping; **Rice and Sugarcane** alone consume almost **60 % of India's irrigation water**

What should be India's Water Strategy for Agriculture?

Strategy	Description
Buffer Stocking	Enhance water storage during the monsoon season in reservoirs.
Water-smart technologies	Like **micro-irrigation, cover-crop method, deficit irrigation**, precision estimation of crop water needs, etc.
Monetary Rewards	Offering financial incentives to farmers who save water and power can drive the transition to less water-intensive crops. E.g., the Punjab government's **'Pani Bachao, Paisa Kamao'**
	The article emphasizes the n**eed to reward farmers for switching from water-intensive crops like paddy and sugarcane** to less water-intensive crops like millets, pulses, and oilseeds
Groundwater Recharge	Focus on recharging groundwater through **check dams and watersheds**.
Demand Management	Promote rational water allocation and efficient usage across crops.
Institutional Reforms	Implement reforms in the irrigation sector, including water and power pricing.
Increase Irrigated Land	Aim to irrigate at **least 75% of the gross cropped area** to cope with climate uncertainties.
Private Investment	Address the challenge of attracting private investments in water infrastructure by considering pricing.
Shift Focus	Prioritize water productivity, as exemplified in Punjab where rice has high land productivity but low water productivity.
Promote Water-Saving Practices	Encourage farming practices that save water, such as **direct seeded rice (DSR), alternate wet and dry (AWD) irrigation**, zero till, and drip irrigation for sugarcane.
Private Sector Investments	Attract private sector investments in reservoirs and canal networks to improve water infrastructure. **Public-private partnerships** can help fund these projects

Case Study:
Israel's Water Management: Israel excels in water technology, including drip systems, desalination, and wastewater recycling, which could benefit Indian agriculture with the right political commitment.

Click Here For Regenerative agriculture: A step towards water conservation

Government Efforts in Agriculture:

Government Efforts	Description
National Mission of Sustainable Agriculture	Launched in 2010 to promote responsible resource management.
Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)	Introduced in 2015 to encourage micro/drip irrigation for water conservation.
Paramparagat Krishi Vikas Yojana	Implemented to leverage **climate-smart farming** practices and technologies.
Green India Mission	Launched in 2014 to protect and restore forest covers, combating climate change.
Neem-Coated Urea	Introduced to reduce excess use of urea fertilizers and protect soil health.

National Project on Organic Farming and National Agroforestry Policy	Promote organic farming and agroforestry for ecological and economic benefits.
State-level Organic Farming Initiatives	States like Andhra Pradesh, Himachal Pradesh, and Sikkim promote organic farming.
ICAR Climate-Resilient **Villages**	Establishing **climate-resilient villages** in 151 districts to build carbon-positive communities.

Insta Links:

- Climate-smart agriculture

Mains Links:

Q. Elaborate on the impact of the National Watershed Project in increasing agricultural production from water-stressed areas. (UPSC 2019)

Q. How and to what extent would micro-irrigation help in solving India's water crisis? (UPSC 2021)

Prelims Link:

Q. Among the following, which one is the least water-efficient crop? (UPSC 2021)
(a) Sugarcane
(b) Sunflower
© Pearl Millet
(d) Red gram

Answer: A

2. WORLD FOOD DAY: WWF'S REPORT: THE HIGH COST OF CHEAP WATER

Context:

The WWF's report, titled **"The High Cost of Cheap Water,"** warns of a growing global water crisis that poses a **threat to $58 trillion in economic value**, food security, and sustainability.

About the Report:

The report, released on World Food Day **(16th Oct)**, presents the **first-ever annual estimate of the economic value of water and freshwater ecosystems**

Major Findings, Threats, and Recommendations in the Report:

Findings	Description
Economic and environmental challenges	A global water crisis is mounting, **posing a threat to $58 trillion** in economic value (about 60% of the World's GDP), food security, and sustainability.
Direct Economic significance of water resources	**Water and freshwater ecosystems** provide both direct and indirect benefits, with direct economic benefits **amounting to over $7 trillion annually**
Indirect Economic Benefits	**Unseen benefits of water ecosystems**, such as purifying water, enhancing soil health, storing carbon, and protecting against extreme weather events, are estimated at around **$50 trillion annually.**
Decline in ecological health	The world has **lost a third of its wetlands since 1970**, and freshwater wildlife populations have seen an average **83% decline**.
"Water Blindness"	There is a **lack of awareness and understanding** of the importance of water resources, the report refers to it as water blindness.
Threats to the Water Ecosystem	
Agriculture's impact	Unsustainable agricultural practices, accounting for over 70% of freshwater use, are a primary threat to rivers and floodplains.
	Excessive fertilizer use leads to diffuse pollution affecting surface and groundwater.
Climate Change	Climate change disrupts the hydrological cycle and reduces water availability.
Pollution	Water pollution by human activities like use of fertilizers, microplastics
Unsustainable Developments	Flow modification & fragmentation by Infrastructure like dams and river diversions
Recommendations Given in the Report	
Preserving water resources	Protecting and **restoring rivers and floodplains** is essential for food security, as they play a crucial role in maintaining agricultural productivity.
Wetlands	Revitalize **30% of Degraded Rivers** and Wetlands by 2030
Subsidies	End Harmful Subsidies in agriculture and energy.
Nature Based Solutions	Financial institutions should Invest in **Nature-based Solutions** for climate adaptation.

Industry responsibility	The food industry is encouraged to **embrace sustainability practices to reduce harm** to freshwater ecosystems, biodiversity, and climate.
Role of water ecosystems in climate resilience	Healthy water ecosystems are vital for climate adaptation, including **mitigating floods, building resilience to droughts**, and sustaining landscapes.

To know about: Water use in Indian agriculture Click Here

To know about: Water Management in India: Click Here

To Know about the growing water crisis and One water Approach (OWA): Click Here

About World Food Day:

It is an international day celebrated every year worldwide on **October 16 to** commemorate the date of the founding of the United Nations Food and Agriculture Organization in 1945. The theme for World Food Day in 2023 is **"Water is life, water is food"**.

About WWF:

The World Wide Fund for Nature is a **Swiss-based (HQ: Gland) international non-governmental organization** founded in 1961.

It's the **world's largest conservation organization** focuses on preserving the environment and aims to halt its degradation. WWF runs campaigns like **Earth Hour.** WWF is part of the **Foundations Platform F20**

Mains Links:

Q. Analyse the availability and usage of water in India. In the context of 'One Water Approch', discuss the measures that are needed for effective management of water in India. (250 Words)

Prelims Link

Consider the following statements: (UPSC 2015)

1. The Accelerated Irrigation Benefits Programme was launched during 1996-97 to provide loan assistance to poor farmers.
2. The Command Area Development Programme was launched in 1974-75 for the development of water-use efficiency

Which of the statements given above is/ are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

Answer: B

The Accelerated Irrigation Benefits Programme (AIBP) was launched in 1996 as a central assistance programme, with the aim to accelerate the creation of irrigation potential.

The Command Area Development (CAD) programme was initiated in 1974-75 with a view to bridging the gap between the potential created and its utilisation and optimising agricultural productivity through better management of land and water use in the command areas served by selected major and medium irrigation projects.

3. ROLE OF FARMER PRODUCERS' ORGANIZATIONS (FPOS)

Context:

In the past two years, Eastern Uttar Pradesh (UP) has seen significant growth in vegetable and fruit exports. This growth is attributed to Farmer Producers' Organizations (FPOs) **that have played a pivotal role in promoting cluster-based farming**, facilitating technology adoption, and helping farmers market their produce.

What are FPOs?

FPOs are **voluntary organizations** controlled by their farmer-members who actively participate in setting their policies and making decisions to improve their own socio-economic situation and that of their communities.

Objectives:

To Leverage **economies of scale** in production and marketing to enhance productivity through efficient, cost-effective and sustainable resource use for ensuring sustainable income-oriented farming

Role of FPOs in Modernizing Indian Agriculture:

Role	Description
Reducing Costs and Increasing Income	FPOs help reduce farmers' costs through bulk purchases of inputs and enable better marketing of farm products. They aggregate produce and offer bulk transport solutions.
Modernization of Agriculture	FPOs promote the modernization of agriculture, particularly benefiting small and marginal farmers who may lack access to modern equipment.
	Specialized Farming: An FPO led the initiative to farm special Kalanamak rice in Siddharthnagar district (UP)

Addressing Small Land Holdings	With the majority of Indian farmers having small land holdings, FPOs encourage collective farming, addressing productivity challenges associated with limited farm size.
Enhancing Bargaining Power	FPOs empower farmers by enhancing their bargaining power and income levels, enabling them to compete with large corporate enterprises.
	Unique Recognition: FPOs have successfully registered local products under Geographical Indications, such as Adam Chini rice and Banarasi langda
Access to Technology	FPOs provide access to modern technologies, credit, capacity-building, and training, and ensure traceability of agricultural produce.
Easy Access to Credit	Farmers within FPOs have easier access to funds and support services from the government, donors, and service providers.
Eliminating Intermediaries	FPOs play a crucial role in eliminating non-transparent intermediaries in agricultural marketing, leading to better incomes for farmers.
Value Addition	FPOs minimize post-harvest losses through value addition and efficient management of value chain facilities.
Collective Strength	FPOs facilitate the collectivization of small, marginal, and landless farmers, giving them collective strength to address issues like crop failure and market access.
Managing Price Fluctuations	Practices like contract farming and agreements, enabled by FPOs, help manage price fluctuations.
Effective Communication	FPOs enable efficient communication for disseminating information about prices, volumes, and other farming-related advisories.
Nutritional Focus	FPOs are enhancing **local diets** by developing the value chain of nutrient-rich agri-products like millets, mushrooms, moringa, and fortified cereals.
Local Campaigns	In Rampur, an FPO collaborated with district administration for the "**Aahaar Se Upchar Tak" campaign**, supplying nutrition-rich products to anganwadi kendras, and enhancing local nutrition.

Issues Facing FPOs:

- **Lack of/ Inadequate Professional Management** - Trained rural manpower is scarce for professional FPO management.
- **Weak Financials** - FPOs primarily comprise small and marginal farmers with limited resources, hindering their ability to provide quality products and services initially.
- **Inadequate Access to Credit** - Credit guarantee schemes require FPOs to have a minimum of 500 shareholder members, leaving many small FPOs without access to credit benefits.
- **Lack of Risk Mitigation Mechanism** - Existing insurance schemes cover production risks for farmers but do not address business risks for FPOs.
- **Inadequate Access to Markets** - FPOs struggle with limited connections to industry players, large retailers, and other market participants.
- **Inadequate Access to Infrastructure** - FPOs lack essential facilities like transport, storage, value addition, processing, brand building, and marketing.
- **Lack of Technical Skills/Awareness** - Farmers often lack awareness of the benefits of collective farming, and there is a shortage of competent agencies to provide support.

Government steps to address various agricultural issues:

Government Steps	Description
Scheme for 10,000 FPOs	Establishing 10,000 Farmer Producer Organizations to enhance agricultural profitability and benefit farmers.
Equity Grant Fund Scheme for Enhancing Viability	Supporting FPOs in improving their viability, sustainability, and creditworthiness through an equity grant fund.
Credit Guarantee Fund Scheme	Providing collateral-free credit to FPOs, facilitating their access to financial resources for agricultural activities.
Scheme for the Creation of Backward and Forward Linkages	Bridging supply chain gaps by facilitating raw material availability and market linkages for FPOs.
Operation Greens **(TOP to TOTAL)**	Promoting FPOs, agri-logistics, processing facilities, and professional management to boost agricultural value chains.
100% Tax Deduction for FPOs with Annual Turnover up to Rs. 100 Crores	Offering tax incentives to FPOs with turnovers within the specified limit.

UP Government Support for FPOs:

- **Formation Plans:** The Centre aims to establish 10,000 FPOs nationwide. In Uttar Pradesh (UP), the

goal is to create one FPO in each of its 826 blocks annually for five years.

- **Dedicated Support**: UP has a specialized FPO cell to guide these organizations, ensuring scheme convergence and addressing compliance.
- **FPO Shakti Portal**: Launched in UP, it offers grievance redressal and business partnership opportunities for FPOs. As of July 15, 1,600 FPOs with a turnover of Rs 229 crore have registered on the portal.
- **Financial Assistance**: The Agriculture Infrastructure Fund provides FPOs with a 3% interest subvention. UP adds another 3%, reducing loan interest to around 3%.
- **Subsidies:** Both Central and state-sponsored schemes offer capital subsidies, encouraging post-harvest infrastructure development.

