



INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

MOUNT RUANG

Indonesian authorities issued a tsunami alert after Mount Ruang volcano erupted five times, expelling ash and lava.

22 APR - 27 APR 2024

WEEKLY CURRENT AFFAIRS

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GENERAL STUDIES – 1

Topics: [Women and women related issues.](#)

1. 50 YEARS OF CHIPKO MOVEMENT

Context:

The [Chipko movement](#), which originated in the 1970s in the Himalayan villages of Reni and Mandal, marked its **50th anniversary recently**.

What was the Chipko movement?

The Chipko movement **was a non-violent protest that began in the Chamoli district of Uttarakhand (then Uttar Pradesh), India, in 1973**. Led by environmental activists such as **Sundarlal Bahuguna and Gaura Devi**, among others, the movement aimed to prevent the felling of trees in the Himalayan region. The **name “Chipko” comes from the Hindi word meaning “embrace,”** as villagers hugged the trees to prevent their cutting.

The original Chipko movement dates back to **1730 when Amrita Devi Bishnoi** and over 300 others from the Bishnoi sect sacrificed their lives protesting the felling of **Khejarli trees** in Rajasthan.)

Impact of Chipko Movement:

Impact	Description
Environmental Awareness and Conservation	Raised awareness about deforestation and the importance of conserving forests.
Push to Eco-Feminism	Eco-feminism is a philosophical and political movement exploring the links between ecological issues and women’s experiences .
	It recognizes the importance of traditional knowledge, often held and transmitted by women, in promoting sustainable practices.
	The Chipko movement exemplifies the collective involvement of women in forest conservation, reflecting the principles of Eco-feminism
Local Empowerment	Empowered local communities, particularly women, in protecting natural resources.
Policy Changes	Contributed to the formulation of policies for forest conservation and sustainable resource management.
Inspiration for Similar Movements	Inspired similar movements globally, emphasizing nonviolent direct action and community involvement.
Global Environmental Movement	Became a symbol of the global environmental movement, highlighting grassroots activism.
Recognition of Women’s Role	Challenged traditional gender roles, recognizing women’s crucial role in conservation.
Economic and Cultural Impact	Helped preserve traditional livelihoods and cultural practices linked to the environment.
Education and Research	Spurred interest in environmental science and sustainable development research.
Forest Protection and Regeneration	Protected forests from destruction, aiding in regeneration and ecological benefits.

Other such movements include:

Movement	Year	Place	Leaders	Aim
Save Silent Valley Movement	1978	Silent Valley, Palakkad district, Kerala	Kerala Sastra Sahitya Parishad (KSSP), Sughathakumari	Protection of Silent Valley from a hydroelectric project
Jungle Bachao Andholan	1982	Singhbhum district, Bihar	Tribals of Singhbhum	Against replacing natural sal forest with Teak

Appiko movement	1983	Uttara Kannada and Shimoga districts, Karnataka	Pandurang Hegde (facilitator)	Opposition to felling and commercialization of natural forests and ancient livelihood
Narmada Bachao Andolan (NBA)	1985	Narmada River, Gujarat, Madhya Pradesh, Maharashtra	Medha Patker, Baba Amte, Adivasis, farmers, environmentalists, human rights activists	The movement against the construction of large dams on the Narmada River
Tehri Dam Conflict	1990s	Bhagirathi River, Tehri, Uttarakhand	Sundarlal Bahuguna	Protest against displacement of town inhabitants and environmental consequences of weak ecosystem
Save Dehing-Patkai	2020	Assam	Adil Hussain, Randeep Hooda, Joi Barua, Jadav Payeng, members of AASU, AAMYU	Opposition to opencast mining in Dehing-Patkai Wildlife Sanctuary
Save the Sunderbans	2020	West Bengal	Response to cyclone Amphan , aiming to protect the Sunderbans from further environmental degradation and provide support to affected communities	



FIG. 1—Locations of activities of main environmental movements in India.

Need of 'New Chipko Movement' at the time of environmental crisis.

- **"We will endure sticks and bullets but save our trees"** – these were the kind of slogans and spirit with which we had conducted the chipko movement in the 1970s and 1980s. **A similar spirit needs** to be displayed and all sections of society have to unite to prevent further degradation of the environment.
- **People should rise and demand from the government their right to live.** Apart from **saving trees**, this time there is a need to fight for **clean air, and pure water too.**
- There is a need to have a **separate environmental vision document** by the government, especially for **Urban India**. Given the recent events, political parties should expect the **environment to become a focal campaign point, at least in cities.**
- There is also a need for an **environmental road-map** from the administration and the executive.
- It is important to **study the steps taken by other countries.** For instance, SO₂ pollution declined by 75% in China over the last decade while in India it increased by 50%. In China, the SO₂ controls were imposed on coal power plants while in the case of India, the measures are delayed until 2022 in some cases.

Conclusion

The Chipko Movement in the 1970s proved as a tipping point for environmental causes not just in India but the rest of the world as well. There is a need for a **"Chipko 2.0", this time led by the coordination of society and political class.**

About Sunderlal Bahuguna (1927-2021):

He spearheaded the Chipko movement in the 1970s to protect trees in the Himalayas, popularizing the slogan **"ecology is permanent economy."** He advocated for the integration of ecology and economy, emphasizing their interconnectedness. Bahuguna protested against the **Tehri Dam project, undertaking a 56-day fast.** He also led a **4,800 km padayatra from Kashmir to Kohima** to raise awareness about Himalayan issues. Bahuguna supported women-led movements against the liquor mafia and championed the **Beej Bachao Andolan** to preserve Himalayan biodiversity. He received the **Padma Vibhushan in 2009** for his environmental activism.

Mains Links:

Q. 'Women's movement in India has not addressed the issues of women of lower social strata.' Substantiate your view. (UPSC 2018)

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.

2. DEADLY DUBAI FLOODS MADE WORSE BY CLIMATE CHANGE

Context:

Recent deadly storms that **submerged Dubai and caused fatalities in Oman** were likely exacerbated by climate change, with human-induced heat making the record rainfall 10-40% heavier, according to scientists.

- Meanwhile, across the **Arabian Sea in Mumbai, a humid heatwave** has persisted in recent days, with relative humidity reaching as high as 55%.

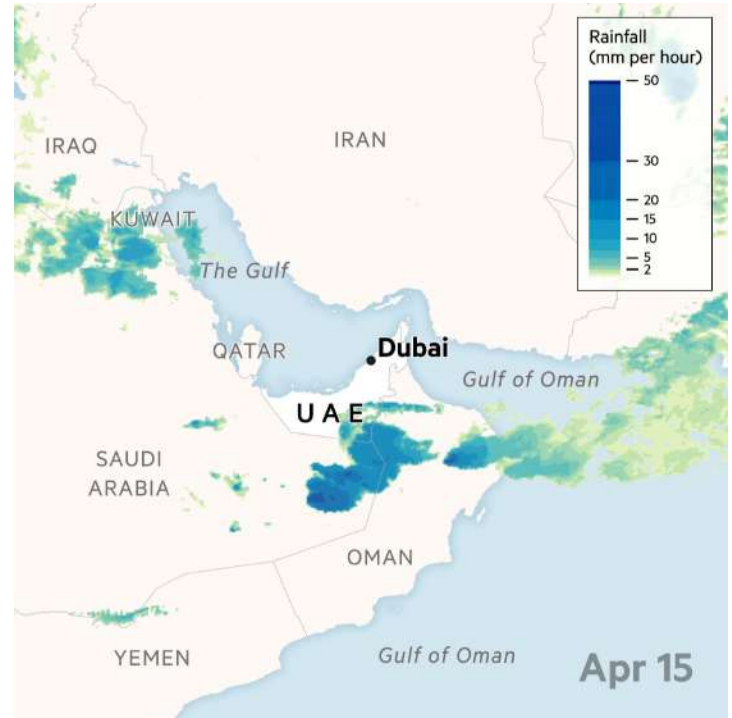
Climate of UAE:

The United Arab Emirates (UAE) typically **experiences arid conditions**, with heavy rainfall events being rare. However, a recent historic event saw Dubai receiving **over 142 mm of rainfall within 24 hours**, far surpassing its annual average of **94.7 mm.**

Possible Reasons for Dubai Floods:

Reasons	Description
1. Anticyclone Interaction	The presence of an anticyclone prevented a weather system, known as a western disturbance , from moving over West Asia. This interaction may have contributed to the storm system that caused the heavy rainfall and lightning in Dubai.
2. Cloud Seeding Operations	Reports indicate that the UAE National Centre of Meteorology's cloud seeding operations might have intensified the rainfall from the storm system. Cloud seeding involves the introduction of substances into clouds to enhance precipitation, which could have amplified the rainfall in Dubai.
3. Dust as Natural Cloud Seeders	Excessive dust in the region could have acted as natural cloud seeders, contributing to the heavy rainfall. Dust particles act as condensation nuclei, facilitating cloud formation similar to the process of man-made cloud seeding.

4. Record Heat and Global Warming	Record heat in recent years, coupled with warming trends in West Asia and the Arabian Sea, created unusual heat conditions. The UAE's climate has warmed by 0.4°C from the long-term average , as noted in the National Centre of Meteorology's Annual Climate Assessment 2022.
	A warmer atmosphere can hold more moisture , leading to heavier rainfall worldwide, including in Dubai.
5. Warm Sea Temperatures and Evaporation	Global warming has resulted in exceptionally warm water in the seas near Dubai , accompanied by warm air above.
	This combination enhances evaporation and increases the atmosphere's capacity to hold moisture . Consequently, larger amounts of rainfall occur, as observed in recent heavy downpours in Dubai.
6. Atmospheric Pressure Dynamics	According to a senior forecaster at the UAE's National Centre of Meteorology, a low-pressure system in the upper atmosphere, combined with low pressure at the surface , resulted in air compression.
	The pressure squeeze was intensified by temperature differences between the ground level and higher altitudes , creating favourable conditions for powerful thunderstorms.
7. Influence of El Niño and La Niña	Other factors, such as the transition from El Niño to La Niña , could have influenced the weather patterns, potentially contributing to the extreme rainfall in Dubai.
	El Niño and La Niña events are natural climate phenomena characterized by variations in sea surface temperatures and atmospheric pressure, which can impact global weather patterns.



Reason for possible hot weather in Mumbai:

Mumbai's hot weather is attributed to a **significant Anticyclonic Effect in the region**. Anticyclones, characterized **by high atmospheric pressure, induce downward-moving winds that compress and heat up, often leading to heat waves**. They can also block other weather systems, exacerbating extreme conditions.

In Mumbai, this anticyclone **created a "heat dome" effect**, further warming the air. Warm air from West Asia and the Arabian Sea was drawn in and heated by sinking motion, **increasing humidity, particularly before the monsoon season**. Additionally, the anticyclone may have inhibited the cooling effect of sea breezes at night, resulting in higher-than-usual nighttime temperatures.

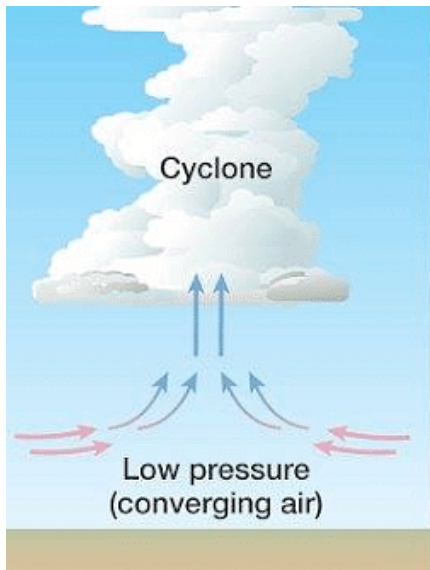
Other extreme events in India:

In 2023, India experienced a series of unprecedented climatic events, signalling a concerning new normal attributed to climate change. February (last year and this year) saw record-breaking temperatures, shattering a 123-year-old record. **Cyclone Biparjoy** formed in the Arabian Sea, lasting 13 days, the longest in over four decades. The India Meteorological Department reported **extreme weather events on 314 of 365 days in 2022**. These events claimed 3,026 lives and damaged about 2 million hectares of crop area.