Conclusion:

To improve FPOs, there is a need to scale and strengthen FPOs, amend the APMC Act for fee exemptions, build farm-level infrastructure, enable MSP procurement, attract private investors, extend funding schemes, create flexible policies, and conduct rural farmer awareness programs.

Insta Links:

Farmer Producer Organizations

Mains Links:

"In the villages itself, no form of credit organization will be suitable except the cooperative society." – All Indian rural credit survey. Discuss this statement in the background of agriculture finance in India. What constraints and challenges do financial institutions supply agricultural finances? How can technology be used to better reach and serve rural clients? (UPSC 2014)

Topics: Awareness in space.

4. INDIAN SPACE ECONOMY: DECADAL VISION AND STRATEGY

Context:

The Indian National Space Promotion and Authorization Centre (IN-SPACe) has unveiled a **decadal vision and strategy** for the Indian space economy, aiming to significantly boost its growth.

What is IN-SPACE?

IN-SPACe is **India's single-window autonomous agency** under the Department of Space, responsible for promoting and authorizing various space activities for non-governmental entities (NGEs).

- It was launched in 2020 to provide a **level playing field for private companies** to use Indian space infrastructure
- It acts as a **single-point interface** between Indian Space Research Organisation (ISRO), and everyone who wants to participate in space-related activities or use India's space resources

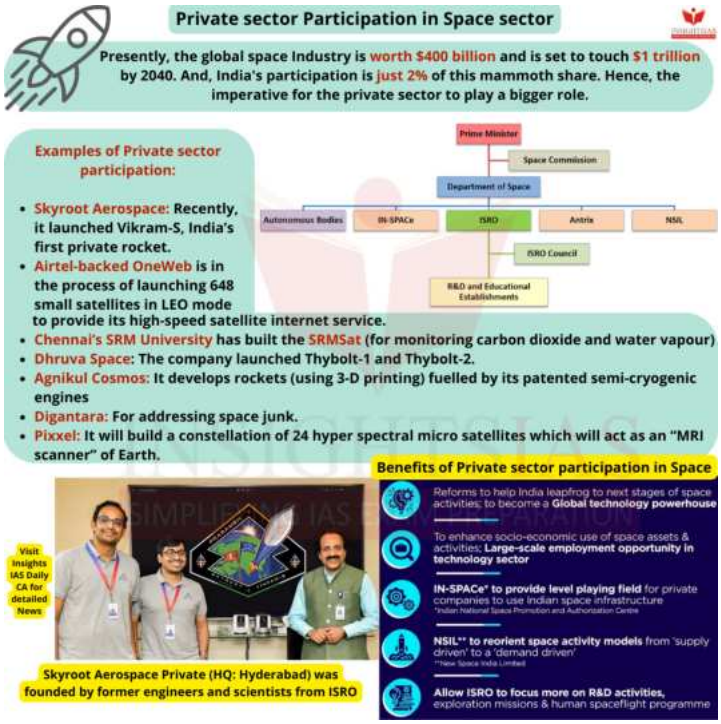
The key points of IN-SPACE's Decadal Vision and Strategy:

Key Points	Details
8% Target	Aiming for an 8% global share in the space economy by 2033, up from the current 2%.
Increase Domestic and Export Share	Expanding the **domestic market share** from $8 billion to $33 billion and **export market share** from **$0.3 billion** to $11 billion by 2033. The current size of the global Space economy is $ 546 billion
Collaborations	Emphasizing collaboration among stakeholders and promoting private sector participation.
Investment	Envisioning an investment of ₹17,600 crore ($22 billion) over the next decade.
Focus Areas	IN-SPACe will focus on three areas: Space-for-Earth, Access-to-Space, and Space-for-Space.
10 Key Capabilities	The decadal vision includes 10 key capabilities: Demand generation, Earth observation, Communication, Navigation, Research, Talent Development, Finance, International Cooperation, Collaboration, and Policy regulation.

Emerging trends and their contribution to the Indian space sector:

Trends	Contribution to the Indian Space Sector
Private participation	ISRO promotes private participation, and domestic private space companies have raised over $245 million in funding. India ranks **fifth** globally in terms of the number of private space firms.
International collaboration	ISRO collaborates with countries and international organizations for joint missions and technology transfers. For example, the **NASA-ISRO Synthetic Aperture Radar (NISAR) mission** is a joint project.
Outer planetary missions	India made history by reaching the Martian orbit with the Mangalyaan Mission and is launching Chandrayaan-3, India's lunar exploration mission, in the first quarter of 2023.

Human missions	Gaganyaan, **India's first manned mission to space**, is a significant milestone scheduled for 2023.
Development of new technologies	ISRO is developing new technologies like reusable launch vehicles and Inflatable Aerodynamic Decelerator (IAD). Agnikul, a domestic startup, successfully tested 3D-printed rocket engines.
Expansion of satellite-based services	ISRO provides satellite-based services in remote sensing, navigation, and meteorology. It plans to expand these services and offer satellite-derived data to stimulate innovation.



Bottlenecks in the Indian space sector:

- **Access to Capital**: Limited funding for downstream companies, as upstream activities receive major investments.
- **Human Resource Constraints**: A need for technically inclined marketing personnel, but they tend to prefer established businesses with market-level salaries.
- **Monopolization:** High capital requirements make it challenging for many players to enter the industry, leading to potential monopolization.
- **Funding Disparity:** India's space budget is significantly smaller compared to countries like the US and China.

Measures taken to promote private sector participation in the space industry:

Measures	Description
New Space India Limited (NSIL)	Established to utilize ISRO's research and development for commercial purposes through Indian industry partners. Announced in Budget 2019.
Indian Space Association (ISpA)	Aims to represent the collective voice of the Indian space industry, including leading domestic and global corporations with advanced space and satellite capabilities.
National Space Policy 2023	The government has approved the **Indian Space Policy (ISP) 2023**, to boost private sector participation and increase investments in the space sector from private companies
ISRO Startup Hub	Launched in 2019, it provides a platform for startups to collaborate with ISRO, access ISRO's facilities, and benefit from ISRO's expertise.
Space Activities Bill, 2020	Currently under consideration by the Indian Parliament, this bill would allow private companies to engage in space activities, including satellite launches and space-based services.

Other Recommendations:

A recent report by the Indian Space Association, NASSCOM and Deloitte India suggested adopting OECD's framework for **segmenting the space value chain** into upstream, downstream and Auxiliary categories

- **Upstream**: All activities, products and infrastructure that ensure development, testing, launching, operations and monitoring of space assets
- **Downstream**: All applications, services and devices relying on satellites to create business value including Earth Observation, Satellite, SATCOM, etc
- **Auxilliary**: Additional space-related activities such as space insurance, awareness, education and training

Conclusion

The Indian space sector has an opportunity to create a vibrant ecosystem for start-ups and private enterprises. India needs to focus on building a comprehensive space policy, providing access to capital for early-stage startups, access to satellite technology for industry, improved training for satellite operations, and allowing private players to use the Indian Space Research Organisation's (ISRO) testing facilities.

Insta Links

- Milestones in India's Space Programme
- Startups are powering India's Space Odyssey 2.0

Mains Link:

Q. What is India's plan to have its own space station and how will it benefit our space programme? (UPSC 2019)

Q. Discuss India's achievements in the field of Space Science and Technology. How the application of this technology has helped India in its socioeconomic development? (UPSC 2016)

Prelims Links

Q. Consider the following statements: (UPSC 2016)

The Mangalyaan launched by ISRO
1. is also called the Mars Orbiter Mission
2. made India the second country to have a spacecraft orbit the Mars after USA
3. made India the only country to be successful in making its spacecraft orbit Mars in its very first attempt

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Ans: C

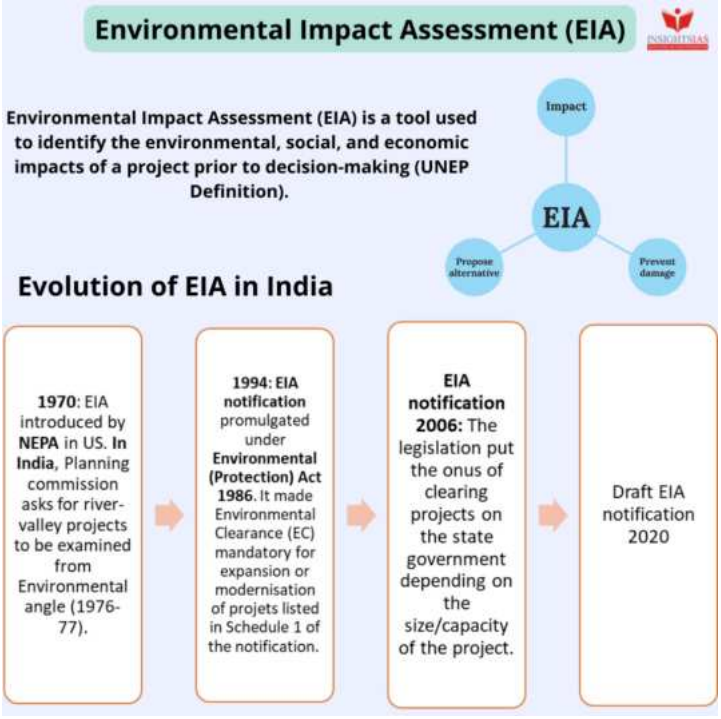
Topics: Conservation related issues, environmental pollution and degradation, environmental impact assessment.

5. HIMALAYAN REGION: NEED FOR EIA

Context:

This article discusses the **importance of Environmental Impact Assessment (EIA)** with respect to the fragile Himalayan ecosystem

What is EIA and its evolution?



Need for EIA in the Himalayn Region:

Challenges	Reasons
Recurring Disasters	Recent events like the **Teesta dam breach (Sept 2023) in Sikkim and Himachal Pradesh** floods and landslides underscore the environmental toll of our development model, particularly in mountainous regions.
"One size fits all" approach	The Himalayan region's unique ecological importance, serving as a water tower and provider of ecosystem services, **is not adequately considered in the existing EIA system.**
Unsuitability of a graded approach	The **differentiated risk management approach** used in the regulatory system doesn't account for the **special ecological features** of the Indian Himalayan Region (IHR).
Unplanned Urbanization	Unplanned construction has disrupted natural water flow, leading to frequent landslides and instability in the Himalayan slopes.
Construction of Dams	The construction of dams without proper environmental impact assessment could submerge arable lands, and biodiversity hotspots, and displace villagers, affecting fisheries and fish ecology.
Ecology under stress	Population growth, industrial and commercial activities, deforestation, soil erosion, and land pressure are stressing the fragile Himalayan ecology.

Vulnerability to extreme conditions	The Himalayas are **inherently vulnerable to extreme weather conditions**, and seismic activity, and are further impacted by climate change.

Suggestions:

- **Address the needs of mountainous regions** like the Himalayas in all four stages of the Environmental Impact Assessment (EIA): **Screening, scoping, public consultation, and appraisal.**
- **Modify the criteria for projects requiring Environmental Clearance** to align with the ecological needs of mountainous regions.
- Include clauses in the general conditions for all projects regarding the **Indian Himalayan Region (IHR)** or mountainous areas with specific characteristics to hold project proponents accountable.
- Utilize the **Environmental Impact Assessment (EIA) diligently** as a powerful regulatory tool to promote sustainable development in the IHR and the entire country.

For recent changes in EIA notifications: Click Here

Conclusion:

A differentiated risk management approach for the IHR in the EIA process and the introduction of a national-level regulator are suggested as potential solutions to address these challenges effectively.

About Environment Impact Assessment (EIA) Notification, 2006

The **Environment Impact Assessment (EIA) Notification, 2006**, is the governing legal instrument to **grant green clearance for the establishment or expansion of an industry** on the basis of the expected environmental impact of the project.