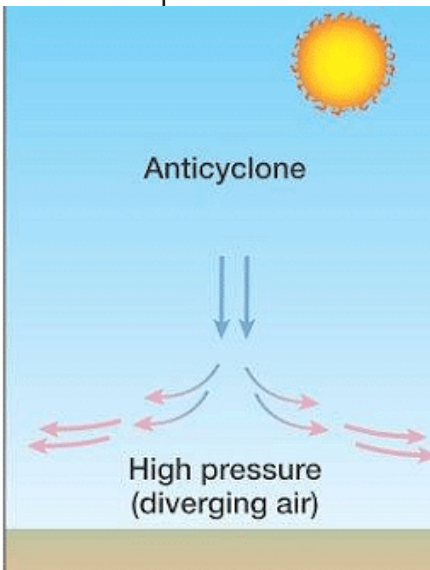
Monsoon patterns are shifting, with prolonged deficit rainfall followed by intense downpours, a trend strengthening over decades. The interaction between the southwest monsoon and a low-pressure system called the western disturbance is responsible for recent heavy rainfall in northern India.

difference between Cyclone and Anticyclone:

Feature	Cyclones	Anticyclones
Atmospheric Pressure	Low	High
Wind Direction	Inward, counterclockwise rotation (Northern Hemisphere)	Outward, clockwise rotation (Northern Hemisphere)
Weather Conditions	Stormy, with heavy rainfall and strong winds	Clear skies, calm conditions
Wind Speed	High	Moderate
Air Movement	Upward, converging towards the centre	Downward, diverging from the centre
Impact on Weather Patterns	Disruptive, causing heavy rain, flooding, and storm surges	Generally stable, may block weather systems and lead to heatwaves
Formation Factors	Form over warm ocean waters with low-pressure systems	Form over cool ocean waters with high-pressure systems



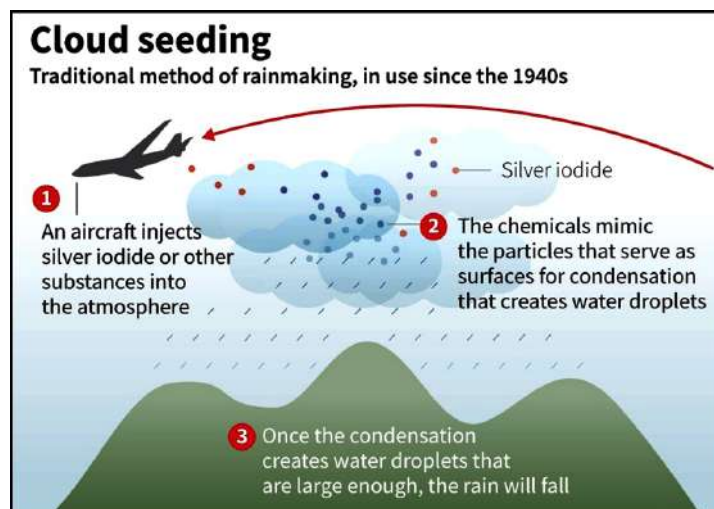
Cyclone
Low pressure (converging air)



Anticyclone
High pressure (diverging air)

What is Cloud Seeding?

Cloud seeding is a **weather modification technique aimed at enhancing precipitation** in clouds to increase rainfall or snowfall. It involves the introduction of substances, known as cloud seeding agents, into clouds to induce or enhance the formation of ice crystals or raindrops, depending on the type of cloud and desired outcome. Common cloud-seeding agents include **silver iodide, potassium iodide, and sodium chloride**. These agents serve as nuclei around which water vapour can condense and form ice crystals, which then grow and fall as precipitation. Cloud seeding is often used in regions experiencing water scarcity or drought conditions to augment water resources, but its effectiveness and environmental impact remain subjects of debate and ongoing research.



Insta Links

- [El Nino and Monsoon](#)

Mains Link

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

Prelims Link

Q. La Nina is suspected to have caused recent floods in Australia. How is La Nina different from El Nino? (UPSC 2011)

1. La Nina is characterised by an usually cold ocean temperature in equatorial Indian Ocean whereas El Nino is characterised by unusually warm ocean temperature in the equatorial Pacific Ocean.
2. El Nino has adverse effect on south-west monsoon of India but La Nina has no effect on monsoon climate.

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

Ans: D

Q. The scientific view is that the increase in global temperature should not exceed 2°C above pre industrial level. If the global temperature increases beyond 3°C above the pre-industrial level, what can be its possible impact/impacts on the world? (UPSC 2014)

1. Terrestrial biosphere tends toward a net carbon source.
2. Widespread coral mortality will occur.
3. All the global wetlands will permanently disappear.
4. Cultivation of cereals will not be possible anywhere in the world.

Select the correct answer using the code given below:

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

Ans: B

GENERAL STUDIES – 2

Topics: Effect of policies and politics of developed and developing countries on India’s interests, Indian diaspora.

1. ISRAEL-IRAN CONFLICTS: CHALLENGES AND SOLUTIONS

Context: Iran recently launched a **series of air strikes on Israel, employing 200-300 drones** and ballistic missiles. The attacks, executed by **Iran’s para-military force**, the Iranian **Revolutionary Guard Corps**, were in response to Israeli war jets targeting an **Iranian consulate in Syria**. Iran dubbed the attack **“Operation True Promise”**.

The attack signals a **significant escalation in the ongoing conflict between Israel and Iran**, moving beyond previous skirmishes involving **Israel and Hamas**.

Events that led to the Attack:

Event	Date	Description
US Withdrawal from Iran’s Nuclear Deal	2018	Israel praises the US withdrawal from the Iran nuclear deal, which it had lobbied against, viewing it as a historic move by President Trump.

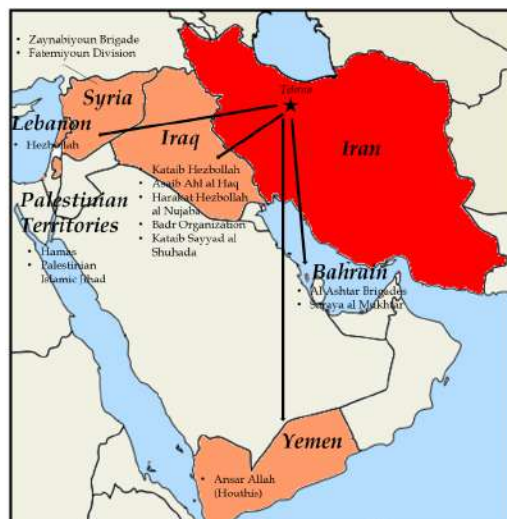
Assassination of Iran's Army General	2020	Israel welcomes the assassination of General Qassem Soleimani by a US drone strike in Baghdad, prompting retaliatory missile attacks by Iran on American bases in Iraq.
 Hamas Attack on Isreal	October 2023	Hamas, supported by Iran, launched a missile and land attack on Israel, leading to Israeli airstrikes on Gaza in response.
Israel Raids	November 2023	Israel conducts raids on medical facilities in Gaza, citing Hamas's presence, and using them for warfare.
Houthi Group's Red Sea Incident	November 2023	The Iran-backed Houthi group's landing on a cargo vessel in the Red Sea initiates the 'Red Sea Crisis,' contributing to regional tensions and supply chain issues.
Escalation of Israel's Ground Offenses	December 2023	Israel intensifies ground offensives in Gaza, resulting in a rise in casualties and refugees, prompting international calls for a peaceful resolution.
Airstrike on the Irani-an Embassy	April 2024	Suspected Israeli airstrike on the Iranian embassy in Damascus results in casualties, heightening tensions further.
Iran's Missile Attack on Israel	April 2024	Iran launches a missile attack on Israel, allegedly in response to an Israeli strike on Iran's consulate in Syria, marking the first direct attack on Israel from Iranian territory.
Isreal strikes back	April 2024	Isreal attacked Iran's airforce base (however, denied by Iran)

Iran and Israel's Conflict:

Iran and Israel have a **long-standing history of enmity**, largely stemming from **ideological and geopolitical differences**.

Period	Key Events
Pre-1979 Iran-Israel Ties	Iran recognized Israel after its formation in 1948. Despite the Arab-Israeli conflict, Iran established diplomatic ties with Israel. During Mohammad Reza Shah Pahlavi's rule from 1941 to 1979 , Iran pursued a pro-Western foreign policy. Despite economic boycotts from Arab states, Iran maintained diplomatic ties with Israel and even sold oil to Israel. Israel, under Prime Minister David Ben Gurion , adopted the "periphery doctrine," forming alliances with non-Arab, mainly Muslim, countries like Turkey and pre-revolution Iran to counter Arab hostility.
The 1979 Revolution	Iran's Islamic Revolution led to a shift in view towards Israel as an occupier of Palestinian land. Ayatollah Khomeini labeled Israel as "Little Satan."
Post-1979 Shadow War	Both countries engaged in indirect conflicts through proxies and limited strategic attacks . Israel targeted Iranian nuclear facilities through a computer Virus (Stuxnet). Iran supported anti-Israel militant groups like Hezbollah and Hamas.

Fig: Iran's Proxy groups



Impact of Middle-East Escalation:

Impact	Description
Increasing Regional Escalation	Heightened tensions could lead to military action, escalating the conflict regionally. Other countries such as Syria, Lebanon and Saudi Arabia could be drawn into a broader conflict.
	Israel is believed to be nuclear-capable therefore conflict can lead to a nuclear flash-point
Potential to Disrupt Oil Supplies	Escalation could disrupt crude oil supplies , impacting global oil prices and economies heavily reliant on oil imports.
	With Iran being a key producer of crude oil within OPEC , volatility in oil prices may increase due to disruptions in shipping routes and geopolitical tensions.
Spike in Inflation and Capital Outflow	Increased geopolitical tensions may lead to commodity price hikes and capital outflows , affecting global markets.
Trade and Travel Disruptions	Recent events include Iran seizing an Israel-linked ship near the Strait of Hormuz and Houthis hijacking a commercial ship in the Red Sea. These incidents affect global trade routes.

India faces challenges **balancing relationships with Iran and Israel**, aiming to maintain stability in the region.

Aspect	Israel's Importance for India	Iran's Importance for India
Economic and Commerce	India is Israel's third-largest trade partner in Asia. Bilateral merchandise trade has grown significantly.	Iran has been a major supplier of crude oil to India , contributing significantly to India's energy security.
Defence	India imports critical defence technologies from Israel . Nearly 41% of Israel's defence exports go to India.	Both countries share geopolitical concerns, especially regarding terrorism and stability in the region.
Energy	India has exploration licenses for natural gas extraction from Israel's gas fields , diversifying the relationship.	US sanctions on Iran have impacted India's oil imports , highlighting Iran's importance for India's energy needs.
Science & Technology	India-Israel Industrial R&D Fund promotes joint projects.	Strategic collaboration on space projects, including satellite launches, strengthens bilateral ties.
Strategic Location	Israel connects the Red Sea to the Mediterranean Sea through land	Iran's strategic location (including Chabahar Port) enhances India's connectivity and economic interests in the region.

India's Position:

India calls for **immediate de-escalation and a return to diplomacy** to resolve conflicts. India's position is on the 'Two-State Solution' of the Israel-Palestine conflict.

What should India do?

India must carefully balance engagements with key regional actors in the Middle East, considering their diverse interests and orientations. India **should prioritize non-ideological engagements** in the region to support its expanding interests in the Middle East.

What Should be done to de-escalate the situation?

- UN Reaction:** The UN urges Iran and Israel to **show restraint** amid escalating tensions in the Middle East. The Secretary-General warned against further escalation and mutual accusations, emphasizing the need for peace.
- Sustainable Ceasefire and Two-State Solution:** Israel should accept a ceasefire in Gaza, open borders for humanitarian aid, and work **towards a two-state solution** for long-term peace.
- Dialogue and Diplomacy:** International mediation and direct talks facilitated by neutral parties could build trust and find common ground between Iran and Israel.
- Addressing Nuclear Proliferation Concerns:** Iran should adhere to the **JCPOA and allow international in-**

specations, while Israel could recognize Iran's right to peaceful nuclear energy.

5. **Regional Cooperation:** Promoting cooperation within regional organizations could address security concerns and foster stability.
6. **Long-Term Vision for the Middle East:** Establishing a comprehensive security architecture and addressing underlying issues can contribute to peace and reconciliation.
7. **Normalization of Relations:** Steps towards diplomatic normalization, such as exchanging ambassadors and reopening embassies, could promote peace, as seen in recent agreements between Israel and some Arab states.

Insta Link:

[Gaza conflict: India-Israel Relations](#)

Prelims Link:

Q. The term "two-state solution" is sometimes mentioned in the news in the context of the affairs of (UPSC 2018)

- (a) China
- (b) Israel
- (c) Iraq
- (d) Yemen

Ans: B

GENERAL STUDIES – 3

Topics: Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.