Features of EIA Notification, 2006:

- The EIA Notification 2006 essentially attempted to **decentralise power to the State Government.**
- For this purpose, the rules **categorize the projects into two categories - A and B**, on the basis of the magnitude of their scale and impact on the natural and artificial resources.
- Under this Notification, the **environmental clearance process** undergoes four stages, namely, **screening, scoping, public consultation, and appraisal stages.**
- With **further amendments**, including in 2020, the EIA Notification underwent several changes with **some features meeting the objectives and some diluting the purpose.**

Insta Links:

- EIA Amendments

Mains Link:

Q. Environmental Impact Assessment studies are increasingly undertaken before a project is cleared by the Government. Discuss the environmental impacts of coal-fired thermal plants located at coal pitheads. (UPSC 2014)

Topics: Disaster and management.

6. 2023 GLOBAL SURVEY ON PERSONS WITH DISABILITIES AND DISASTERS

Context:

The UN Office for Disaster Risk Reduction (UNDRR) conducted the 2023 Global Survey on Persons with Disabilities and Disasters, following up on the **2013 survey**.

About the Survey Report:

The report was released ahead of **International Day for DRR** (October 13). Its theme **"Fighting inequality for a resilient future"** is aligned with the Sendai Framework.

Aim of the survey:

It is aimed to assess the **preparedness of persons with disabilities** for disasters, accessibility of early warning and risk information, awareness of disaster risk reduction (DRR) plans, and their participation in DRR decision-making.

What is DRR?

Disaster Risk Reduction (DRR) refers to the practices and strategies aimed at minimizing the risks and vulnerabilities associated with natural and human-made disasters.

Key results of the survey:

- **Limited progress in disability inclusion in DRR** over the past decade, with no significant regional differences.
- **Low awareness** of DRR plans among disabled
- **Lack of DRR plans** addressing the specific needs of persons with disabilities
- Limited participation in local-level DRR decisions by persons with disabilities
- **24% of respondents had been displaced** due to crises or disasters, with armed conflict or violence being the leading cause of displacement.

Recommendations:

- There is a need for **dedicated leadership roles for disability inclusion** and addressing underlying risk factors to promote inclusion and resilience for all.
- Compliance with international law
- Inclusion of persons with disabilities in policymaking
- **Addressing intersectionalities** and diversity in DRR policies and practices

- **Equity between persons with and without disabilities** in all measures to reduce and prevent disaster risk.

Sendai Framework for DRR 2015–2030 recognizes **Persons with Disabilities (PwDs)** as contributing stakeholders and emphasises the need for their inclusion in all DRR policies and practices.

India's Initiatives:

September 2019: NDMA came out with comprehensive guidelines under the title, **'National Disaster Management Guidelines on Disability-Inclusive Disaster Risk Reduction, 2019' (NDMA 2019)**. This was the **first comprehensive set of guidelines** issued by any country globally on disability-inclusive disaster risk reduction (DiDRR).

Features of NDMA guidelines:

Feature	Description
Information Symmetry	Provision for **sign language interpretation** and subtitles for persons with hearing impairment in video graphic materials.
Proper Training	Training for emergency response personnel to understand the rights of persons with disabilities and related disaster risks.
24x7 Helpline Number	Establishment of 24x7 helplines for persons with disabilities.
Essentials for PwDs	Ensuring services like **caregiver support, supplies, and medical aid** are delivered to the doorstep of persons with disabilities.
State Commissioner for PwDs	Appointing a **State Commissioner for Persons with Disabilities** as the nodal officer to address disability-specific issues during crises.
Awareness	**Promotion of awareness** about disaster risk reduction challenges for persons with disabilities.
Support	Encouragement of **technological support and innovations** to benefit persons with disabilities in disaster risk reduction.
Sensitization	**Sensitizing local communities** about the presence of persons with disabilities and their special needs, especially during disasters.
Informed PwDs	Measures, including **early warnings,** to ensure that persons with disabilities are properly informed and prepared.
Involvement of PwDs	Active involvement of persons with disabilities **as equal participants** in disaster preparedness and planning.
Protection of Properties of PwDs	Special attention to **protect the property and assets of persons with disabilities** after evacuation or in post-disaster situations.

Other efforts:

Effort	Description
G20 Disaster Risk Reduction (DRR) Working Group	India established the first G20 Working Group on DRR during its presidency to prioritize DRR within the G20.
Expanding Disaster Early Warning	Effective early warning systems during Cyclone Biparjoy resulted in zero deaths from the event in India.
UN Secretary General's Early Warnings for All Initiative	India is working to achieve universal early warning coverage for everyone by the end of 2027.
Coalition for Disaster Resilient Infrastructure (CRDI)	India launched CRDI with the UN in 2019 to support policy development and capacity for disaster-resilient infrastructure, especially in developing countries.
Manual for Disaster Management Plan (DMP)	The Union Ministry of Jal Shakti has released the Manual for Disaster Management Plan (DMP).

Best Practices - Disaster Response in Odisha:

Best Practice	Description
Sneha Abhiyaan	Self-help groups (SHGs) in villages manage cyclone shelters, including the distribution of cooked food.
Mamta Gruhas	Safe spaces provide comprehensive care for women, children, and vulnerable sections of society.
Training and Capacity Building	SDRF provides training to frontline workers, including ASHAs and SHGs, in various aspects of disaster response.

Conclusion:

All the constructive steps initiated are **stepping stones in India's journey towards becoming a disability-inclusive society**. These measures also open up possibilities to take the movement forward, introducing more **need-based and disability-sensitive strategies** by including the stakeholders and caregivers in the decision-making process.

About UNDRR:

UNDRR (est. 1999; HQ: Geneva, Switzerland) was created to ensure the implementation of the **International Strategy for Disaster Reduction** and later support the implementation of the Sendai Framework.

Inta Links

- Risk-reduction strategies using traditional knowledge

- United Nations Office for Disaster Risk Reduction (UNISDR)

Practice Question:
Q. Discuss the need for Disaster risk reduction in India. What are the challenges involved and explain the global efforts in this direction? (250 words)

GENERAL STUDIES – 4

1. EXAMPLE OF ETHICS

Example 1: Indian superwomen

Two women from **Kerala, Sabitha and Meera Mohanan**, working as caregivers for an elderly couple in **Israel**, became heroes during an attack by insurgents from the Hamas group. The Israeli Embassy in India hailed them as "**Indian superwomen**." Sabitha described the harrowing incident when they locked themselves in a safety room for more than four hours while attackers rained bullets on the door.

Ethical Values are shown:

Sabitha and Meera demonstrated remarkable ethical values, including **courage, selflessness, and dedication to protecting the elderly** couple they were caring for during the attack. They risked their lives to ensure the safety of others and showed **unwavering commitment to their duty**

Example 2: Copyright issues against AI

Music publishers Universal Music, ABKCO, and Concord Publishing have filed a lawsuit against artificial intelligence company **Anthropic**, alleging the misuse of copyrighted song lyrics to train its chatbot Claude. The publishers claim that Anthropic violated their rights by using lyrics from over 500 songs without permission.

Ethical Issues:

The lawsuit against Anthropic raises ethical concerns about the use of copyrighted song lyrics without permission to train AI, potentially **infringing on intellectual property rights and creative content ownership.**

CONTENT FOR MAINS ENRICHMENT

1. AI-BASED SYSTEM ENHANCES ELEPHANT SAFETY ON RAIL TRACKS

Tamil Nadu is close to completing its **first** artificial intelligence **(AI)-based early warning system** designed to **protect wild elephants** from train collisions along the Ettimadai–Walayar railway section. This initiative involves **the installation of 12 e-surveillance towers** equipped with thermal imaging cameras to monitor elephant movements. Once fully functional, the system will **alert forest department staff and railway authorities** to reduce train speed, enhancing elephant safety in the region.

Previous Measures:

Measure	Description
Coordination Committee	The Union Environment Ministry set up a permanent coordination committee involving the Ministry of Railways and the Environment Ministry to prevent **elephant deaths on railway tracks**
Eco Bridges (Wildlife Corridors)	These are **wildlife corridors, also known as wildlife crossings**, which connect two larger areas of similar wildlife habitat, allowing animals to move safely.
MIKE Program	The "Monitoring the Illegal Killing of Elephants (MIKE)" program was launched in 2003 to combat illegal elephant poaching and trade.
Seed Bombs for Elephant Food Enrichment	**Odisha's Athagarh Forest Division** has initiated the practice of casting seed balls (or bombs) in reserve forest areas to enrich food stock for wild elephants and mitigate human-elephant conflicts.
Right of Passage for Elephants	The Supreme Court upheld the 2011 Madras High Court order regarding the **Nilgiris elephant corridor, affirming the animals' right of passage and mandating** the closure of resorts in the area.

Usage:

The examples of initiatives can be used in Environment/ Ethics (Animal Ethics) Questions

2. LIFE LESSONS FROM WALT DISNEY

Context:

On the occasion of **Disney's 100th year**, the article delves into the history and origins of the Disney empire, starting from Walt Disney's humble beginnings in Kansas City.

Life Lessons from Walt Disney (1901-1966):

Life Lessons	
Dream Big	Walt Disney's success began with a dream. He showed that **having big dreams and pursuing them** relentlessly can lead to great achievements.
Perseverance	Disney started from a humble beginning and faced numerous setbacks and even bankruptcy, but he never gave up. He taught us that **perseverance and resilience** are keys to success.
Creativity	Disney encouraged thinking outside the box e.g., the creation of the iconic character **Mickey Mouse**
	Innovation: Disney was known for his innovative ideas, from creating **the first feature-length animated film** to introducing Disneyland
Patriotism	Disney's contributions during **World War II**, including producing war-related films and patriotic content
	During WW 1, he joined the **American Red Cross** and was sent overseas where he spent over a year driving an ambulance across **France and Germany.**
Legacy	Disney's legacy endures through **his creations and the impact** he had on entertainment and storytelling. He taught us about leaving a lasting legacy.
Imagination	Disney celebrated the power of imagination and encouraged us to let our imagination run wild. He believed that imagination can change the world.

MOTIVATION – A Quote From Walt Disney

"All the adversity I've had in my life, all my troubles and obstacles, have strengthened me… You may not realize it when it happens, but a kick in the teeth may be the best thing in the world for you."

3. AMUL'S 'BE MORE MILK' CAMPAIGN

Context:

The campaign has gained global recognition with a colourful and animated billboard displayed at New York's Time Square.

Aim:

The campaign promotes milk in a **fresh and youthful way**, encouraging global youth to embody qualities like **honesty, purity, and authenticity** while fostering positive cultural integration.

Usage:

The example can be used in Ethics/Indian Society Qn for innovation and Cultural integrations.

4. USING BAMBOO FOR LAND-SLIPS PREVENTION

Context:

The Forest Department of Kerala plans to **plant** bamboo **and bamboo creepers** along the Gap Road stretch of the Kochi-Dhanushkodi National Highway in Munnar to prevent landslips caused by unscientific road widening.

The bamboo is expected to **penetrate the soil and prevent future landslips**, ensuring soil protection.

In 2017, the Government amended the Indian Forest Act to **categorise bamboo as grass**. Now there is **no prohibition on growing or cutting bamboo** trees even outside the forests.

About Bamboo

It grows four to five feet deep into the soil and ensures strong protection of the soil. Using bamboo to prevent landslides has been found successful in countries like **Malaysia, the Philippines and Nepal**

5. USE OF LOCAL COMMUNITY FOR WILDLIFE CONSERVATION

FACTS FOR PRELIMS

GS-1

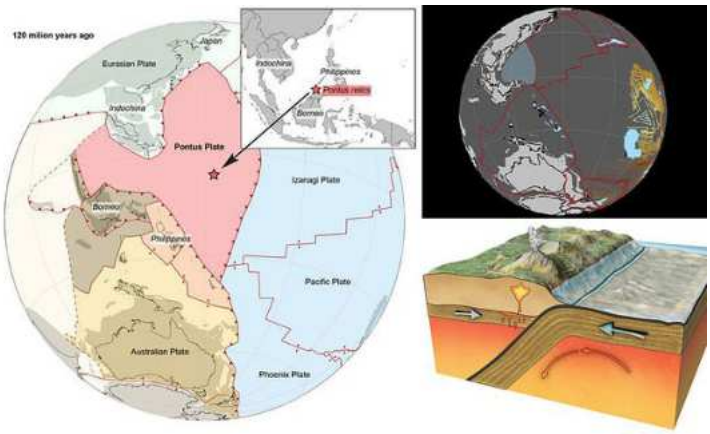
1. PONTUS PLATE

Context:

Scientists have recently **rediscovered the "Pontus plate,"** a **long-lost tectonic plate that disappeared about 20 million years ago.**

- This plate was **approximately a quarter the size of the Pacific Ocean** and once **existed beneath an ancient ocean known as the Pontus Ocean**.
- The rediscovery of the Pontus plate was **accidental, occurring during a study of rocks in Borneo.** Researchers had **originally been studying the Pacific plate when they came across rock fragments that didn't fit with known plates' magnetic properties.**
- Computer modelling eventually revealed that **these rock fragments belonged to a previously unknown tectonic plate, the Pontus plate**.