1. INDIA'S DECLINING NET HOUSEHOLD SAVINGS

Context:

Recent data from the Reserve Bank of India reveals that **India's net household savings are at a 47-year low, standing at 5.3% of the GDP in the fiscal year 2023, down from 7.3% in 2022.**

- This decline is accompanied by a **sharp increase in household debt** (at 5.8% of GDP) reaching the **second-highest level** since the 1970s.

What is the Household Saving Rate?

The Household Saving Rate **refers to the percentage of disposable income that households save instead of spending on consumption.** It is a key economic indicator that reflects the propensity of households to save for the future.

Household savings consist of three main parts:

1. **Financial assets:** This includes cash, bank deposits, retirement funds, insurance policies, stocks, and other investments.
2. **Physical assets:** These are investments in tangible assets like real estate, land, and property.
3. **Gold and silver ornaments:** Savings in the form of precious metals like gold and silver jewellery or bullion.

A higher saving rate indicates greater financial prudence and potential for investment, while a lower saving rate may suggest higher consumer spending and less savings for future needs.

Household net savings are the total money and investments families have, like deposits, stocks and bonuses, minus any money they owe, like loans and debt.

Why are domestic savings important for India's economy?

Domestic savings are **vital for India's economy as they fuel investment** in key sectors like infrastructure and industries. This capital formation supports economic growth, job creation, and prosperity.

What is Household debt?

Household debt refers to the total amount of money that individuals owe to creditors, such as banks, financial institutions, or other lenders.

Reasons for declining Household savings in India and Increasing Household Debt:

Reasons for Declining Household Savings in India	Reasons for Increasing Household Debt
Low-interest rates discourage saving	Higher borrowing for consumption , including consumer durables
Rising inflation reduces purchasing power	Increased reliance on debt to fund expenses and investments
Global Economic uncertainty (such as the Russia-Ukraine war, and Gaza Crisis) led to precautionary saving	Growth in non-mortgage loans , such as farm and business loans
Changing consumer mindset favouring current consumption over saving for the future	Credit widening , with more borrowers taking out loans, rather than credit deepening
Lack of adequate financial literacy and planning	
Increasing costs of living outpacing income growth	

As households borrow more to support consumption, their savings diminish. Increased borrowing means **more income goes toward debt repayment**, reducing the amount available for savings.

The fall in household savings can have several macroeconomic implications:

- Increased household debt:** The fall in household savings means people have less money set aside for the future, which can lead to more borrowing.
- Impact of high-interest rates:** Policy measures like higher interest rates aimed at controlling inflation can inadvertently lead to increased household debt levels, potentially trapping them in a debt cycle.
- Effect on demand:** High-interest rates can weigh on households' ability to consume, thereby **reducing demand in the economy**.
- Fragility and joblessness:** This shift towards a more financialized economy could make the economy fragile and potentially lead to job losses
- Rising inequality** - The rise in financial liabilities with falling asset levels could be a sign of rising inequality.
- Dependence on foreign capital** - A dip in household savings would lead to more dependence on foreign capital to fund growth.

Steps to Increase Household Savings in India:

- Implement initiatives to **enhance financial literacy among households**, empowering them to make informed decisions about savings and investments.
- Introduce tax incentives or deductions for savings instruments** such as retirement accounts, fixed deposits, and insurance policies to encourage households to save more.
- Government Savings Schemes:** Promote government-sponsored savings schemes like the [Public Provident Fund \(PPF\)](#), [National Savings Certificate \(NSC\)](#), and [Sukanya Samridhi Yojana \(SSY\)](#) to attract households to invest in safe and secure avenues.
- Employer Contributions:** Encourage employers to contribute to their employees' retirement savings through schemes like the Employees' Provident Fund (EPF) and the [National Pension System \(NPS\)](#).
- Financial Inclusion:** Expand access to banking and financial services in rural and underserved areas to include more households in the formal financial system, offering them opportunities to save.

Steps to Reduce Household Debt in India:

- Debt Counseling Services:** Establish debt counselling services to provide guidance and support to households struggling with debt management,
- Regulation of Lending Practices:** Implement stricter regulations on lending practices by financial institutions to prevent predatory lending and discourage households from taking on excessive debt burdens.
- Debt Relief Programs:** Introduce debt relief programs or schemes to assist households facing financial hardship esp. farmers.
- Alternative Financing Options:** Promote alternative financing options such as peer-to-peer lending, microfinance, and community-based savings and credit groups as alternatives to traditional banking loans, offering households access to affordable credit sources with reasonable terms and conditions.

Conclusion:

While some interpret **reduced savings in India as a sign of confidence in future income prospects**, others express concerns about **financial fragility and sustainability**, especially given **India's low per capita income among G20 nations**. The situation underscores the delicate balance between consumption aspirations, inadequate public amenities, and income instability for Indian households.

Insta Links:

[Household Consumption Expenditure Survey 2022-23](#)

Prelims Link:

Q. As per the NSSO 70th Round "Situation Assessment Survey of Agricultural Households", consider the following statements: (UPSC 2018)

1. Rajasthan has the highest percentage share of agricultural households among its rural households.
2. Out of the total agricultural households in the country, a little over 60 percent belong to OBCs.
3. In Kerala, a little over 60 percent of agricultural households reported to have received maximum income from sources other than agricultural activities.

Which of the statements given above is/are correct?

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

Ans: C

Q2. In a given year in India, official poverty lines are higher in some States than in others because (UPSC 2019)

- (a) poverty rates vary from State to State
- (b) price levels vary from State to State
- (c) Gross State Product varies from State to State
- (d) quality of public distribution varies from State to State

Ans: B

[Topics: Conservation related issues, environmental pollution and degradation, environmental impact assessment.](#)

2. CHALLENGES POSED BY RENEWABLE ENERGY PROJECTS IN INDIA

Context:

The challenges posed by renewable energy development, particularly in the context of solar parks, underscore the complex intersection between sustainable energy goals and local socio-economic and environmental concerns.

India's Renewable Energy Status:

India is the **world's third-largest emitter** of greenhouse gases. In the fiscal year 2023-24, **India added over 18 GW of renewable energy capacity**, a 21% increase from the previous year, led by solar (approx. 13 GW) and wind (approx. 2 GW) installations. Total installed capacity has risen from over 76 GW in 2014 to approx. 179 GW by October 2023, nearly **2.34** times higher.

India aims to install 500 GW of renewable energy capacity by 2030, significantly up from the previous 450 GW target.

Examples of large-scale solar Park in India:

Solar Park Name	Location	Capacity	Land Area
Khavda Solar and Wind Park	Near Vighakot village, Kutch, Gujarat	30 GW	72,600 hectares
Pavagada Solar Park	Karnataka	2,050 MW	13,000+ acres
Bhadla Solar Park	Bhadla village, Jodhpur District, Rajasthan	2.25 GW	14,000 acres
Kurnool Ultra Mega Solar Park	Kurnool district, Andhra Pradesh	1,000 MW	Almost 6,000 acres
Charanka Solar Park	Gujarat		

Large-Scale Renewable Energy Parks: Positive Impacts

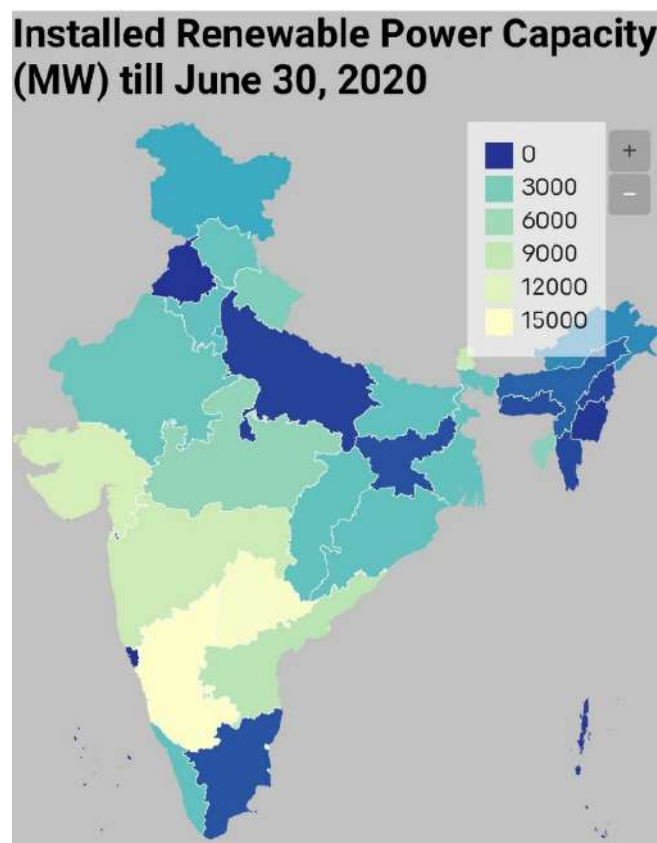
- 1. Steady Income for Landowners:** Farmers in areas like Pavagada, Karnataka, gain a reliable annual income by leasing their land to solar parks.
- 2. Renewable Energy Production:** These parks play a vital role in India’s renewable energy output, reducing reliance on fossil fuels and supporting the country’s goal of achieving Net Zero emissions by 2070.
- 3. Employment Opportunities:** The development of large-scale renewable energy projects creates job opportunities locally, fostering employment growth in the regions where they are established.

Challenges Posed by the Renewable Energy Projects:

Issue	Description
Land Use Challenge	Large-scale renewable energy projects, especially solar parks, require extensive land use. India may need 50,000-75,000 sq. km of land, about half the size of Tamil Nadu, to achieve its Net Zero targets. This poses a challenge as it may lead to the conversion of agricultural land.
Impact on Food Security	Conversion of agricultural land for renewable energy could affect food security. India needs at least 400,000 hectares of land by 2030 to meet renewable goals , potentially disrupting agricultural practices and reducing available farming land.
Loss of Common Lands	Near Bhadla, Rajasthan , solar parks have led to the loss of sacred common lands and grazing areas, negatively impacting local farmers and pastoralists.
Resource Competition	Large water demand for maintaining solar panels can conflict with local water needs, impacting water security.
Biodiversity and Ecosystem Disruption	Construction of solar parks can lead to biodiversity loss, especially in sensitive ecosystems like deserts, impacting the overall ecological balance.

Regional Divide in Renewable Energy Projects:

According to the Central Electricity Authority’s report on Optimal Generation Capacity Mix, by 2030, solar and wind will make up almost **51 per cent** of total generation capacity and almost **31 per cent** of all generated power. If these projections materialise, they are likely to have **major fiscal consequences for the coal-rich states of the East (where the majority of poor people live)**



The concentration of RE assets in West and South

India’s massive RE build-out so far has largely benefited **western** and **southern** states. In August 2023, **92.5 per cent** of all grid-connected RE generation came from **eight states**(**Central Electricity Authority**).

The main reasons behind this are;

- Higher insolation and wind density:** Instrumental in the generation of solar and wind power respectively.
 - **Eg: Rajasthan** for solar power and **Tamil Nadu** for wind power.
- Favourable state finances:** Coal-rich states **lack diversity** in terms of revenue sources and experience **higher fiscal strain**.
 - **Eg:** States like **Jharkhand** and **Odisha** depend a lot on **coal royalties**.
- Investment environment:** **Southern** and **Western** states have better **fiscal and budgetary condition** that promotes **investor confidence**.
- Land availability and cost of RE:** According to **Bridge to India**, a renewable power consultancy, the lack of easy **availability of renewable resources and land** together are the main hindrances in the growth of renewable energy in the eastern region.

Impacts on the revenue of coal-rich states

- The decline in royalties:** Coal royalties as a proportion of overall state revenue will decline as **coal growth starts slowing** later this decade
- Increase in cost of power:** The cost of **power procurement** will increase as new RE contracts are layered on top of existing commitments for firm power.
- Increase in power import:** **Grid-scale energy storage technologies** are unlikely to be adopted at a large scale by the end of the decade. Since most coal-rich states have **limited grid-scale RE-deployment**, they will have to import more power from other states.
- Worsen budget deficits:** Declining royalties and increasing imports could worsen the budget deficits of RE-poor power-importing states by almost **8.66 per cent on average**(beyond the norms of the **FRBM Act, 2003**).
- Displacement of RE integration costs:** By giving **inter-state transmission waivers** to an entire generation of new RE projects, the integration costs of the energy transition are **displaced onto state PSU balance sheets** without necessarily facilitating **compensatory investment** in upgraded transmission capacity, which can better manage the variability of the new RE projects.
- Global market dynamics:** International demand for cleaner energy sources could influence India’s **energy export market**. States with significant renewable energy assets may benefit from such global dynamics, potentially affecting the **overall economic landscape**.

Way forward

Action	Description
Expand Community Engagement	Involve local communities in planning and decision-making for solar park developments to align projects with local needs, similar to community leasing in Pavagada.
Revise Legal Frameworks	Strengthen laws to require Environmental and Social Impact Assessments for solar parks, preventing adverse effects on local communities and ecosystems.
Promote Agrivoltaics	Implement agrivoltaic systems combining agriculture with solar energy , providing dual land use for energy production and farming, maximizing land efficiency and supporting local economies.
Enhance Training Programs	Develop targeted training programs to equip local populations with new skills, ensuring they benefit from shifts in employment opportunities due to renewable energy projects.
Balanced Regional Development	Give RE-poor states a bigger stake in the energy transition, reviving the philosophy of balanced regional developmentalism, and providing preferential lending for RE projects in these states.
Greater Voice in Federal Power Negotiations	Provide RE-poor states with a greater voice in federal power negotiations, possibly through the revival of institutions like the Inter-State Council.
Financial Transfers to RE-poor States	Ensure explicit financial transfers to RE-poor states through mechanisms like the Finance Commission, promoting collaborative industrial policy through just transition mechanisms.

Conclusion

Green industrial policy should not be the exclusive privilege of historically well-endowed states. Otherwise, the energy transition will simply be yet another **drain of resources** from India’s least developed to its most developed regions. Policy measures that **support both** the decline of **traditional** energy sources and the rise of **renewables** will play a key role in managing these transitions effectively.

Insta Links:

Perspective- India's Green Energy Transition

Prelims Link:

Q. Consider the following statements regarding 'Earth Hour': (UPSC 2014)

1. It is an initiative of UNEP and UNESCO.
2. It is a movement in which the participants switch off the lights for one hour on a certain day every year.
3. It is a movement to raise awareness about climate change and the need to save the planet.

Which of the statements given above is/are correct?

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

Ans: C

Q. With reference to 'Water Credit', consider the following statements: (UPSC 2021)

1. It puts microfinance tools to work in the water and sanitation sector.
2. It is a global initiative launched under the aegis of the World Health Organisation and the World Bank.
3. It aims to enable poor people to meet their water needs without depending on subsidies.

Which of the statements given above are correct?

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

Ans: C

GENERAL STUDIES – 4

1. UK: DEPORTATION OF ASYLUM SEEKERS TO RWANDA

Context:

The UK Parliament **passed a bill allowing asylum seekers** arriving irregularly to be deported to Rwanda, a move spearheaded by Chancellor Rishi Sunak to **curb Channel crossings**. Despite opposition, the bill cleared both houses and is set to become law. It will apply to **anyone who arrives in the UK without prior permission**, even if their aim is to claim asylum on legitimate grounds

However, critics, argue that it's **cruel and ineffective**.

Ethical issues include:

1. Questions about the **safety and well-being of individuals** being sent to Rwanda

2. The fairness of the **deportation process**
3. The potential for exploitation or harm of vulnerable populations
4. By overriding laws preventing deportation and compelling courts to treat Rwanda as a "safe country," **there's a clear violation of the rule of law**.
5. **Rwanda's human rights record**, marred by allegations of ill-treatment of dissidents, journalists, and refugees, raises serious doubts about the ethical implications of such a decision.
6. Sending refugees to a country where **they may face persecution violates the core principle of non-refoulement** in international refugee law, as outlined in the **1951 Refugee Convention and its 1967 protocol**.

Thinkers' Views:

Ethical Thinker	View on Asylum Seekers and Refugees
Mahatma Gandhi	Advocated for compassion and support towards asylum seekers and refugees, emphasizing the principles of nonviolence and empathy.
Rabindranath Tagore	Emphasized the importance of hospitality and universal brotherhood , promoting acceptance and integration of refugees into society.
S w a m i Vivekananda	Would likely advocate for providing refuge to those in need, viewing it as a moral duty and an expression of humanitarianism .
Nelson Mandela	Emphasized the importance of solidarity and support for refugees, drawing from his own experience of fighting against discrimination and injustice.
Aung San Suu Kyi	Advocated for the protection of refugees' rights and the promotion of democracy and human rights as essential for ensuring their well-being and dignity.

India's stance on refugees:

India is not a party to the Refugee Convention, as it hasn't ratified either the 1951 Convention or its 1967 Protocol, and India **lacks a national refugee protection framework**. Nonetheless, India extends asylum to numerous refugees from neighbouring states and adheres to **UNHCR's guidelines** for other nationals, particularly from Afghanistan and Myanmar. For asylum-seekers from non-neighbouring countries, India conducts **Refugee Status Determination (RSD) before granting asylum**

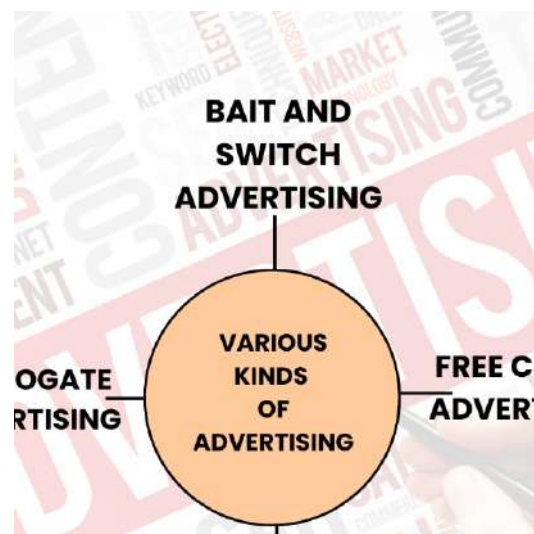
2. MISLEADING ADVERTISEMENTS AND ISSUES RELATED TO IT

Context:

The Supreme Court has urged the government **to take action against Fast Moving Consumer Goods (FMCG) companies for using misleading advertisements**, especially those targeting families with babies and schoolchildren.

In another case, the Supreme Court **criticized the Union government for its inaction against Patanjali Ayurved over misleading advertisements** and ordered the company’s MD Acharya Balakrishna and co-founder Yoga guru Ramdev to **submit their public apology** published in newspapers.

Concerns were raised amid **reports of higher sugar content in Nestle’s baby food products**.



What are Misleading Advertisements?

Misleading advertisements are **promotional messages or claims that deceive or mislead consumers** about the characteristics, benefits, or efficacy of a product or service. These ads may contain false or exaggerated information, leading consumers to make purchasing decisions based on inaccurate perceptions

Examples of misleading advertisements:

Company	Misleading Claim
Detox Tea Co.	“Lose 10 lbs in 7 days with our tea”
Beauty Products Inc.	“Eliminates wrinkles in one day”
Bourn Vita	“Our drink is low in sugar” (when it contains high sugar content)
Fresh Teeth Inc.	“Whitens teeth 10 shades in one use”
Hair Care Co.	“Regrows hair in 2 weeks”
Social Networking Inc.	“100% safe and secure”

Impact of misleading advertisement:

Impact	Examples
Loss of Customer Trust	Volkswagen used deceptive advertising to market their diesel cars as environmentally friendly, causing damage to the environment and a loss of trust in the company by customers.
Negative Brand Image	PepsiCo’s advertising campaign for Aquafina bottled water, which claimed the water was “ pure, perfect and refreshing, ” was misleading because the water was sourced from tap water.
Legal Consequences	L’Oreal was sued by the Federal Trade Commission (USA) for advertising that their anti-ageing creams could mimic the effects of a surgical facelift.
Health Impact	For example, sugary drinks such as soda are associated with many health problems.
Ethical impact	Unfair Competition, Breach of Trust, Deception and Manipulation

Legal provisions against misleading advertisements:

Legal Provisions	Description
CCPA’s Guidelines to Prevent False or Misleading Advertisements	Issued in 2022, these guidelines cover goods, products, and services, and aim to prevent false or misleading advertising .

Food Safety and Standards Regulations, 2018	Specifically deals with food (and related products), and regulates product claims, while the above guidelines deal with goods, products and services.
Cable Television Network Rules, 1994	Advertisements must not draw inferences that it has “ some special or miraculous or supernatural property or quality, which is difficult to prove.
FSS Act 2006	Misleading ads are punishable under Section 53 of the Food Safety and Standards Act, 2006.
Consumer Welfare Fund	Set up under the Central Goods and Services Tax (CGST) Act, 2017 , this fund promotes and protects the welfare of consumers .
Central Consumer Protection Council	Monitors and enforces consumer protection laws facilitates consumer education, and provides consumer redressal mechanisms.
Consumer Protection (E-Commerce) Rules, 2020	These mandatory rules require sellers to take back defective or deficient goods , withdraw services, or provide refunds if goods or services do not meet the description on the platform .
Advertising Standards Council of India (ASCI)	A self-regulatory organization that monitors ads and deals with complaints against them in India.
	The Advertising Standards Council of India (ASCI) had previously released guidelines on dark patterns in digital advertisements , urging companies not to mislead customers through omission, exaggeration, implication, or ambiguity.

Thinker’s view on Misleading Advertisements:

Ethical Thinker	Views
Mahatma Gandhi	Misleading people is a violation of truthfulness and honesty.
Chanakya	Emphasized the importance of ethical conduct in business and the detrimental effects of deceptive practices.
Swami Vivekananda	Advocated for truth and integrity, promoting the welfare of society.
Immanuel Kant	Misleading people violate the principle of treating individuals as ends in themselves, rather than means to an end.

Insta Links

- [Regulating misleading advertisements](#)

Mains Links

Q. Do you think that the brand ambassadors of products should be held accountable for misleading advertisements and endorsements? Examine. (250 Words)

Prelims Links

Consider the following statements: (UPSC 2018)

1. The Food Safety and Standards Act, 2006 replaced the Prevention of Food Adulteration Act, 1954.
2. The Food Safety and Standards Authority of India (FSSAI) is under the charge of the Director General of Health Services in the Union Ministry of Health and Family Welfare.

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: A

CONTENT FOR MAINS ENRICHMENT

WHY IN NEWS?	HOW TO USE IN ANSWERS?
<p>1. RANDOMIZED CONTROL TRIALS (RCTS)</p>	<p>Context: Randomized Control Trials (RCTs), pioneered by Sir Austin Bradford Hill, revolutionized TB treatment.</p> <p>What is RTC? Randomized Control Trials (RCTs) are a type of scientific experiment commonly used in medical research and other fields to assess the effectiveness of interventions or treatments. In an RCT, participants are randomly assigned to either the treatment group, which receives the intervention being studied, or the control group, which does not receive the intervention or receives a placebo. This random assignment helps ensure that any differences observed between the two groups are due to the intervention itself and not to other factors.</p> <div data-bbox="432 674 1501 1323" data-label="Diagram"> </div> <p>Randomized controlled trials (RCTs) have revolutionized medicine, providing an impartial way to assess treatment efficacy. They've led to major breakthroughs like aspirin preventing heart attacks, HIV antiretroviral therapies, and COVID-19 vaccines. RCTs tested streptomycin, the first effective antibiotic for TB, transforming TB management. Sir Austin Bradford Hill's work introduced the 'Bradford Hill Criteria,' vital in modern epidemiology. These criteria confirmed links between factors like alcohol and heart disease, and smoking and lung cancer, shaping public health policies and perceptions.</p> <p>Kremer and fellow economists Abhijit Banerjee and Esther Duflo won the 2019 Nobel Prize winner in Economics for experiments using RTCs</p>

2. 'MILLION MIYAWAKI' PROJECT

Context: The Embassy of **Israel in India** has joined the '**Million Miyawaki**' project, aimed at improving **air quality in Indian cities through mass afforestation** in urban spaces. In collaboration with the **Million Miyawaki Foundation**, the embassy will plant **a million trees in Delhi-NCR**, creating forest-like Miyawaki plantations with up to 30 locally sourced species (as part of Earth Day celebrations)

About Miyawaki Method:

It is inspired by **Japanese botanist Akira Miyawaki**, and boosts greenery in compact spaces. It fosters multi-layered forests with quick growth, mimicking natural biodiversity. Though they lack some natural forest attributes like medicinal properties, they serve as effective carbon sinks and mitigate ecological damage from activities like mining.