This plate formed **at least 160 million years ago**, possibly even earlier, and **eventually disappeared as it was subducted beneath the Australian and Chinese plates**. This discovery **sheds light on Earth's geological history and the movement of** tectonic plates**.**



2. SIR SYED AHMED KHAN

Context:

Sir **Syed's 125th birth anniversary** coincides with the **passing of the Women's Reservation Bill.**

Sir Syed Ahmed Khan, a prominent figure in **promoting modern education and advocating reforms, had complex and evolving views on women's empowerment and education:**

- **Conflicting Views**: While he was known for his efforts to promote modern education among Muslims, Sir Syed held conflicting views on women's education.
- **Educational Institution**: He established the **Mohammedan Anglo-Oriental College at Aligarh,** indicating his **commitment to education**. However, **his approach to women's education was conservative, advocating a "disorganised tutor-based home education"** for them.
- **Concerns About Education**: Sir Syed believed that **women's education could potentially jeopardize their primary role in life,** which, in his view, was marriage. He supported gender segregation and opposed co-education, reflecting a somewhat feudal mindset.
- **Advocate for Women's Empowerment**: Despite his conservative views on women's education, **Sir Syed was a strong advocate for women's empowerment**. He criticized harmful practices like female infanticide, polygamy, and child marriage through the Aligarh Institute Gazette.
- **Influence of European Experience**: Sir Syed's interactions with **women in Europe during a visit in 1869-70 had a significant impact on his views**. He admired the freedom enjoyed by women in Europe and believed that the rejection of women's education by Muslims had contributed to the community's decline.

3. THEOSOPHICAL SOCIETY

Context:

In 1879, **Helena Petrovna Blavatsky and Henry Steel Olcott**, founders of the Theosophical Society, **established the society's headquarters in Adyar, Madras, India**.

- The society aimed to **investigate unexplained natural laws and latent human powers** through **spiritual development**, with Blavatsky believed to **possess psychic abilities, including communication with "Mahatmas" on an astral plane**. However, in 1884, allegations of the dubious nature of these powers led to a major controversy

About Theosophical Society:

It is the organizational body of Theosophy, a new religious movement. Theosophy is a **philosophy that combines mysticism and spiritualism**.

It teaches that the **purpose of human life is spiritual emancipation** and that the **human soul undergoes reincarnation** upon bodily death. Theosophy also promotes values of universal brotherhood and social improvement.

The Theosophical Society was **founded in New York City in 1875 by**:

1. **Helena Blavatsky**, a Ukrainian mystic and the principal thinker of the Theosophy movement
2. **Henry Steel Olcott**, the first president of the Theosophical Society
3. **Charles Webster Leadbeater**
4. **William Quan Judge**

The **Theosophical Society's headquarters were established in Adyar,** near Madras (now Chennai) in India in 1882. **Annie Besant popularized the movement in India**

4. 69TH NATIONAL FILM AWARDS

Context:

The **President of India** presented the **69th National Film Awards in New Delhi**.

- The National Film **Awards were established in 1954** to encourage the **production of films with high aesthetic and technical standards**, and educational and cultural value.
- The awards **were originally** called "**State Awards for Films".**
- Awards are given in three sections – **Features, Non-Features and Best Writing on Cinema.**

Some of the awards include:

- Dadasaheb Phalke Award: The highest award, given to **recognize the contributions of film personalities to the development of Indian cinema**
- **Silver Lotus Award**: Given for the best **feature film on national integration**
- **Best Popular Film Providing Wholesome Entertainment**

The Role of Cinema in Reflecting Society: They portray the **struggles, triumphs, and challenges faced by individuals and communities**. By depicting real-life issues **on screen, cinema creates a space for viewers to engage with various perspectives**, encouraging them to re-evaluate their own beliefs and biases.

5. CORAL REEF FOSSILS IN LADAKH

Context:

Geologists have made a remarkable **discovery of** coral reef **fossils** at an elevation **of 18,000 feet above sea level in the Burtse region, Eastern Ladakh Himalayas.**

- These **fossils reveal the existence of ancient coral colonies** and **provide insights into a previously unknown geological past of the Burtse region**, suggesting the presence of a diverse marine ecosystem.

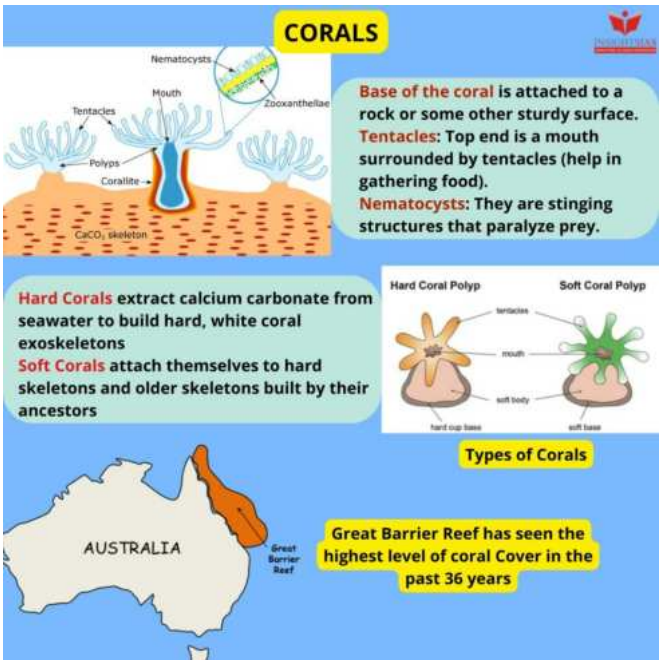
The findings support the idea that **the Himalayas emerged when continental plates were thrust out of the Tethys Sea about 40 million years ago.**

Significance:

The discovery of coral reef fossils in Ladakh is significant because **it indicates that this region, now a high-altitude desert, was once submerged under a vast ocean**. This finding offers insights into Ladakh's geological history, the impact of tectonic activity, and ancient climate conditions.

About the Coral reefs

They are underwater ecosystems composed of coral colonies held together by calcium carbonate, which are vital for marine ecology.



GS-2

1. ELECTORAL BONDS

Context:

The Supreme Court of India has referred the challenge to the **validity of the** electoral bonds scheme**,** which allows anonymous donations to political parties, to a **Constitution Bench of five judges**.

- The case also pertains to the passage of the electoral bonds scheme as a Money Bill

What are Electoral Bonds?

Electoral Bonds

Feature	Description
Introduction	The electoral bonds system was introduced in 2017 and implemented in 2018 through a Finance Bill. It allows individuals and entities to make anonymous donations to registered political parties.
Denominations	State Bank of India (SBI) issues electoral bonds in denominations of Rs 1,000, Rs 10,000, Rs 1 lakh, Rs 10 lakh, and Rs 1 crore.
Payable to the Bearer	Electoral bonds are payable to the bearer on demand and are interest-free
Eligible Buyers	Indian citizens and entities established in India can purchase electoral bonds, either individually or jointly with others.
Validity Period	Electoral bonds are valid for 15 calendar days from the date of issue.
Authorized Issuer	State Bank of India (SBI) is the authorized issuer, and these bonds are issued through designated SBI branches.
Eligibility	Only political parties registered under Section 29A of RPA 1951, and having secured at least 1% of the votes polled in the last general election are eligible
Purchase	Electoral bonds can be purchased digitally or through cheques. Encashment is only possible through an authorized bank account of the political party.
Accountability	Political parties must disclose their bank account with the Election Commission of India (ECI). Parties are obliged to explain the utilization of funds.
Benefits	Electoral bonds enhance transparency in political funding, encourage accountability in disclosing donation utilization, discourage cash transactions, and preserve donor anonymity (Donors' names are not mentioned on the bonds)
Challenges	Challenges include potential compromise of donor anonymity, government access to donor data for electoral advantage, risk of crony capitalism, and loopholes regarding transparency and donation limits for corporate entities.
Companies Act 2013	The Companies Act 2013 specifies that a company can make political contributions if its net average profit of the three preceding financial years is at least 7.5%. The removal of this clause has raised concerns about black money in political funding through shell companies. To know more Visit Insights IAS Daily CA

About Constitution Benches

2. SUPREME COURT UPHOLDS RIGHTS OF THE UNBORN CHILD

Context:

The Supreme Court of India has upheld the rights of an unborn child by rejecting a **woman's plea to terminate her 27-week-old pregnancy**.

Reasons:

The court cited the **violation of the** Medical Termination of Pregnancy (MTP) Act, as there was **no immediate threat to the mother or any foetal abnormality**.

However, the court allowed the parents to **decide whether they wanted to give up the baby for adoption** and directed the state to bear all medical costs.

As per the Medical Termination of Pregnancy (MTP) Act:

Stage	Abortion Guidelines
Up to 20 weeks	Termination is allowed on the advice of 1 doctor.
20 - 24 weeks	Termination in this stage is determined by **2 registered medical practitioners** in specific cases, such as statutory rape, sexual assault, women with disabilities, or a change in marital status during pregnancy.
After 24 weeks	A medical board in "**approved facilities**" must be set up, which can "allow or deny termination of pregnancy" only if there is substantial foetal abnormality. All state/ UTs are mandated to constitute a Medical Board consisting of gynaecologists, paediatrician, etc

What is the "foetal viability test"?

It determines the point at which a **foetus can survive outside the womb**. While Indian courts have interpreted the Medical Termination of Pregnancy (MTP) Act **broadly**, the concept of "foetal viability" as a criterion for permitting abortion is **relatively new in India**. This test is based on the **landmark 1973 US Supreme Court decision in Roe v Wade**, which established abortion as a constitutional right, allowing it up to the point of foetal viability.

For an ethical Aspect of the topic: Click Here

3. ETHICS COMMITTEE OF LOK SABHA

Context:

Lok Sabha Speaker has referred **a "cash-for-query" complaint** made by a BJP MP against a Trinamool Congress member to **the Ethics Committee of the Lower House**.

- The **complaint is based on evidence from an advocate, which he claims shows the exchange of bribes between the accused and a businessman**.
- He also pointed out that a significant number of **recent parliamentary questions were focused on the Adani Group, a conglomerate she has accused of malpractices**.

The **Lok Sabha Ethics Committee examines complaints of unethical conduct** by members of the Lok Sabha. The committee **was established in 2000 by the late Speaker G M C Balayogi**. It became a **permanent part of the House in 2015**. The committee was established in **Rajya Sabha in 1997.**

The committee's functions include:

1. Examining complaints **of unethical conduct by members of the Lok Sabha**
2. **Making recommendations**
3. Formulating a **code of conduct for members**
4. **Suggesting amendments or additions to the code of conduct**

About Cash for Query Complaint:

A "cash-for-query" **complaint is an accusation that someone took money in exchange for asking questions in Parliament**.

For example, in 2005, 11 former MPs were put on trial for a "cash-for-query" scam. The sting showed them taking **cash to raise questions in Parliament**

4. AUTOMATED PERMANENT ACADEMIC ACCOUNT REGISTRY OR 'APAAR' CARD

Context:

The **Union Education Ministry** has introduced **the concept of 'One Nation, One Student ID,'** referred to **as APAAR ID,** in **alignment with the** National Education Policy **(NEP) 2020.**

- The **APAAR ID,** which **stands for 'Automated Permanent Academic Account Registry,'** is a **digital identification system for students in India**.

Highlights:

- The APAAR ID is an **education ecosystem registry** system known as **'EduLocker' for students across all states in India.**
- It will **digitally store academic qualifications, credit scores, certificates, and other academic data** for students from **pre-primary to higher education.**
- To enrol in the APAAR ID system, **students must obtain their parent's consent, and the states have been directed to initiate this process.**
- **The unique 12-digit APAAR ID will be used for admissions and other academic activities, making it convenient for students.**
- Both **new and existing users can register or log in using their mobile number, Aadhar Card, or ID and password.**

This initiative aims to create a **unified educational system, enhance security, and make academic data easily accessible for students.**

5. ADVANCED TRAFFIC MANAGEMENT SYSTEM (ATMS) STANDARDS AND SPECIFICATIONS 2023

Context:

The **National Highways Authority of India (NHAI)** has unveiled an **upgraded Advanced Traffic Management System (ATMS)** with the **aim of enhancing road safety and digital enforcement** on **National Highways and Expressways**

Key Features of the Initiative	Description
Video Incident Detection and Enforcement System (VIDES)	**Replaces VIDS cameras**, identifies 14 distinct traffic incidents - Alerts route patrol vehicles - **Generates e-challans** - Relays alerts **to Variable Messaging Boards** - Notifies nearby travellers via the 'Rajmargyatra' mobile app.
Comprehensive Camera Installation	**Cameras every 10 km along National Highways** - State-of-the-art Command and control Centres every 100 km - Integration of camera feeds - Integration of **Vehicle Speed Detection System (VSDS) - Optimization of Automatic Number Plate Recognition (ANPR) cameras.**
Traffic Monitoring Camera System (TMCS) Upgrades	**Cameras every 1 km on National Highways** - Advanced capabilities include automated accident and stalled vehicle detection.
Collaboration with Traffic Agencies	**Dedicated workstations for traffic police representatives in Command and control Centres** - Facilitates real-time coordination and response through shared camera feeds.
Disaster Management and Information Sharing	**Provides inputs for effective disaster management planning**. - Offers online sharing of **highway status and other important information for agencies and highway users.**
Digital Highways and 5G Integration	**Development of integrated utility corridors along National Highways for Optic Fibre Cables (OFC) infrastructure**. - Use of OFC for communication with the Command & Control Centre. - **Provisions for 5G-based communication as coverage expands.**

6. DISTRICT OFFICERS UNDER THE POSH ACT

Context:

The Supreme Court has instructed the Indian government and all states and union territories to **promptly appoint district officers** under the Sexual Harassment of Women at Workplace (POSH) Act.

Need for Direction:

The court noted a **lack of uniformity in implementing the Act** and non-implementation of the Act in several instances

Directions of SC:

Direction	Description
Ensure the appointment of District Officer	Principal Secretaries of the Ministry of Women and Child Development of every state/UT to **ensure the appointment of a District Officer** in every district within four weeks under Section 5 of the PoSH Act.

Local Complaints Committees	Each appointed District Officer would constitute **Local Complaints Committees** to receive complaints from women employed in small establishments with **less than 10 workers** or cases in which the assailant is the employer himself (Section 6 of the Act).
Tenure	The Chairperson and every Member of the Local Committee shall hold office for a period, **not exceeding three years,** from the date of their appointment as specified by the District Officer.
Nodal Person	Identify a 'nodal person' within the Department to oversee the implementation of the PoSH Act and coordinate with the Centre.
Compliance Report	Each State/UT Government is to submit a consolidated report of its compliance with the directions to the Centre within eight weeks.
Compliance by Centre	Centre to consolidate reports, and identify/remedy lapses in compliance by State, before filing a consolidated affidavit of compliance within 12 weeks.
Transparency	The court also suggested making **anonymized data** from annual compliance reports public to enhance transparency

POSH Act 2013

Context: The Indian Supreme Court has expressed concern over the "sorry state of affairs" in the implementation of the act.

	Major Provisions of POSH Act 2013
Sexual harassment defined	Sexual harassment includes "any one or more" of the following "unwelcome acts or behaviour" committed directly or by implication: • Physical contact and advances • A demand or request for sexual favours • Sexually coloured remarks • Showing pornography • Any other unwelcome physical, verbal, or non-verbal conduct of a sexual nature
Obligation	Every employer is required to constitute an Internal Complaints Committee (ICC) at each office or branch with 10 or more employees.
Complaint Committees	ICC has powers similar to those of a civil court in respect of summoning and examining any person on oath and requiring the discovery and production of documents.
Members	It needs to have a minimum of four members with at least half of them women and one external member, preferably from an NGO or an association that works for women's empowerment or a person familiar with issues related to sexual harassment, like a lawyer.
Time	The complaint must be made "within three months from the date of the incident".
Conciliation	The ICC may (at the request of the aggrieved woman) allow the matter to be settled through conciliation (but no monetary settlement allowed)
Punishment	Non-compliance shall be punishable with a fine of up to Rs 50,000.
Compensation	Compensation is determined based on five aspects: • Suffering and emotional distress caused to the woman • Loss of career opportunity • Her medical expenses • Income and financial status of the respondent • The feasibility of such payment Visit Insights IAS Daily Current Affairs
Domestic Worker	Domestic workers are protected under the Act and have the right to seek redressal from the Local Complaints Committee (LCC)

GS-3

1. ANTI-MONEY LAUNDERING: SEBI RELEASES FRESH SET OF GUIDELINES

Context:

The Securities Exchange Board of India **(SEBI)** has issued a set of amendments to **strengthen anti-money laundering(AML) standards and combat finance terrorism (CFT).**

- These guidelines are based on ru**les established under the** Prevention of Money Laundering Act **of 2002.**

The key amendments include:

- **Additional Measures:** Financial groups must implement **group-wide programs to deal with money laundering.** Additional measures should be **taken if the host country does not meet AML/CFT requirements consistent with the home country's standards.**
- **Disclosing Status:** In the case of a trust, the **reporting entity must ensure that trustees disclose their status** at the commencement of an account-based relationship.
- **Identifying Beneficial Ownership.**

These amendments aim to **enhance the effectiveness of AML/CFT measures and strengthen the process of identifying beneficial ownership**.

Securities and Exchange Board of India (Sebi)

Context: The Securities and Exchange Board of India (Sebi) recently unveiled a new logo on the occasion of its 35th anniversary.

Securities and Exchange Board of India (est. 1988; HQ: Mumbai) is the statutory regulatory body for securities and commodity market in India under the ownership of Ministry of Finance.	
Regulatory Authority	Primary market, Secondary Market, Mutual fund, Foreign Institutional Investment
Background	Initially a non-statutory body without any statutory power. It became autonomous and given statutory powers by SEBI Act 1992
Aim	To protect the interests of investors in securities and to promote the development of, and regulate the securities market
Powers & Functions Visit Insights IAS Daily CA	• It is a quasi-legislative and quasi-judicial body that can draft regulations, conduct inquiries, pass rulings, and impose penalties. • Its primary objective is to protect the interests of Indian investors in the securities market and promote its development. • SEBI also regulates the tasks entrusted to depositors, credit rating agencies, custodians of securities, foreign portfolio investors, and other participants. • It educates investors about securities markets and their intermediaries • It prohibits fraudulent and unfair trade practices within the securities market and related to it.
Expansion of its powers	• It can regulate any money pooling scheme worth Rs. 100 crore or more and attach assets in cases of non-compliance. • SEBI Chairman has the authority to order "search and seizure operations"
SEBI's structure	SEBI Board consists of a Chairman (for 3 years terms) and several other whole time and part time members.
Securities Appellate Tribunal (SAT)	It has been constituted to protect the interest of entities that feel aggrieved by SEBI's decision. SAT consists of a Presiding Officer and two other Members. It has the same powers as vested in a civil court.

2. WHITE PHOSPHORUS

Context:

Human Rights Watch (HRW) says the **Israeli military recently used** white phosphorus **munitions in Lebanon and Gaza.**

- White phosphorus munitions can be **delivered through artillery shells, bombs, rockets, or grenades.** This substance is **colourless, white, or yellow and emits a garlic-like odour.**

White Phosphorous in war:

- While **white phosphorus is not banned by international conventions**, it is not categorized as an **"incendiary weapon"** intended to cause fires or burns.
- Instead, it is **considered a multipurpose munition**. **Protocol III of the 1980 Convention on Certain Conventional Weapons prohibits incendiaries or the use of other substances** to attack civilian populations, but it **allows militaries to argue that white phosphorus is used only as a smokescreen, signal, or to illuminate a target.**
- **Israel has faced accusations of using white phosphorus in Gaza in the past, notably during Operation Cast Lead in 2008-2009**.

About White phosphorus:

It is a **highly toxic, wax-like substance known for its ability to burn at extremely high temperatures,** exceeding 800 degrees Celsius (1,500 degrees Fahrenheit).

It can **melt metal and is often used by militaries to create smokescreens** due to its **fast-spreading fires and thick smoke production** that can last for about seven minutes.

White phosphorus is harmful to **humans and can cause severe burns, penetrating down to the bone.** The **chemicals can be absorbed by the body, leading to dysfunction in multiple organs**, including **the liver, kidneys, and heart**

3. NAVRATNA STATUS

Context:

Two Central Public Sector Enterprises (CPSEs) under the Ministry of **Railways**, **Ircon International Limited (IRCON), and RITES Ltd,** have been **granted** 'Navratna' status.

- **RITES Ltd, in its 50th year of operation**, is a prominent **transport infrastructure consultancy and engineering firm in India,** offering services in various sectors such as **transportation, railways, highways, airports, and more**.
- **IRCON, with 47 years of experience**, specializes in railways, highways, and high-tension substation engineering and construction. The company has executed various **projects in railway construction, electrification, tunnelling, and more, both in India and abroad.**

Maharatna and Navratna category

Context: Oil India is now the 13th Maharatna CPSE in India. Additionally, the government raised ONGC Videsh Ltd (OVL) to a Navratna CPSE, making it the 14th Navratna among CPSEs.

Criteria for Maharatna Status	Criteria for Navratna Status	Criteria for Miniratna Status
1. Shall have Navratna status	1. Miniratna Category - I or Schedule 'A' CPSEs	Miniratna Category-I status: • Made profit in the last 3 years continuously • Pre-tax profit is Rs.30 crores or more in at least 1 of the 3 years • Having Positive net worth status
2. Listed on the Indian stock exchange with prescribed public shareholding	2. 'Excellent' or 'Very Good' rating in 3 of last 5 years	
3. Average annual turnover > Rs. 25,000 crore (last 3 years)	3. Composite score of 60 or above in the following 6 performance indicators including Net Profit to Net Worth, Cost of Services, Earning per share, etc.	
4. Average annual net worth > Rs. 15,000 crores (last 3 years)		Miniratna Category-II status: • Made profit for the last 3 years continuously • Having positive net worth status. • Not defaulted in the repayment of loans/interest payment on any loans due to the Government. • Not dependent upon budgetary support or Government guarantees.
5. Average annual net profit after tax > Rs. 5,000 crores (last 3 years)		
6. Significant global presence/international operations		

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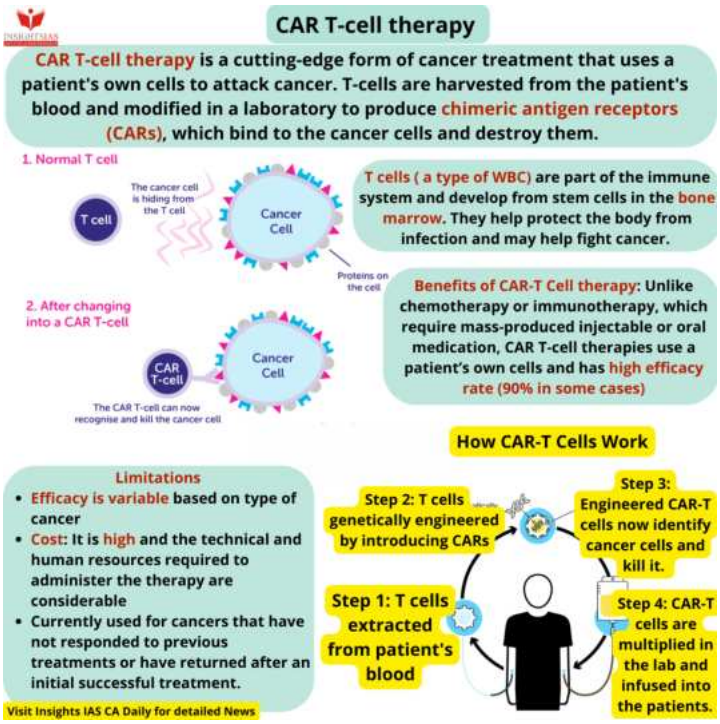
4. CAR-T CELL THERAPY

Context:

India's Drug Controller General (DCGI) has granted market authorization for CAR-T (Chimeric Antigen Receptor-T) cell therapy developed by **ImmunoACT, a spin-off company from IIT-Bombay.**

- This ground-breaking treatment, known as **NexCAR19**, is now approved for use in cases of **relapsed-refractory B-cell lymphoma and leukaemia.**
- The therapy's market authorization **follows extensive scrutiny of data from phase 1 and 2 clinical trials by the Central Drugs Standards and Control Organisation (CDSCO).**



5. PSYCHE

Context:

NASA has launched a **spacecraft called 'Psyche' on a six-year mission to study a unique metal-rich asteroid also named 'Psyche**.'