What is Earth Day?

Earth Day, **originating in 1970 after widespread protests against environmental degradation** is now observed globally on **April 22nd**. Coordinated by **EARTHDAY.ORG**, formerly Earth Day Network, its aim is to **mobilize a massive environmental movement** for transformative change.

Notably, the **Paris Agreement, a landmark climate accord, was signed on Earth Day in 2016**. It underscores a collective responsibility, as outlined in the **1992 Rio Declaration**, to achieve a balance between economic, social, and environmental needs for present and future generations. Other important environmental days include **World Water Day on March 22nd, World Biodiversity Day on May 22nd, and World Environment Day on June 5th**. Additionally, Earth Hour, an initiative by the **World Wildlife Fund for Nature (WWF)**, occurs annually on the **last Saturday of March**, urging individuals worldwide to switch off **lights from 8:30 pm to 9:30 pm** to raise awareness about climate change and environmental conservation.

FACTS FOR PRELIMS

GS-1

1. MOUNT RUANG

Context:

Indonesian authorities issued a **tsunami alert after Mount Ruang volcano** erupted five times, **expelling ash and lava**.

- The Centre for Volcanology and Geological Disaster Mitigation issued the **highest-level alert, warning of potential hazards including the collapse of the volcano into the sea, which could trigger a tsunami**.
- Indonesia, with **120 active volcanoes**, faces frequent **volcanic activity due to its location along the Ring of Fire**.

Volcano Mount Ruang erupts in Indonesia

Column of sulphur dioxide (SO₂) in the atmosphere as of April 17 at 0000 GMT, in mg/m²

50 75 100 140



2. TRIBES IN NEWS

Tribe	Description
Shompen Tribe	Shompen tribe, residing in the dense rainforests of Great Nicobar Island, cast their first vote in the Lok Sabha Election.
	Belonging to the Mongoloid group , they are one of the Particularly Vulnerable Tribal Groups , with an estimated population of 229 according to the 2011 Census. They live a semi-nomadic lifestyle , hunting wild pigs, pythons, monitor lizards, and crocodiles.
Pahariya tribe	Jharkhand's Pahariya tribe, primarily residing in Jharkhand and West Bengal, aims for seed independence through community-led Seed banks.
	Pahariya engage in shifting agriculture and worship deities specific to their households , clans, and villages. The Pahariyas speak the Mal Pahariya language influenced by local dialects and have a mixed language of Santali, Bengali, and Hindi.

3. ROSS ICE SHELF

Context:

Researchers have discovered that **the massive Ross Ice Shelf makes sudden jumps twice a day.**

- These sudden shifts, **akin to tremors along earthquake faults**, could **weaken the Ross Ice Shelf over time, potentially accelerating ice melt** rates and contributing to sea level rise.
- A sudden jump occurs when **two sections of ice press against each other (rubbing creates tension)**, just as tectonic plates on Earth cause earthquakes.
- The research team emphasises **that icequakes and fractures** are natural occurrences on ice shelves.



GS-2

1. NATIONAL HUMAN RIGHTS COMMISSION (NHRC) OF INDIA

Context:

During the recent **Statutory Full Commission meeting organized by the National Human Rights Commission (NHRC) of India**, chaired by Justice Shri Arun Mishra, the emphasis was placed on the need for collaborative strategies among all seven National Commissions to ensure the protection of human rights, particularly for vulnerable and marginalized sections of society.

Aspect	Details
Establishment	Established in 1993 as a statutory body under the Protection of Human Rights Act (PHRA), 1993 , as amended by the Protection of Human Rights (Amendment) Act, 2006. Its establishment aligns with the Paris Principle , which sets out the international minimum standards for national human rights institutions.
Composition	Consists of a Chairperson, five full-time Members , and seven deemed Members. Deemed Members include Chairpersons of other key National Commissions such as the National Commission for Scheduled Castes, etc. The Protection of Human Rights (Amendment) Act, 2019 , provided that a Judge of the Supreme Court can be appointed as Chairperson in addition to the person who has been the Chief Justice of India.
Tenure	The tenure for both the Chairperson and Members is three years or until the age of seventy years.
Powers and Functions	Has all the powers of a civil court while trying a suit under the Code of Civil Procedure, 1908. Can inquire into any violation of human rights or negligence in the prevention of such violation by a public servant, either suo motu or on a petition . Can intervene in proceedings regarding allegations of human rights violations pending before a court.

Key Initiatives	Guidelines to check the misuse of the power of arrest by the police. Elimination of manual scavenging.
Challenges	The Global Alliance for National Human Rights Institutions (GANHRI) deferred its re-accreditation mainly due to political interference in appointments, involving the police in probes into human rights violations, etc. Without accreditation, NHRC will be unable to represent India at the UN Human Rights Council

2. TOP-TIER SECURITY PARTNER

Context:

Australia's new **National Defence Strategy (NDS)** highlights **India as a top-tier security partner**, emphasizing the importance of its **Comprehensive Strategic Partnership in contributing to stability in the Indo-Pacific region.**

- The strategy aims to **deepen defence cooperation with India** through practical initiatives and information sharing.
- Australia plans to **allocate \$330 billion** to its **Integrated Investment Programme (IIP)** over the next decade, indicating a **commitment to enhancing defence capabilities.**
- This investment is expected to **raise defence spending to around 2.4% of Gross Domestic Product by 2033-34.**

India and Australia are also finalizing agreements for **cooperation in hydrography and air-to-air refueling**, further enhancing their strategic partnership.

3. NATIONAL ORGAN AND TISSUE TRANSPLANT ORGANISATION (NOTTO)-ID

Context:

The Union Health Ministry has mandated that all cases of organ transplants, whether from living or deceased donors, must be assigned a **unique National Organ and Tissue Transplant Organisation (NOTTO)-ID for both the donor and the recipient.**

- This directive aims **to curb commercial dealings in organs**, particularly those involving foreign citizens.
- Hospitals are required to **generate the NOTTO-ID from the NOTTO website.**

NOTTO is a national-level organization under **MOHFW** which undertakes **activities of coordination and net-**

working for the procurement and distribution of Organs and Tissues.

4. CHILDCARE LEAVE

Context:

The **Supreme Court** declared that **denying childcare leaves to mothers of children with disabilities violates the state's constitutional duty to ensure gender equality in the workforce.**

- The court emphasized that **women's participation in the workforce is a constitutional requirement under Article 15**, and **denying childcare leaves could force them to quit their jobs**, especially if they **have children with special needs.**
- The court also involved the Central Government in the case and ordered the state to **reconsider childcare leave policies in line with the RPWD Act.**Top of Form

Rule 43-C of the Central Civil Services (Leave) Rules, 1972 provides for **2 years (730 days) of CCL to female employees with children under 18 years** of age to look after their kids.

There's **no age limit in case of disabled child.**

5. ASEAN FUTURE FORUM

Context:

India's External Affairs Minister, delivered remarks at the **1st ASEAN Future Forum.**

- India supports **ASEAN unity and centrality**, emphasizing the **importance of a strong and unified ASEAN in the Indo-Pacific region.**

About ASEAN Future Forum:

- It was **proposed by Vietnam** at the **43rd ASEAN Summit in 2023.**
- It is a **common platform for ASEAN member states** as well as partner countries to **share new ideas and policy recommendations.**
- It aims to contribute to **promoting and shaping ASEAN's development path.**

6. MATERIAL RESOURCE OF THE COMMUNITY(ARTICLE 39 (B))

Context:

The Maharashtra government informed the Supreme Court that the **phrase "material resources of the community"** encompasses both public and private resources, subject to judicial review for redistribution.

The case concerns **Article 39(b) of the Constitution, directing the state to distribute material resources for**

the common good. The SC bench, comprising nine judges, seeks clarity on **whether privately owned resources fall under this provision.**

Judicial views on “material resources of the community” under Article 39(b) vary:

1. In **State of Karnataka v Shri Ranganatha Reddy (1977)**, the majority **opinion of SC excluded private properties from this category**
2. **SC: Mafatlal Industries Ltd v Union of India (1996)** supported a broad interpretation of “material resources” to include both natural and man-made, private and public properties.

Private Property owners contest the state’s authority to acquire properties for redistribution, citing violations of the **Right to Equality under Article 14.**

7. ARTICLE 244(A) OF INDIAN CONSTITUTION

Context:

The people of the **Diphu Constituency (Assam)** have been demanding the implementation of **Article 244(A) of the Constitution.**

Article 244(A) of the Constitution allows for the creation of an **autonomous state within Assam**, specifically in tribal areas such as **Karbi Anglong**. This provision, added through the **Constitution (Twenty-second Amendment) Act of 1969**, grants significant powers to the autonomous state, including its own Legislature or Council of Ministers. Notably, it provides **more autonomy compared to the existing Autonomous Councils** under the **Sixth Schedule by granting control** over law and order.

The history of this provision traces back to **the 1950s when demands for a separate hill state emerged among certain tribal populations of undivided Assam.** By the 1980s, this demand had escalated into an armed separatist insurgency, with Karbi groups at the forefront. Leaders of Karbi Anglong and North Cachar Hills, part of this movement, were given the option to remain in Assam or join Meghalaya. They chose to stay in Assam based on promises of greater powers, **including those outlined in Article 244(A).**

8. NOMINATION IN ELECTION

Context:

In the Surat Lok Sabha constituency, the **BJP candidate won uncontested** due to the rejection of the Congress

candidate’s nomination papers (due to alleged **discrepancies in the signatures of his proposers**) and the withdrawal of other candidates. The Congress alleged coercion of their proposers and appealed to the Election Commission (EC).

Nominations in elections follow specific criteria outlined in the **Representation of the People Act, 1951 (RoPA)**. Section 33 of the RoPA specifies the requirements for valid nominations, including the need for proposers from the respective constituency. The **Returning Officer (RO) can reject nominations** if signatures are found to be not genuine, as per Section 36 of the RoPA.

Section 33 of the Representation of the People Act, 1951 also outlines eligibility criteria for contesting Lok Sabha elections:

- **Individuals aged 25 or above** can run from any constituency
- **Proposers**, those supporting the candidacy, must be from the same area.
- Candidates from **recognized parties require one proposer**, while independents or smaller parties **need ten.**
- **Up to four sets of nomination papers** with different proposer groups can be submitted to ensure acceptance despite issues with one set.

To date, **Over 35 candidates have been elected unopposed to the Lok Sabha**, mostly in the first two decades after independence, with the last instance in 2012.

Legal Recourse: The Election Commission (EC) is unlikely to address the request directly due to **constitutional and legal provisions (Article 329(b) of the Constitution and the Representation of the People Act)**. Election petitions challenging the decision **must be filed before the respective High Court.** While the RP Act recommends **concluding trials within six months, this timeline is often not met**

9. UNCTAD REBRANDED AS ‘UN TRADE AND DEVELOPMENT’

Context:

UNCTAD, the United Nations Conference on Trade and Development, has undergone a significant rebranding as **“UN Trade and Development”** to mark its **60th anniversary.**

- This strategic move reflects its commitment to **enhancing its impact and amplifying its voice on behalf of developing countries.**
- The rebranding initiative includes **a new visual identity aimed at better reflecting the organization’s work and values.**

- The organization will adopt its **new name and logo across all official channels** in the **six UN languages**.

About UNCTAD:

The **United Nations Conference on Trade and Development (UNCTAD)** is a permanent intergovernmental organization that **promotes the interests of developing countries in world trade**.

It was established by the **United Nations General Assembly** on December 30, 1964 and has its **headquarters in Geneva**.

UNCTAD’s work focuses on **trade, development, finance, technology, investment, and sustainable development**.

It collects **data, conducts research, and analyses policies** to help countries frame policies in these areas.

UNCTAD also outlines recommendations for **realigning the global debt architecture with developing countries’ needs**.