- This asteroid orbits the **Sun between Mars and Jupiter**.
- The primary goal of the Psyche mission is to **explore the iron core, a previously unexplored aspect of planet formatio**n.
- For the first time, **the mission will examine a celestial body primarily composed of metal rather than rock and ice**.
- Additionally, it aims to **gain insights into the internal structure of terrestrial planets, including Earth**, by directly **studying the interior of a differentiated body, which would otherwise remain hidden.**

6. GREEN CREDIT PROGRAM (GCP) AND ECOMARK SCHEME UNDER LIFE INITIATIVE

Context:

The **Indian government has introduced two green initiatives** in preparation for the upcoming **UN Climate Summit, COP 28** - Green Credit Program **(GCP) and Ecomark scheme Under LiFE Initiative**

Initiative	Description
Green Credit Program (GCP)	**A market-based mechanism** designed to incentivize **voluntary environmental actions across various sectors**
	Initial focus on **water conservation and afforestation**
	Indian Council of Forestry Research and Education (ICFRE) is responsible for the implementation, management, monitoring, and operation
	Individuals and entities e**arn Green Credits by registering environmentally friendly activities through a dedicated government app/website**
Ecomark Scheme	**Provides accreditation and labelling for household and consumer products** meeting specific environmental criteria while maintaining quality standards
	Aims to **raise consumer awareness of environmental issues**, encourage **eco-conscious choices**, and motivate manufacturers to transition to **eco-friendly production**
	Administered by the **Central Pollution Control Board** in partnership with **the Bureau of Indian Standards (BIS)**

Topic	Details
	Mission LiFE (Lifestyle for Environment) (launched in Oct 2022) is a global movement initiated by India to promote an environmentally conscious lifestyle. LiFE Lifestyle For Environment
Need	Addressing environmental degradation and climate change at the individual and community level
Aim	It aims to replace mindless consumption with mindful utilization and encourages individuals and communities to undertake climate-friendly actions in their daily lives.
Approach	Focus on individual behaviours, co-create globally, leverage local cultures
Objectives	Promote environmentally conscious lifestyle, nudge individuals to undertake climate-friendly actions, create a global network of Pro-Planet People (P3)
Example	Promoting Sustainable Transportation: Encouraging individuals to use public transport, carpooling, cycling, or walking instead of private vehicles to reduce carbon emissions and promote a greener commute.
Other related initiatives	Glasgow Climate Meet (Cop26), Panchamrit strategy, International Solar Alliance, National Action Plan on Climate Change, National Clean Air Programme (NCAP), National Biofuel Policy

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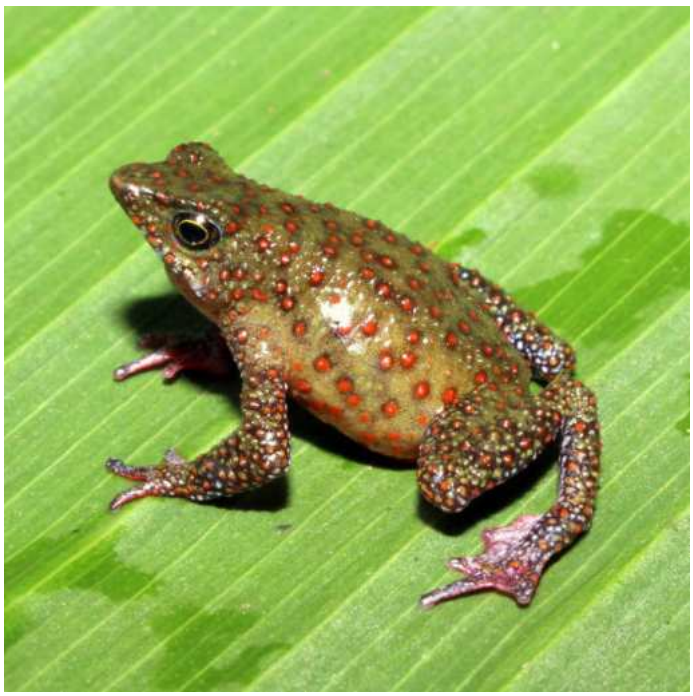
7. NEW TOAD SPECIES

Context:

A **new species of toad**, called **Bufoides bhupathyi**, has been discovered in the **Dampa tiger reserve of Mizoram, India**.

- This marks the **third species in a genus found in the north-eastern region of India**.
- The previous two species, **Bufoides meghalayanus and Bufoides kempi,** were found in Meghalaya.

- To resolve taxonomic confusion, field surveys were conducted, **leading to the discovery of Bufoides bhupathyi,** which is distinct from other similar species in terms of **interdigital webbing, colouration, skin tuberculation, and the presence of ovoid, tuberculated, and depressed parotid glands.**
- The **new species is currently known to exist only in the Dampa tiger reserve** and is likely to meet the **criteria for being assessed as critically endangered according to** the International Union for Conservation of Nature **(IUCN).**
- It has been named after S Bhupathy, a **prominent herpetologist who served as the principal scientist at the Salim Ali Centre for Ornithology and Natural History in Coimbatore.**



8. ANGEL TAX FOR START-UPS

Context:

The **Central Board of Direct Taxes (CBDT)** has issued a **directive to its officers, instructing them not to carry out scrutiny of** angel tax **provisions** for start-ups **recognized by the Department for Promotion of Industry and Internal Trade (DPIIT).**

- The directive comes in response to **concerns raised by start-ups regarding scrutiny notices for angel tax.**

The **CBDT directive outlines two scenarios for recognized**

start-up companies:

- **First, if** the case is **selected under scrutiny solely for the applicability of Section 56(2) (viib)** of the Income-tax Act, **no verification is required during the assessment proceedings**, and the contention of the recognized start-up on the issue will be accepted.
- **Second, if the case is selected under scrutiny for multiple issues, including Section 56(2) (viib) of the Income-tax Act, the issue will not be pursued during the assessment proceedings.**

Angel tax is **income tax levied at a rate of 30.6% on unlisted companies** that issue shares to **investors at a price higher than their fair market value**.

The **Finance Act 2023** amended Section 56(2)(viib) of the Income-tax Act, **colloquially known as the 'angel tax,'** to include foreign investors. **DPIIT-recognized start-ups are exempt from the angel tax levy.**

9. PRODUCTION OF HYDROCARBONS UNDER OLAP BID

Context:

The **Ministry of Petroleum & Natural Gas in India** is offering **8 blocks for hydrocarbon** exploration and production under the Open Acreage Licensing Policy **(OALP) bid round IX.**

- Three of the blocks are in the **Cauvery basin, two in Saurashtra, two in Assam Shelf, and one in the Cambay basin**.

Six of the blocks fall under **Category-I basins with proven hydrocarbon resources**, while the remaining **two are in Category-II with contingent resources**. The notice inviting offers for these blocks will be released soon for international competitive bidding.

The **Open Acreage Licensing Policy (OALP)** was launched **in June 2017** to **accelerate exploration and production (E&P) activities in India**. OALP allows companies **to select exploration blocks on their own, without waiting for a formal bid round from the government**

10. SELF-DECLARATION OF FREEDOM FROM AVIAN INFLUENZA

Context:

The **World Organisation for Animal Health (WOAH)** has approved **India's self-declaration** of freedom from **Highly Pathogenic** Avian Influenza **(HPAI)** in specific poultry compartments.

- This is a **significant development for India's poultry industry** and reflects the **country's commitment to maintaining high animal health and biosecurity standards.**
- **Compartmentalization**, a strategy used to establish and maintain groups of animals with specific health statuses, played a key role in this achievement.
- India adopted the **concept of poultry compartmentalization as a crucial tool to reduce the risk of disease outbreaks and facilitate the trade of poultry and poultry-related products.**

India, one of **the top producers of eggs and poultry meat globally**, is poised to capitalize on this achievement, potentially **opening up new opportunities in the global market.**

11. INDIAAI REPORT

Context:

Seven working groups of the **Ministry of Electronics and Information Technology (MeitY)** have submitted the **first edition of the IndiaAI report**.

- This report **outlines India's strategy** for the **development of its artificial intelligence (AI) ecosystem**. The IndiaAI program aligns with Prime Minister vision of "**India for AI and AI for India" and aims to catalyse the development of a 1 trillion-dollar digital economy.**

About IndiaAI Program:

- The IndiaAI program is **holistic and ambitious**, covering **various aspects of the AI ecosystem**, **including compute infrastructure, data, AI financing, research and innovation, skilling, and institutional capacity for data management**.
- It also focuses on supporting **start-ups and entrepreneurship, India datasets program, and the India AI Compute Platform**.
- The report details the operational aspects of establishing **Centers of Excellence (CoEs)** and outlines an **institutional framework for governing data collection, management, processing, and storage**.
- It includes **recommendations on leveraging India's demographic dividend and enhancing AI skills, strengthening AI compute infrastructure** through public-private partnerships, and implementing a Design Linked Incentive (DLI) Scheme to support domestic companies and start-ups.

12. INCLUSION OF TRADITIONAL MEDICINE ON WHO'S LIST

Context:

The Indian government is pushing for the **inclusion of Ayurveda and related** traditional medicine systems in the 11th revision of the **World Health Organization's International Classification of Diseases (ICD)** as the **second module of a supplementary chapter on traditional medicine conditions.**

- This move aims **to provide these traditional systems with a standardized language for global recognition and integration**.
- The ICD serves as a **common language for healthcare professionals worldwide, allowing them to share standardized information**.
- ICD-11 previously included **Module-1 for traditional medicine conditions originating in China**.
- The inclusion of **Ayurveda and related systems in Module-2 would allow for a more comprehensive approach to reporting adverse events and integrating traditional medicine into insurance and reimbursement system**s, in line with WHO's goals for universal health coverage.

13. INDIAN RUPEE'S VALUATION

Context:

The **Indian rupee has reached a nearly two-year high in valuation against** major trading partner currencies **due to central bank intervention and increased domestic inflation**.

The rupee's **40-currency real effective exchange rate (REER) showed a 5.7% overvaluation** by the end of September, **the highest since November 2021.**

The RBI's focus on **preventing the rupee from weakening, coupled with inflation**, has contributed to **the high REER, although analysts believe the RBI doesn't consider it an outlandishly overvalued currency.**

14. NEW EVOLUTIONARY LAW

Context:

Scientists have **proposed a new** evolutionary **law** that can **explain the evolution of both living and non-living entities, including minerals and stars**.

- This law suggests that **natural systems**, **whether living or non-living, evolve towards greater patterning, diversity, and complexity**.

About New Evolutionary Law:

- As life evolved from **single-celled to multi-celled organisms**, **Earth's minerals became more complex, contributing to diversity.** The interaction between **biodiversity and mineral diversity played a role in shaping life as it exists today.**
- It **identifies three kinds of functions in nature**: **stability** (systems with stable arrangements survive), **dynamic systems with an energy supply, and novelty** (exploration of new configurations or arrangements leading to new behaviours or characteristics).

This law has **implications for various complex evolving systems**, from **astrophysics to ecology and artificial intelligence,** and scientists **aim to apply it to diverse domains of science**.

The study showcases the **importance of interdisciplinary collaboration, including input from philosophers of science in shaping these ideas.**

15. TILAPIA PARVOVIRUS

Context:

India has reported the **presence of tilapia parvovirus (TiPV)** for the first time in **Tamil Nadu**., affecting **farm-bred tilapia fish.**

- The virus caused **mortality rates ranging from 30% to 50% in farms and 100% in laboratory settings**.

Tilapia, considered a **"poor man's fish,"** was introduced to **Indian freshwater bodies in the 1950s.** While **Nile tilapia, introduced in the 1970s**, is larger and widely cultivated, **the occurrence of TiPV is a concern for tilapia farming in India**. Research is ongoing to **develop a vaccine to combat TiPV and mitigate losses for fish farmers.**

16. LYMPHATIC FILARIASIS

Context:

The **Lao People's Democratic Republic** (Lao PDR) has successfully eliminated lymphatic filariasis (LF), a **mosquito-borne infectious disease**, becoming the **second country to achieve this in 2023 after Bangladesh.**

- Lao PDR is the **11th country in the WHO Western Pacific Region** to **eliminate LF**.
- **The World Health Organization (WHO)** credited this **achievement to the efforts of the Lao government**, healthcare workers, communities, and national and international partners.
- Overall, **19 countries have successfully eliminated LF**, with **mass drug administration being a cost-effective method for treating affected residents and stopping transmission**.

LF, also known as el**ephantiasis, causes severe health issues, and its elimination is a significant global health goal.** The elimination of LF contributes to the **United Nations' sustainable development goal of "health for all" by 2030**

17. MARINE CLOUD BRIGHTENING

Context:

Australian researchers are exploring the concept of **"marine cloud brightening"** as a **potential solution** to mitigate **coral bleaching on the Great Barrier Reef caused by extreme heat**.

- This approach **involves using water cannons to spray seawater into the sky**, which results in the **formation of brighter, whiter clouds**.
- These clouds, known as **low marine clouds**, **reflect sunlight away from the ocean's surface**, offering **protection to the marine life beneath and potentially reducing coral bleaching.**
- The idea of **marine cloud brightening** was initiated **after the mass coral bleaching event in 2016,** with **initial lab development and pilot testing near the Great Barrier Reef**.
- This method aims to **delay coral bleaching during marine heatwaves**, potentially buying more time for the reef's recovery.
- To brighten clouds, **researchers spray microscopic seawater droplets** into the **air, mimicking the creation of sea salt aerosols** by natural processes like wind and waves.
- **Sea salt provides shade and additional reflection of light**. While humanity unintentionally brightens clouds through the release of aerosols, the research in **Australia aims to harness this process for environmentally responsible and socially acceptable conservation efforts for the Great Barrier Reef.**

18. DEFENCE SYSTEMS OF ISRAEL

Weapon System	Purpose and Features	Current Status	Future Developments
Iron Beam	Strengthen Israel's air defence against **short-range projectiles, drones, artillery, and mortar shells.** Uses a **fibre laser to destroy airborne targets.** Advantages include **lower costs per shot, unlimited firings, lower operational costs, and no interceptor debris.**	Deployed **in active combat service.**	**Expected increase in energy levels**. The naval version is in development for use on **naval ships to protect against drone swarms.**

Iron Dome	Short-range **defence system with an intercept range of 2.5 to 43 miles.** Designed to **protect populated areas.**	Deployed **in active combat service.**	Provides **short-range defence against various threats**.
David's Sling	Designed to **counter medium-range missiles.** Operational since 2017.- **Uses the "Stunner" interceptor for** medium- to long-range threats up to 185 miles.	Limited use **since becoming operational**	Expected to play a vital role in **Israel's multi-tiered defence strategy, complementing Arrow and Iron Dome systems**

19. 'LENIENCY PLUS' NORMS TO CURB CARTELISATION

Context:

The Competition Commission of India **(CCI)** has introduced a draft of **revised lesser penalty regulations that include a "leniency plus" program to combat cartel activities**.

What are 'Leniency plus' norms?

In the **"Leniency Plus" program, a cartel member cooperating with CCI for leniency can disclose the existence of another unrelated cartel during the original leniency** proceedings in exchange for an **additional reduction in penalties, thereby saving time and resources in cartel investigations**.

- The "**Leniency Plus**" regime is **already recognized in several other countries.**
- The "leniency plus" regime was **introduced in the new Competition (Amendment) Act, 2023. However, several provisions of the Act are yet to be notified**.
- Experts believe that the "**leniency plus" regime will strengthen the CCI's leniency program and enable quicker and more effective market corrections.**

20. TELCOS' LICENCE FEE TAX

Context:

The Supreme Court set aside the Delhi High Court's order that categorized license fees before and after July 31, 1999, differently, as capital expenditure (Capex) and revenue expenditure.

What does the judgement say?

The **Supreme Court of India** has ruled that the **payment of entry fees and variable annual** license fees by telecom companies should **be considered as capital expenditure, not revenue expenditure, and therefore, they should be taxed accordingly**

Capital expenditure vs Revenue expenditure:

Capital expenditures are typically **one-time large purchases of fixed assets** that will be used for revenue generation over a longer period. Revenue expenditures are the ongoing operating expenses, which are short-term expenses used to run the daily business operations.

Background:

Previously, **Telecom firms were required to pay a one-time license** fee for entry and an annual license fee linked to their Annual Gross Revenue **(AGR)** as per the National Telecom Policy 1999.

Impact of the Decision:

The judgment disallows license fees as a revenue expense for tax calculation, leading to an increase in tax liabilities for telecom companies.

This decision is expected **to result in additional tax liabilities for telecom companies**, particularly older **ones like Bharti Airtel and Vodafone Idea, estimated to be around $1 billion in the current fiscal year.**

- The Supreme Court's order has not clarified whether **these accounting changes should be made retroactively, and income tax authorities are expected to demand payment** for any shortfall in tax payments for the prior period, along with applicable penalties.

21. ESTIVATION

Context:

Estivation, **also known as aestivation**, is **a biological phenomenon** in which **some animals enter a prolonged state of dormancy or inactivity** during hot and dry conditions.

- It serves as a **survival strategy to conserve energy and water**. Animals undergoing **estivation typically seek shelter in cool underground burrows, crevices, or cocoons**, reducing their metabolic activity and energy consumption.
- This behaviour helps them **avoid extreme dryness and the risk of predation**.

Examples of estivating animals include the **West African lungfish, desert tortoises, and certain land snails.**

22. MICROALGAE

Context:

A **study published in the journal Nature Microbiology** has revealed that **microalgae**, crucial in the **ocean's food chain and carbon capture**, have developed a **unique strategy to adapt to global warming and declining nutrient levels in the sea.**

- As climate change **reduces nutrient availability**, these **microalgae activate a protein called rhodopsin,** similar to the **protein in the human eye responsible for vision in dim light**.
- This light-responsive **protein enables microalgae to thrive by using sunlight as an alternative to traditional chlorophyll for growth.**
- The study suggests that microbial rhodopsins are **significant light capturers in the ocean**, potentially **absorbing as much light as chlorophyll-based photosynthesis**.
- As global warming **leads to nutrient scarcity at the ocean's surface** due to reduced mixing between the surface and deeper waters, **microalgae struggle to produce food and capture carbon dioxide**.

This mechanism may **have applications in biotechnology for enhancing the activity of light-dependent microbes for various purposes, from insulin production to biofuel.**

23. REVERSIBLE INHIBITION OF SPERM UNDER GUIDANCE OR RISUG

Context:

The **Indian Council of Medical Research (ICMR)** has successfully **tested a long-lasting male contraceptive called "Reversible Inhibition of Sperm Under Guidance" (RISUG).**

About RISUG:

- RISUG is a **non-hormonal injectable male contraceptive** that **blocks the production of sperm** by **creating a physical barrier in the vas deferens, the tube that carries sperm**.
- It begins **to work within two months of injection and remains effective for up to a decade**.
- The overall **efficacy of RISUG in achieving azoospermia (absence of sperm) was 97.3%, and it was 99.02% effective in preventing pregnancy without any serious side effects.**

This breakthrough in male **contraception offers a safe, effective, and long-lasting option for family planning.**

Use of Artificial Intelligence in Space and Historical Studies

Cases	Key Points
AI **to read the ancient scroll**	Recently, AI was used to **read an ancient scroll damaged by the Vesuvius eruption**
	Called the Vesuvius Challenge - a competition for **reading Herculaneum Papyri**
	Scrolls contain **Roman and Greek texts, well-preserved**.
	Researchers read the word **'porphyras' (Purple) in ancient Greek using AI.**
AI in space exploration	Northwestern University-led team **developed BTSbot for automated supernova discovery without any human involvement.**
	BTSbot is a machine-learning algorithm trained **on 1.4 million images** It detected supernova **SN2023tyk.**

24. INDIA'S GOAL OF LANDING MAN ON THE MOON

Context:

The Prime Minister has **"directed" the Indian Space Research Organisation (ISRO) to achieve several significant milestones recently**

Key Space Exploration Goals	Description
Indigenous Space Station (Bharatiya Antariksha Station) by 2035	India's plan **to establish its own space station by 2035**. Build on the success of **past space initiatives, including** Chandrayaan-3 **and** Aditya L-1 **missions.**
Indian Landing on the Moon by 2040	**India's goal is to land an Indian on the moon by 2040.**
Interplanetary Missions	Encouragement to **work on interplanetary missions**. This includes creating a **space vehicle to orbit Venus and another to land on Mars**.
Department of Space (DoS) Roadmap for Moon Exploration	The DoS will **formulate a roadmap for moon exploration**. This includes a series of **Chandrayaan missions, new launch vehicle development, launch pad construction, and human-centric laboratories.**
Investment and Private Sector Contribution	Noting the need for **substantial investments and contributions from the private sector to achieve these goals.**

25. GREEN ENERGY CORRIDOR (GEC)

Context:

The **Cabinet Committee on Economic Affairs**, has **approved the** Green Energy Corridor (GEC) **Phase-II – Inter-State Transmission System (ISTS)** for a 13 GW **Renewable Energy Project in Ladakh.**

What is GEC?

Aspect	Details
About	Green Energy Corridor (GEC) is an **initiative aimed at integrating and evacuating renewable energy into India's power grid**, promoting sustainable growth, and enhancing energy security. It has two phases.
Implementing Agency	**Power Grid Corporation of India Limited (POWERGRID)**
GEC-1 Implementation	Already underway in Gujarat, Andhra Pradesh, Karnataka, Himachal Pradesh, Maharashtra, Madhya Pradesh, Tamil Nadu, and Rajasthan, aiming to integrate and **evacuate 24GW of Renewable Energy (RE).**
GEC-2 Implementation	Planned for seven states: Gujarat, Himachal Pradesh, Karnataka, Kerala, Rajasthan, Tamil Nadu, and Uttar Pradesh. Targeting grid integration and power evacuation of around 20 GW of RE projects over five years (FY 2021-22 to 2025-26).
Objectives	Synchronize renewable energy (wind and solar) with conventional power sources.
	Achieve 500 GW of installed electricity capacity from non-fossil fuels by 2030
	Evacuate 20,000 MW of large-scale renewable power
Significance	Enhance India's **long-term energy security;** Promote **eco-friendly growth** by reducing the carbon footprint; Create **employment opportunities** for both skilled and unskilled workers.

26. NIEMANN-PICK DISEASE

Context:

Parents of children suffering from Niemann-Pick disease, a rare genetic disorder affecting fat metabolism, are urging the Indian government to include it in the National Policy for Rare Diseases.

What is Niemann-Pick disease?

Niemann-Pick disease refers to a group of inherited metabolic disorders in which abnormal amounts of lipids (fatty materials such as waxes, oils, and cholesterol) build up in the brain, spleen, liver, lungs, and bone marrow.

Symptoms:

Enlarged liver and spleen, difficulty in coordinating movement, frequent respiratory infections, slurred speech among others.

Causes:

This condition is inherited in an autosomal recessive pattern, where both gene copies must be faulty to manifest the disease.

Occurrences:

Niemann-Pick disease affects one in 250,000 individuals and is expensive to treat.

What is the National Policy for Rare Diseases?

The National Policy for Rare Diseases is a government initiative **designed to address and provide support** for individuals suffering from rare and uncommon medical conditions.

Significance:

This inclusion would provide **financial support to eligible patients** and grant access to the expensive enzyme replacement therapy, **Xenpozyme**. The Drug Controller General of India recently permitted a pharma company to import and market Xenpozyme after US FDA approval.

27. INS IMPHAL

Context:

INS Imphal, **India's third indigenous stealth destroyer of the** Project 15B **class**, was delivered to the Indian Navy four months ahead of schedule by **Mazagon Dock Shipbuilders Limited**.

Features:

It's the **first warship with accommodation for women officers and sailors**, can carry 312 crew, has a **4,000 nautical**

mile range, and is **armed with Brahmos missiles, Barak-8** missiles, and **anti-submarine weapons**. This class of destroyers is more versatile than previous ones and capable of various maritime missions.