GS-3

1. INITIATIVES OF WHO

Initiative	Description
WHO’s First ever Patient Safety Rights Charter	<p>The World Health Organization (WHO) launched the Patient Safety Rights Charter at the Global Ministerial Summit on Patient Safety, developed under the theme “Engaging patients for patient safety” on World Patient Safety Day 2023. It aims to build patient-centered healthcare systems, improve patient safety, and reduce the risk of harm, supporting the implementation of the Global Patient Safety (GPS) Action Plan 2021–2030. India has signed the GPS Action Plan 2021-2030.</p> <p>The Charter covers 10 Patient Safety Rights, including the right to timely, effective, and appropriate care, safe healthcare processes and practices, qualified health workers, safe medical products, dignity, respect, and more.</p>
WHO pre-qualified the Euvichol-S vaccine for Cholera	<p>The WHO prequalified the Euvichol-S vaccine for Cholera, a simplified and cost-effective formulation of the oral cholera vaccine Euvichol-Plus.</p> <p>Meaning of Prequalification: “Prequalified” means that the vaccine has undergone a rigorous assessment by the WHO and has been deemed to meet international standards of quality, safety, and efficacy. The vaccine is suitable for procurement by United Nations agencies and other international organizations</p> <p>Cholera, caused by Vibrio cholerae bacteria, is transmitted through contaminated food or water, with the highest number of cases reported in the Middle East and Africa. India reported 132 cases in 2023 (till July).</p>

2. SUMMIT OF THE FUTURE 2024

Context:

UN Secretary-General Guterres highlights Multilateral Development Banks (MDB) reform as a key theme at the upcoming **Summit of the Future during UNGA**, praising the Indian G20 presidency’s efforts.

About the Summit:

The Summit of the Future 2024 is a flagship event organized during the annual high-level UN General Assembly meeting in September. It focuses on key global issues, with a particular emphasis on **reforming multilateral development banks (MDBs)** to address contemporary challenges like poverty and climate crisis.

Originating from the Our Common Agenda report, it emphasizes renewing trust and solidarity across nations and generations. Member States aim to create a Pact for the Future, reaffirming the UN Charter, reinvigorating multilateralism, and agreeing on solutions to current and future challenges.

What are MDBs?

MDBs are international financial institutions (e.g., World Bank Group and the Asian Development Bank) aiding developing countries with financial and technical assistance to foster economic development and reduce poverty.

Recommendations by the independent expert group on MDB's Reform (during India's G20 presidency) include tripling annual lending levels by 2030, adopting a triple mandate for MDBs to eliminate extreme poverty, and modernizing funding models.

3. THE GLOBAL ALLIANCE FOR INCINERATOR ALTERNATIVES (GAIA) ASIA PACIFIC

Context:

The **Global Alliance for Incinerator Alternatives (GAIA) Asia Pacific**, along with other environmental groups, has urged the **Association of Southeast Asian Nations (ASEAN)** to take **strong action against plastic pollution** ahead of **the Intergovernmental Negotiating Committee (INC-4) session.**

- Over **100 civil society organizations (CSOs)** emphasized the **urgent need for ASEAN to lead in negotiations for a global treaty on plastic pollution**, given the region's challenges with overflowing landfills, polluted waterways, and marine ecosystem destruction.
- The CSOs called for **legally binding measures to reduce plastic production and consumption**, focusing on the entire plastic lifecycle, **including phasing out single-use plastics.**

The **Global Alliance for Incinerator Alternatives (GAIA) Asia Pacific** focuses on **supporting innovative and zero waste solutions in the region.**

GAIA is a global network of **non-governmental organizations, grassroots organizations, and individuals who work towards a world without incineration and waste.**

They believe that the **planet's finite resources, health, and fragile biosphere** are endangered by inefficient and polluting production practices.

4. DRAGONFLY MISSION

Context:

NASA has confirmed its **Dragonfly rotorcraft mission to Titan, Saturn's largest moon** will be scheduled **for 2028.**

- **Dragonfly, a "dual-quadcopter,"** will explore **Titan's organic compound-rich surface**, covering tens of kilometres in under an hour due to **Titan's dense atmosphere and low gravity.**

- Despite **primarily operating on the surface**, it will utilize **flight for transportation and science measurements.**
- Powered by a **radioisotope power system**, Dragonfly will conduct **operations during the day and recharge during the night.** Top of Form

5. FORESTS AS A NATIONAL ASSET

Context:

The Supreme Court of India emphasized in a recent judgment that **forests are a crucial national asset and a significant contributor to the country's financial wealth.**

- This ruling came amidst **criticism of the Forest Conservation (Amendment) Act of 2023**, which is **accused of facilitating encroachments in protected forests and promoting commercial exploitation.**
- The court **condemned the act of granting forest land to private individuals** and ordered an investigation against forest officials for **providing contradictory information about the land.**
- It also **imposed fines on both the state government and the private parties involved.**

6. GENOMIC ACCORDION

Context:

Mpox, a DNA virus, exhibits a **unique evolutionary strategy** known as the **genomic accordion**, involving **expansions and contractions of its genome.**

- Researchers identified **6.4-kilobase sections of the genome**, previously deemed unimportant, as **critical for human-to-human transmissibility and evolutionary adaptability.**
- Variations in certain genes influence the **virus's evolution, with different clades exhibiting varying levels of virulence.**
- Genomic surveillance plays a **crucial role in understanding and combating viral outbreaks**, allowing for **targeted interventions to mitigate health risks and prevent global spread.**

7. ETHYLENE OXIDE IN INDIAN SPICES

Context:

Following red flags raised by **food regulators in Hong Kong and Singapore** regarding the presence of a **cancer-causing ingredient in certain Indian spice products** from some brands, the Indian government **has ordered food commissioners to collect samples of spices from all manufacturing units in the country.**

- The harmful substance, **ethylene oxide**, has been classified as a **'Group 1 carcinogen' by the International Agency for Research on Cancer.**
- Ethylene oxide is **banned for use in food items in India.**

Ethylene oxide, primarily used as a **sterilizing agent and insecticide**, poses health risks including **irritation of the eyes, skin, nose, throat, and lungs**, as well as potential long-term effects on the **central nervous system and carcinogenic properties**.

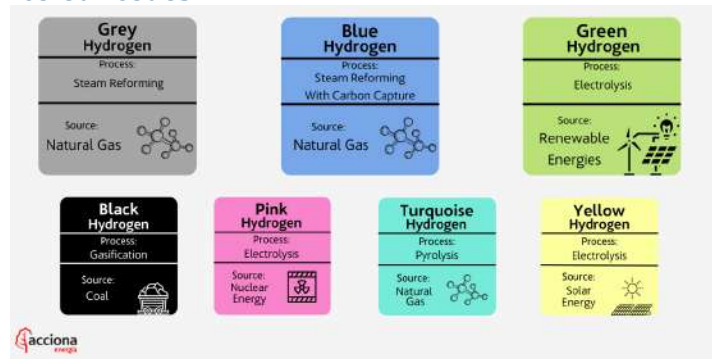
8. 'PINK' HYDROGEN

Context:

India is considering amending the **Atomic Energy Act, 1962**, to allow **private investments in the nuclear sector**, aiming to **boost nuclear capacity and promote clean energy** initiatives, **particularly hydrogen**.

- Currently, **the Act restricts private ownership of nuclear plants**, but proposed amendments would **enable private companies to participate in certain activities**, such as financing, project development, and equipment supply.
- The production of **'pink' hydrogen**, which is generated through **electrolysis powered by nuclear energy**.

Types of Hydrogen based on colour codes:



9. LLAMA 3

Context:

Meta has unveiled its most **advanced Large Language Model (LLM) yet**, the **Meta Llama 3**, which boasts **significant improvements in performance and capabilities over its predecessors**.

- Available in two sizes, **8B and 70B parameters**, **Llama 3 is integrated into Meta's proprietary virtual assistant, Meta AI**.
- The model **surpasses previous benchmarks**, outperforming competitors like **Google's Gemma 7B and Mistral's Mistral 7B** in various evaluations, including language understanding and question-answering tasks.
- Meta emphasizes the responsible development of Llama 3, **providing trust and safety tools like Llama Guard 2 and Code Shield**.
- **Llama 3 is integrated into Meta AI** and **accessible for developers through platforms like Hugging Face** and cloud providers such as **Azure ML and Vertex AI**.

Large language models (LLMs) are **artificial intelligence (AI) programs** that use deep learning to **process large amounts of text data**. LLMs can perform a **variety of tasks**, including:

Translation, Summarization, Object recognition, Content generation, Classification, and Predicting.

10. ANDAMAN AND NICOBAR TO ESTABLISH WILDLIFE SANCTUARIES

Context:

The Andaman and Nicobar administration's plan to establish wildlife sanctuaries on **islands traditionally managed and inhabited by the indigenous southern Nicobarese people** ignores their rights and disregards the ecological and social impacts.

Proposed Sanctuary	Description
Coral Sanctuary on Meroë Island	The government plans to establish a coral sanctuary

Megapode Sanctuary on Menchal Island	The proposed sanctuary aims to protect endemic Megapode birds
Leatherback Turtle Sanctuary on Little Nicobar Island	The administration seeks to create a sanctuary for leatherback turtles without consulting indigenous Nicobarese people, who traditionally use the island.

The Andaman Islands **consist of 572 islands**, with key ones including **North Andaman, South Andaman, Little Andaman, and Middle Andaman**. It boasts the **highest number of wildlife sanctuaries in India**, totalling 96, along with **9 national parks**.

National Park/Sanctuary	Location	Features	Major Fauna
Campbell Bay & Galathea National Parks	Great Nicobar	Part of Great Nicobar Biosphere Reserve - Separated by a 12-km wide forest buffer zone . Galathea National Park is India's southernmost	Giant robber crab, megapode, Nicobar pigeon, turtle species
Mahatma Gandhi Marine National Park	South Andaman	Protects mangroves, corals, and nesting sea turtles. Mostly fringing reefs	Mangroves, corals, nesting sea turtles
Mount Harriett National Park (Mount Manipur National Park)	South Andaman	The third-highest peak in the A&N archipelago. Renamed to honour Manipur's freedom fighters	Andaman wild pigs, saltwater crocodiles, turtles, robber crabs
Rani Jhansi Marine National Park	Ritchie's Archipelago, South Andaman	Located near Button Islands. Vegetation includes mangroves and evergreen forests	Spotted deer, water lizards, monitor lizards, fruit-eating bats, dugongs, dolphins, sea turtles, blue whales, corals
Saddle Peak National Park	Andaman and Nicobar Islands	The highest point of the A&N Islands. Features varied fauna and flora	Andaman wild pig, Andaman imperial pigeon, dolphins, whales, saltwater crocodile
Other National Park	North Button Island NP, Middle Button Island NP, South Button Island NP		

11. REPORTS IN NEWS

Name	Description
Trends in World Military Expenditure, 2023 Report	It was released by the Stockholm International Peace Research Institute (SIPRI)
	Key findings reveal that in 2023, India ranked as the fourth-largest military spender globally, following the United States, China, and Russia.
	NATO member states collectively spent \$1341 billion (55% of global military expenditure)
	Overall, world military spending surged to a record high of \$2443 billion, propelled by events like Russia's invasion of Ukraine and escalating geopolitical tensions.
	Stockholm International Peace Research Institute is an international institute based in Stockholm. It was founded in 1966 and provides data, analysis and recommendations for armed conflict, military expenditure and arms trade as well as disarmament and arms control

<p>'Ensuring safety and health at work in a changing climate' Report</p>	Released by the International Labour Organization (ILO)
	The report highlights climate change's impact on Occupational Safety and Health (OSH) : Excessive heat annually contributes to over 2 million disability-adjusted life years , posing risks to outdoor workers, especially in hot climates. Existing international labor standards address climate-related OSH hazards.
	Vulnerable sections, like women workers in agriculture and those with disabilities, face increased risks.
	India-related findings show factors like water shortages contributing to farmer suicides
	Recommendations include coordinating OSH policies, implementing targeted national policies, and adopting effective workplace preventive measures.

Reports	Description
<p>Global Report on Food Crises (GRFC)</p>	The latest Global Report on Food Crises (GRFC) reveals that in 2023, nearly 282 million people across 59 countries and territories faced high levels of acute hunger
	Key findings include acute malnutrition among children and women , and worsening situations for those displaced by conflict and disasters. E.g., Sudan faced the largest deterioration due to conflict , with 8.6 million more people facing high levels of acute food insecurity as compared with 2022
	Drivers: Conflict, extreme weather events, and economic shocks were identified as key drivers of the crisis.
	The GRFC is produced annually by the Food Security Information Network (FSIN) and launched by the Global Network Against Food Crises (GNAFC)
	GNAFC was established in 2016 by the European Union , the UN's Food and Agriculture Organization (FAO), and the World Food Programme (WFP). GNAFC aims to enhance coordination among existing initiatives and organizations to tackle the underlying causes of food crises.
<p>UNESCO releases 2024 gender report of the Global Education Monitoring Report, titled "Technology on her Terms"</p>	The report examines the impact of technology on girls' education and the role of education in shaping future technological development. It highlights how ICT can help overcome barriers to education access, but also emphasizes the digital gender gap, negative effects of social media, and underrepresentation of women in STEM fields
	UNESCO (est. 1945; HQ: Paris, France) the United Nations Educational, Scientific and Cultural Organization, is a specialized agency of the United Nations. Parent organization: United Nations Economic and Social Council. Objective: To build peace through international cooperation in Education, the Sciences, and Culture. India has been a member of the UNESCO since its inception
<p>WHO-led study on Global Immunization</p>	Global immunizations have saved at least 154 million lives over the past 50 years
	The study analyzed the WHO's Expanded Programme on Immunization (EPI) , launched in 1974 to provide life-saving vaccines to all children globally.
	Measles vaccination had the most significant impact on reducing infant mortality
	The Global Alliance for Vaccines and Immunization (GAVI) , launched in 2000, aims to expand vaccine coverage, with India becoming the first implementing country to donate to GAVI in 2014.
	The World Health Organization (WHO) is a UN agency established in 1948 to promote global public health. Headquartered in Geneva, Switzerland , with six regional offices and 150 field offices worldwide, it sets health standards, provides technical assistance, and collects global health data.