Various Projects of the Indian Navy:

Project Name	Examples of Warships
Project 15A (guided missile destroyers of the Kolkata class)	INS Kolkata, INS Kochi, INS Chennai
Project 15B **(advanced version of 15A)**	INS Visakhapatnam, INS Mormugao, INS Imphal, INS Surat
Project 17	INS Shivalik, INS Satpura, INS Sahyadri
Project 17A	INS Nilgiri, INS Himgiri, INS Udaygiri
Project 28	INS Kamorta, INS Kadmatt, INS Kiltan
Project 75	INS Kalvari, INS Khanderi, INS Karanj
Project 75I (Future Submarines)	Under development
Project 71 (Indigenous Aircraft Carrier)	INS Vikrant (Under construction)
Project 15 (Delhi-class)	INS Delhi, INS Mysore, INS Mumbai
Project 25A (Kamorta-class)	INS Kamorta, INS Kadmatt, INS Kiltan

Type of Warship	Description	Examples
Aircraft Carriers	Large ships capable of carrying and launching aircraft.	INS Vikramaditya, INS Vikrant (under construction)
Destroyers	Versatile warships with anti-air, anti-ship, and anti-submarine capabilities.	INS Kolkata, INS Visakhapatnam, INS Imphal
Frigates	Smaller than destroyers, with multi-role capabilities.	INS Shivalik, INS Nilgiri
Corvettes	Compact warships designed for coastal defense and patrol duties.	INS Kamorta, INS Kiltan
Submarines	Submersible vessels used for stealthy underwater operations.	INS Kalvari, INS Arihant
Patrol Vessels	Smaller craft used for patrolling, search and rescue, and other coastal missions.	INS Saryu, INS Sunayna
Mine Countermeasures Vessels	Designed for mine-clearing operations.	INS Nireekshak, INS Karwar
Landing Platform Docks	Amphibious assault ships for launching troops and equipment ashore.	INS Jalashwa, INS Shardul
Offshore Patrol Vessels	Used for patrolling and surveillance in offshore waters.	INS Vikram, INS Vajra
Research Vessels	Ships dedicated to scientific research and oceanographic studies.	INS Sagardhwani, INS Sindhughosh (research variant)
Training Ships	Used for training purposes and instruction of naval cadets.	INS Tarangini, INS Sudarshini

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SPORTS CORNER

1. IOC AMENDS THE OLYMPIC CHARTER TO STRENGTHEN ITS HUMAN RIGHTS COMMITMENTS

The International Olympic Committee (IOC) has made amendments to the **Olympic Charter** to strengthen its **human rights commitments** during its 141st Session. These changes include additional wording in the **Fundamental Principles of Olympism.**

They aim to **promote and respect human rights** across their three spheres of activity: as an organization, as the owner of the Olympic Games, and as the leader of the Olympic Movement.

Additionally, the **IOC's Framework on Fairness, Inclusion, and Non-Discrimination** aims to ensure inclusion in elite sports without discrimination based on gender identity or sex variations while preserving fair competition.

About IOC:
The International Olympic Committee (IOC) (founded: 1894; HQ: Lausanne, Switzerland) is a non-governmental sports organization responsible for organizing the **Olympic Games** and governs **National Olympic Committees** (NOCs). In 2009, the UN General Assembly granted the **IOC Permanent Observer status**. The IOC Session is the annual meeting of IOC members where **each member has one vote**, and its decisions are final.

2. FIDE WORLD CUP

Context: The Prime Minister recently congratulated **Raunak Sadhwani on his victory at the FIDE World Junior Rapid Chess Championship 2023**

About FIDE World Cup**:**
The FIDE World Cup, established in **2000 by the International Chess Federation (FIDE),** encompasses various iterations. Since 2005, it's been a **128-player single-elimination chess tournament**, a vital part of the World Chess Championship qualification. The format includes 7 rounds of "mini-matches" with 2 games each, followed by rapid and blitz tiebreaks if needed. The final consists of 4 games before tiebreaks.

About FIDE:
The International Chess Federation or World Chess Federation, commonly referred to by its French acronym FIDE, is an international organization (HQ: Lausanne (Switzerland); Founded 1924) that connects the **various national chess federations** and acts as the governing body of international chess competition. It was

FIDE was constituted as a **non-governmental institution**. It is the governing body of the **sport of chess and regulates all international chess** competitions. It was recognized by the International Olympic Committee as a **Global Sporting Organization in 1999**. It has 199 countries as **affiliate members (including India),** in the form of **National Chess Federations**

MAPPING

1. KULASEKARAPATTINAM (TAMIL NADU)

Context:
ISRO is establishing a **second spaceport in** Kulasekarapattinam**, Tamil Nadu**, dedicated to Small Satellite Launch Vehicles (SSLVs) developed by the private sector.
This spaceport will be operational in about two years and will exclusively **serve the private sector, with no ISRO rocket launches planned from there**.
The **SSLV is a cost-effective, flexible launch vehicle** capable of deploying around 500kg satellites in a **500-km orbit**. Additionally, a small space manufacturing park is planned near the spaceport, offering further support to private sector initiatives.
Kulasekharapatnam is a town in the **Thoothukudi district of Tamil Nadu**. It was an **ancient port dating to the 1st century AD** and was contemporaneous to the existence of Kollam, Cheran, and Pandyan ports.

2. PARVATI KUND AND JAGESHWAR TEMPLES (KUMAON REGION, UTTARAKHAND)

Context:
Prime Minister Narendra Modi has encouraged people to visit the Parvati Kund and Jageshwar temples in the Kumaon region of Uttarakhand, emphasizing their natural beauty and spiritual significance.

Jageshwar is a Hindu pilgrimage town in the district **Almora** (Kumaun region Uttarakhand), known for its group of **125 ancient temples dating from the 7th to the 14th century** (primarily constructed and restored by the **Katyuri dynasty kings**). These temples are dedicated to various deities, with many **honouring Lord Shiva.**

According to the **Skandha Purana and Linga Purana**, the worship of Lord Shiva **originated** in Jageshwar, making it a significant **religious site**. Additionally, the area was a hub for **Lakulisha Shaivism**, a revivalist sect that reveres Lord Shiva.

It also hosts religious festivals like the **Jageshwar** Monsoon Festival and **Maha Shivratri Mela**. The temples showcase a mix of North Indian **Nagara and South/Central Indian architectural styles**.

Parvati Kund, located at an elevation of about 5,338 feet, is believed to be the place where Lord Shiva and Goddess Parvati meditated.

3. VIZHINJAM PORT

Adani Group's Vizhinjam Port (set to be completed by 2024) (near Thiruvananthapuram in Kerala)**,** is poised to transform the country's maritime infrastructure.

Features of the Port:

- India's first **deepwater container transhipment** terminal.
- Proximity to international shipping routes connecting Europe, the Gulf and East Asia
- This transhipment terminal can handle **ultra-large ships and marks India's entry** into the transhipment club
- It has the potential to **compete with global ports like Colombo, Singapore, Port Klang, and Jebel Ali**.

4. AMAZON RAINFOREST

Context:

Severe drought in the Amazon rainforest has disrupted the lives of Indigenous people, leading to water and food shortages.

The Rio Negro, one of the world's largest rivers, has reached a **record low level**, causing significant problems.

Reasons for the drought:

Two **simultaneous natural events, El Nino** and **high sea surface temperatures**, have exacerbated the drought by **reducing cloud formation** and rainfall. With rising global temperatures, the Amazon is expected to exp**erience more frequent and severe droughts**, potentially leading to irreversible changes in the rainforest.

About Amazon Rainforests:

The Amazon Rainforests are **vast, tropical forests in South America**, covering 6,000,000 square km. They are found within **28 degrees north or south of the equator**, receiving over **200 cm of rainfall** annually. It plays a vital role in **absorbing carbon dioxide** and stabilizing the global climate and water cycle. **Covering about 40% of Brazil**, it's bordered by the Guiana Highlands, the Andes, the Brazilian central plateau, and the Atlantic Ocean. The basin is shared **by eight countries and French Guiana**.

Prelims Links:

Q. Which one of the following pairs is correctly matched? (UPSC 2013)

	Geographical Feature	Region
(a)	Abyssinian Plateau	Arabia
(b)	Atlas Mountains	North-Western Africa
(c)	Guiana Highlands	South-Western Africa
(d)	Okavango Basin	Patagonia

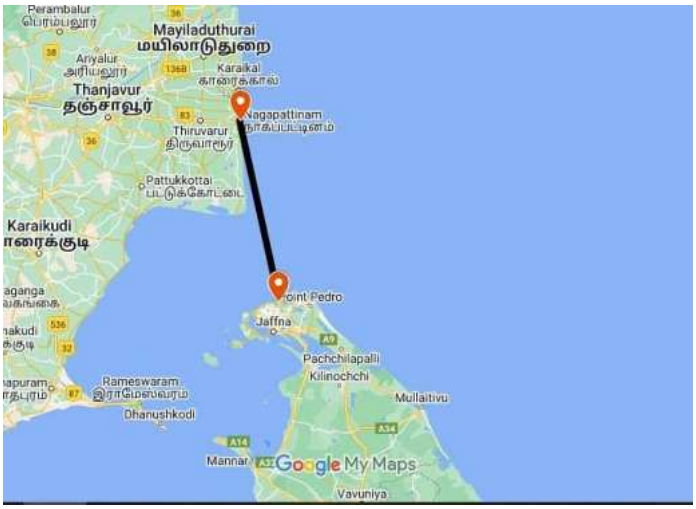
Ans: B

5. INDIA-SRI LANKA FERRY SERVICE

Context:

The historic sea route between India and Sri Lanka has been revived with the launch of a passenger ferry service connecting **Nagapattinam (India) and Kankesanthurai (Sri Lanka)**, approx. 110 Km distance, with the aim of strengthening bilateral relations, promoting tourism, and boosting local trade.

- **Named 'Cheriyapani,'** the service rekindles maritime links dating back to the early 1900s.
- Previously, **Indo-Ceylon Express or Boat Mail** used to run between Chennai and Colombo but was halted in 1982 due to the Sri Lankan civil war.



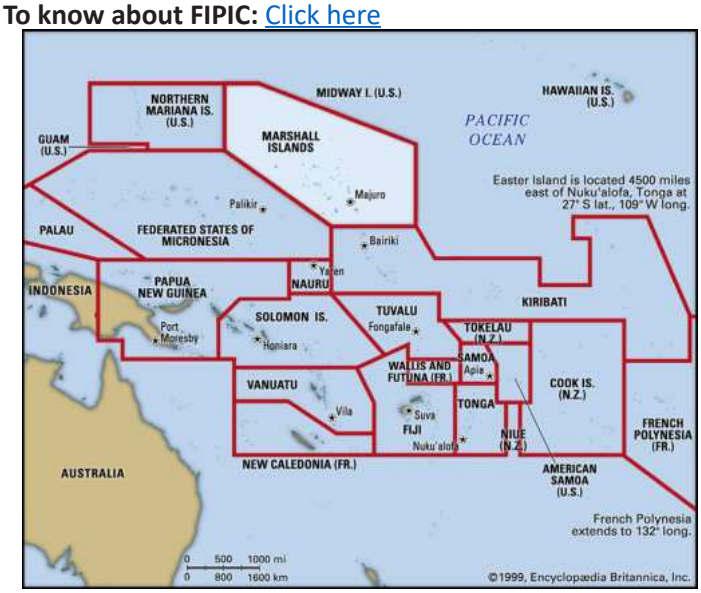
6. MARSHALL ISLANDS

The United States signed a new **20-year agreement with the Marshall Islands** worth over $2 billion in economic assistance.

This deal is part of the Compacts of Free Associations (COFAs), **which involve the U.S. providing defence and economic aid to certain Pacific island nations**, and gaining military access to strategic ocean areas.

This agreement follows similar deals with **Palau and Micronesia** and is aimed at strengthening U.S. influence in the Northern Pacific amid competition with China.

About Marshall Islands:

It is an island nation in the **Pacific Ocean, known for its atolls and islands**. Its history includes **Spanish and German influence**, Japanese occupation during World War I, and **U.S. administration post-World War II, including nuclear tests**. It gained independence in 1979 through a Compact of Free Association **with the United States**.

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