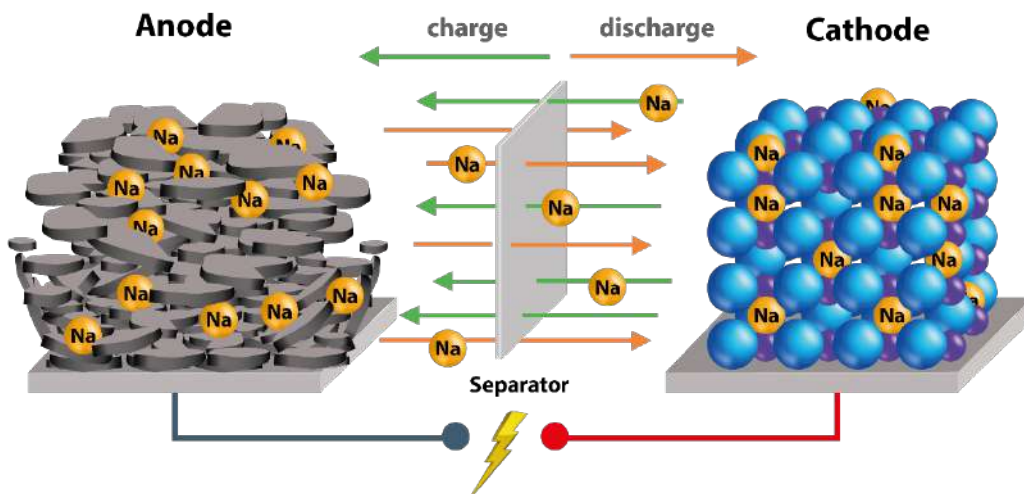
<p>PwC India released a report titled 'Navigating India's Transition to Sustainability'</p>	<p>The report analyzes how companies are adjusting to SEBI's Business Responsibility and Sustainability Reporting (BRSR) requirements, which mandate disclosures on environmental, social, and governance (ESG) aspects for the top 1000 listed companies.</p> <p>BRSR aims to enhance compliance, consistency, and communication regarding non-financial disclosures, with SEBI introducing BRSR Core in 2023 to bolster the reliability of ESG disclosures.</p>
<p>IUCN released a report titled "Towards a Regenerative Blue Economy - Mapping the Blue Economy"</p>	<p>The report outlines the concept of a Regenerative Blue Economy (RBE), which prioritizes the effective regeneration and protection of ocean ecosystems while supporting sustainable economic activities and fair prosperity</p> <p>Global initiatives like IUCN's Nature 2030, Great Blue Wall Initiative, Clean Seas Campaign, Moroni Declaration and Cape Town Manifesto are examples of efforts promoting RBE</p> <p>India's Initiatives include Maritime India Vision 2030, Deep Ocean Mission, Pradhan Mantri Matsya Sampada Yojana, etc.</p> <p>The International Union for Conservation of Nature (IUCN), headquartered in Gland, Switzerland, is a global organization founded in 1948. It focuses on nature conservation and sustainable use of natural resources, serving as a leading authority on global environmental issues.</p>
<p>'Re-aligning Agri-food Policies for Protecting Soil, Water, Air & Biodiversity (SWAB)</p>	<p>Released by ICRIER</p> <p>The report sheds light on the influence of agri-food policies on India's agricultural production and emphasizes on synergy of SWAB for sustainable food systems.</p> <p>Recommendations include offering premium MSP for low-carbon crops and exploring carbon markets for carbon farming credits.</p> <p>ICRIER, established in 1981, is a non-profit economic think tank providing research and policy advice on economic matters to the Indian government and other entities. It aims to enhance policy-making by offering analytical research and objective policy recommendations.</p>

12. SODIUM-ION BATTERY

Context:

South Korean researchers have developed a **high-power hybrid sodium-ion battery** capable of **charging in seconds**, marking a **potential breakthrough in energy storage technology**.

- **Sodium, being nearly 1000 times more abundant than lithium**, offers a cheaper and more feasible energy source.
- This development suggests the **battery could be a viable alternative to lithium-ion batteries, meeting increasing demands for low-cost energy storage** devices with high energy density.



Feature	Sodium-ion Batteries	Lithium-ion Batteries
Cost	Generally lower cost due to the abundance of sodium (Sodium is 500-1000 times more abundant than lithium).	Higher cost due to the scarcity of lithium and its extraction process.
Energy Density	Lower energy density compared to lithium-ion batteries.	Higher energy density, providing more power in a smaller size.
Cycle Life	Generally lower cycle life compared to lithium-ion batteries.	Longer cycle life, retaining capacity over more charge-discharge cycles.
Safety	Generally safer due to the less reactive nature of sodium.	Generally safe but can be prone to thermal runaway under certain conditions.
Environmental Impact	Sodium is more abundant and less harmful to the environment .	Lithium extraction and disposal can have environmental consequences.
Application	Suitable for large-scale energy storage and grid applications.	Widely used in consumer electronics, electric vehicles, and portable devices.

13. NEPTIS PHILYRA

Context:

Butterfly enthusiasts made a remarkable discovery in **Tale Valley Wildlife Sanctuary, Lower Subansiri district, India**, spotting **the elusive Neptis philyra**, also known as the **long-streak sailor**, for **the first time in the country**.

- The butterfly, initially described in **Russia in 1859, is native to East Asia but had not been recorded in India before.**



14. GOLDEN TREVALLY

Context:

The **ICAR-Central Marine Fisheries Research Institute** achieved a significant breakthrough in mariculture by successfully developing **seed production technology for golden trevally, a high-value marine fish.**

- This accomplishment is **expected to create new opportunities for sustainable seafood production and enhance India's mariculture potential.**

Golden trevally is considered a **promising species for marine aquaculture** due to its **rapid growth, high-quality meat, and strong market demand** for consumption and ornamental purposes.



15. RAMPAGE MISSILES

Context:

Israel recently utilized **the Rampage missile** in an **attack on an Iranian military base**.

- The Rampage missile is an **air-to-surface weapon** developed by **Israel Aerospace Industries and Israeli Military Industries Systems**.

Features of Rampage:

- Designed for **precision strikes, it targets high-quality, well-protected sites** such as communication centres and air force bases.
- The missile boasts **supersonic speeds, making it challenging to intercept**.
- With a range exceeding 190 miles, it can be **deployed from aircraft or as a stand-alone system, utilizing GPS/INS guidance navigation and anti-jamming capabilities**.
- Additionally, it can **adjust its trajectory mid-flight and operate effectively in various weather conditions**, ensuring precise target hits.

16. MILITARY EXERCISES IN NEWS

Name	Description
Exercise Poorvi Lehar	<p>Exercise Poorvi Lehar (XPOL) is a maritime exercise conducted by the Indian Navy along the East Coast. Its aim is to validate procedures for assessing the Navy's preparedness to tackle Maritime Security challenges in the region.</p> <p>The exercise involved participation from Ships, Submarines, Aircraft, and Special Forces.</p>
Multi-nation Combined Task Force-150 under Combined Maritime Forces (CMF)	<p>The Indian Navy seized drugs in the Arabian Sea as part of the multinational Combined Task Force-150 under CMF. This operation, known as Operation Crimson Barracuda, marks the first such initiative by the Indian Navy since joining CMF in 2022.</p> <p>CMF is a multinational maritime partnership focused on upholding the Rules-Based International Order by countering illicit nonstate actors on the high seas and promoting security, stability, and prosperity in international waters. With 42 member countries (including India), CMF's main focus areas include defeating terrorism, preventing piracy, encouraging regional cooperation, and promoting a safe maritime environment. Participation in CMF is voluntary, and it is commanded by a U.S. Navy Vice Admiral</p>
Exercise Dustlik	<p>The fifth edition of the annual Exercise DUSTLIK, a joint military exercise between India and Uzbekistan, is being held from April 15-28, 2024, in Termez, Uzbekistan.</p> <p>The exercise aims to bolster bilateral military cooperation, improve combined capabilities, and promote interoperability. It specifically concentrates on conducting joint operations in semi-urban and mountainous terrain.</p>

17. COMPULSORY CONVERTIBLE DEBENTURES

Context:

The **Competition Commission of India (CCI)** has **approved the International Finance Corporation's (IFC) subscription to Compulsory Convertible Debentures (CCDs)** of Napino Auto and Electronics Limited (Napino).

- **IFC, established in 1956**, aims to **promote economic growth in developing countries** by fostering private sector development.

Compulsory convertible debentures (CCDs) are **debt instruments that are automatically and mandatorily converted into equity** after a specific time period or when certain events occur.

CCDs are hybrid instruments that are debt when issued but are **guaranteed to be converted into equity** at a later

date.

CCDs help companies **repay debt without spending cash and benefit investors by offering fixed interest and later ownership of company shares.**

18. ALTERNATE WETTING AND DRYING (AWD) METHODS

Context:

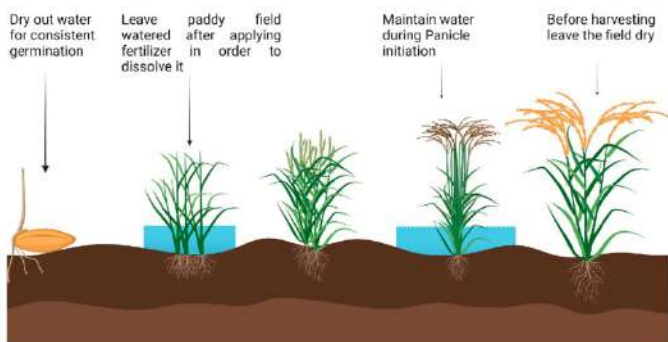
In Vietnam, where rice cultivation contributes **significantly to greenhouse gas emissions**, some farmers are embracing innovative techniques to mitigate methane production.

Traditionally, rice paddies emit substantial amounts of methane **due to the anaerobic conditions** created by flooding. However, farmers are adopting alternate wetting and drying (AWD) methods, which reduce water usage and methane emissions.

What is AWD?

It stands for Alternate Wetting and Drying, a water-saving technique used in rice cultivation. Instead of **continuously flooding rice fields**, AWD involves alternating periods of flooding and drying, allowing the **soil to partially dry out between irrigation cycles**. This method helps to reduce water usage in rice paddies while also decreasing methane emissions, as the intermittent drying reduces the anaerobic conditions that promote methane production.

The alternate wetting and drying (AWD) technique



19. SATELLITE TECHNOLOGY DAY

Context:

The **U R Rao Satellite Centre (URSC) celebrated Satellite Technology Day (STD) - 2024**, marking the **50th anniversary of the successful launch of India's first**

satellite, Aryabhata, on April 19, 1975.

About Aryabhata:

- **Aryabhata was India's first satellite**, launched on **April 19, 1975 from Kapustin Yar**, a Soviet rocket launch and development site.
- The satellite was built by the **Indian Space Research Organisation (ISRO) and launched by the Soviet Union as part of the Soviet Interkosmos program.**
- It was named after **the 5th-century Indian astronomer and mathematician Aryabhata.**
- The satellite was **instrumented to explore conditions in Earth's ionosphere, measure neutrons and gamma rays from the Sun**, and perform investigations in X-ray astronomy.
- It carried out three experiments, **one each in X-ray astronomy, Solar Physics and Aeronomy.**

20. WHO GLOBAL SODIUM BENCHMARKS

Context:

The **World Health Organization (WHO)** has issued the **second edition of its global sodium benchmarks**, providing updated reference values **for sodium content to combat chronic conditions linked to high blood pressure and obesity.**

- The **first edition of the WHO global sodium benchmarks**, published in May 2021, contained **10 pre-determined benchmarks** for different food categories.
- Developed collaboratively with **governments, organizations, and private sector partners**, these benchmarks aim to **inform policy-making and support efforts to reduce sodium consumption globally.**
- Part of a broader initiative, they emphasize **improving nutrition systems, enhancing food accessibility, and raising public awareness** about the risks of chronic conditions and the importance of healthy lifestyles.

21. PULICAT BIRD SANCTUARY

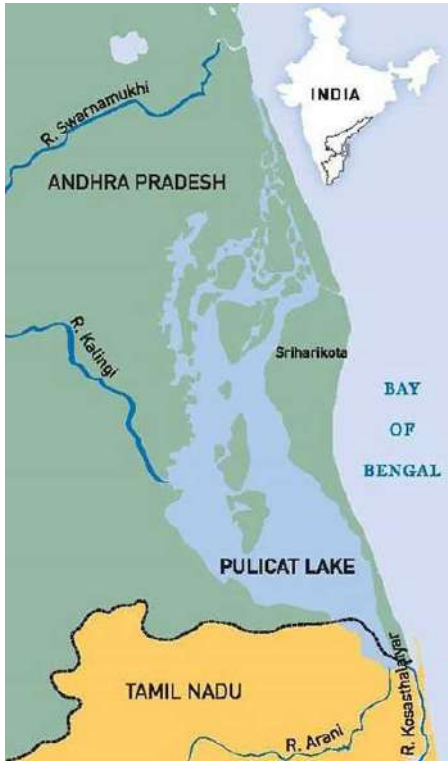
Context:

The **Tamil Nadu government is considering denotifying** a significant portion of the **Pulicat bird sanctuary**, potentially **excluding Patta land in 13 revenue villages** from the sanctuary area.

- This move follows a process under the **Wildlife (Protection) Act of 1972**, where **people were invited to submit written claims for the land within a two-month period.**
- The denotification process involves **settling claims of affected individuals before issuing a final notification under the Wildlife (Protection) Act.**

About Pulicat Bird Sanctuary:
Pulicat Lake Bird Sanctuary is a wildlife refuge in the Tirupati district of Andhra Pradesh and the Thiruvallur District of Tamil Nadu, India.

It's a popular **birding spot in South India** and is known for its **greater flamingos, White Ibis, Grey Pelicans, Grey Herons, Open Billed Storks, Egrets, Spot Billed Ducks, Reef Herons, Painted Storks, Spoon Bills, and Cormorants.**



22. PAYMENTS AGGREGATOR

Context:

PayU, a **digital financial services provider**, has received **in-principle authorization from the Reserve Bank of India (RBI)** to operate as a **Payments Aggregator (PA)** under the **Payment Settlements Act, 2007**.

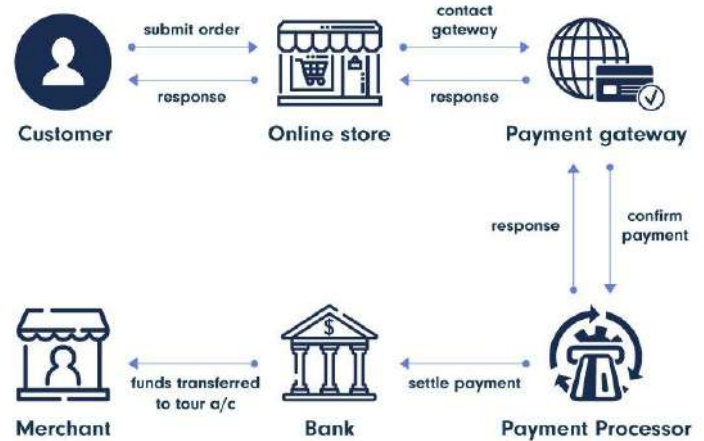
- With this approval, PayU can **onboard new merchants on its platform**.

A **payment aggregator is a third-party service** that allows **customers to make payments and businesses to accept payments online**.

Payment aggregators allow businesses to accept a variety of payment methods, including:

Debit cards, Credit cards, Cardless EMIs, UPI, Bank transfers, E-wallets, and E-mandates.

Payment Aggregator Model



23. ASSET RECONSTRUCTION COMPANIES (ARCS)

Context:

The **Reserve Bank of India (RBI)** has issued a **master direction for asset reconstruction companies (ARCs)**, effective from **April 24, 2024**.

- These have been issued in the exercise of the powers conferred by the **Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002**.
- The guidelines stipulate **that ARCs must maintain a minimum capital requirement of Rs 300 crore**, with existing ARCs given until March 31, 2026, to meet this threshold.
- **Non-compliant ARCs will face supervisory action**, including the prohibition on **incremental business until compliance is achieved**.
- ARCs with a **minimum Net Owned Fund (NOF) of Rs 1000 crore** can act as resolution applicants and are permitted to invest in specified instruments, subject to certain conditions and caps on investment.

An **Asset Reconstruction Company (ARC)** is a financial institution that buys **Non-Performing Assets (NPA) or bad assets from banks** and financial institutions so that the **latter can clean up their balance sheets**.

24. TELECOMMUNICATION INFRASTRUCTURE SHARING, SPECTRUM SHARING, AND SPECTRUM LEASING

Context:

The **Telecom Regulatory Authority of India (TRAI)** has released recommendations on **Telecommunication Infrastructure Sharing, Spectrum Sharing, and Spectrum Leasing**.

Key recommendations include:

- allowing the sharing of **passive and active infrastructure elements** among telecommunication service licensees,
- **mandating universal service providers to share passive infrastructure** with other telecom service providers,
- and permitting **inter-band access spectrum sharing**.
- Additionally, TRAI suggests exploring the **implementation of authorized shared access (ASA) technique-based spectrum sharing** and **conducting field trials for the same**.
- **Leasing of access spectrum** among access service providers is also recommended.

Spectrum refers to the **radio frequencies allocated to the mobile industry and other sectors for communication over the airwaves**.

The **Telecom Regulatory Authority of India (TRAI)** is a government agency that regulates India's telecommunication sector.

It was established on February 20, 1997, under the **Telecom Regulatory Authority of India Act, 1997**.

25. SYMPATHETIC SOLAR FLARES

Context:

Recently, a **rare celestial event** occurred as **four solar flares erupted simultaneously, captured by NASA's Solar Dynamics Observatory**.

- These "**sympathetic solar flares**" originated from different regions of the **Sun's surface due to complex magnetic interactions**.
- Such flares are caused by **multiple eruptions linked by massive magnetic field loops above the solar surface, leading to coronal mass ejections and bursts of plasma**.

This activity suggests that the Sun may be nearing or **reaching the peak of its 11-year solar cycle, marked by increased solar events**.

Sympathetic flares are caused by **multiple eruptions across the Sun's magnetic field**, linked by **massive magnetic field loops** that lie above the solar surface.

When **one spot detonates, others follow suit**. This leads to coronal mass ejections (CMEs) and massive bursts of plasma.

26. PERMISSIBLE LEVEL OF PESTICIDES

Context: The **Food Safety Standards Authority of India (FSSAI)** has faced criticism for increasing the **maximum residue limit (MRL) of pesticides** in **Indian herbs and**

spices by tenfold.

- The FSSAI's decision **lacks transparency regarding the data used to make the change, raising concerns about the safety of consuming these products**.

The Food Safety and Standards Authority of India (FSSAI) is a statutory body under **the Ministry of Health & Family Welfare, Government of India**.

It was established under the **Food Safety and Standards Act, 2006**, to ensure **food safety and hygiene in India**.

FSSAI is responsible for **laying down science-based standards for food products, and regulating their manufacturing, storage, distribution, sale, and import to ensure the availability of safe and wholesome food for human consumption**.

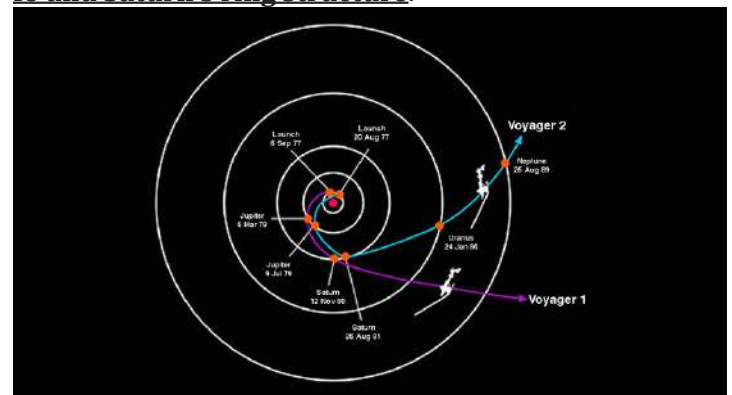
It also **promotes public awareness and provides guidance on food safety and nutrition**.

27. VOYAGER 1

Context:

Voyager 1, Earth's farthest spacecraft, is back online after engineers remotely fixed its 46-year-old systems.

The Voyager mission, conducted by NASA, launched Voyager 1 on September 5, 1977, followed by Voyager 2 on August 20, 1977. Its objective was to explore the outer planets of the solar system: Jupiter, Saturn, Uranus, and Neptune. Key features include flybys of Jupiter and Saturn, with Voyager 2 continuing to Uranus and Neptune, becoming the only craft to visit these planets. Both Voyagers **entered interstellar space** after their primary missions. Their discoveries include **detailed images of planets, moons, and atmospheric data**. Voyager 1 made groundbreaking discoveries such as **active volcanoes on Io and Saturn's ring structure**.



28. PARO STATEMENT

Context: The **Sustainable Finance for Tiger Landscapes Conference**, held in Paro, Bhutan, concluded with the **Paro Statement**, committing to mobilize an **addi-**

tional \$1 billion over the next decade to conserve tigers and their landscapes.

- **Tiger** Range Countries present **included Bangladesh, Bhutan, Cambodia, China, India, Kazakhstan, Malaysia, Nepal, Thailand, and Vietnam.**

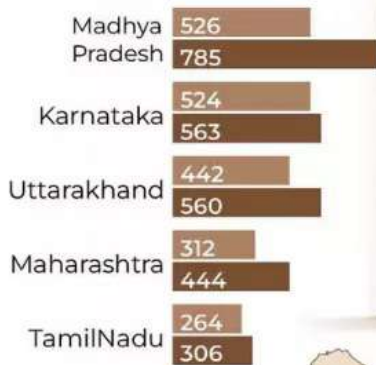
The Tiger Count

Tiger numbers in India:



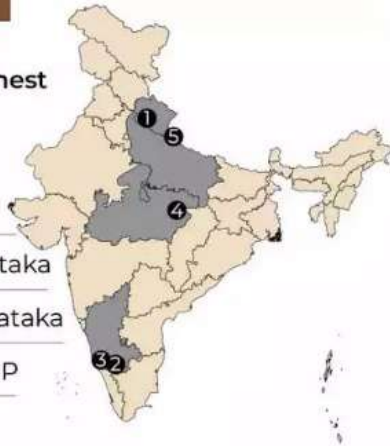
States with highest tiger numbers

■ 2018 ■ 2022



Reserves with highest tiger population

- 1 Jim Corbett, Uttarakhand
- 2 Bandipur, Karnataka
- 3 Nagarhole, Karnataka
- 4 Bandhavgarh, MP
- 5 Dudhwa, UP



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About the Tiger Conservation Coalition

The **Tiger Conservation Coalition** brings together leading biologists and experts in wildlife crime, human-wildlife coexistence, policy, finance, development and communications, with unprecedented alignment on achieving tiger conservation at scale.

Its member organisations include **the International Union for Conservation of Nature (IUCN), the Environmental Investigation Agency; Fauna & Flora; Natural State; Panthera; TRAFFIC; the United Nations Development Programme (UNDP); the Wildlife Conservation Society; Worldwide Fund for Nature (WWF) and the Zoological Society of London (ZSL).**

29. ROCKS OR CRYSTAL MAZE 2

Context:

The Indian Air Force (IAF) achieved a milestone with the successful test firing of **an air-launched ballistic missile, known as ROCKS or Crystal Maze 2**, capable of hitting targets over 250 kilometres away.

About Crystal Maze 2 (also known as ROCKS)

It is a **medium-range ballistic missile** developed by Israel. It has a strike range of **over 250 km** and is classified as an **air-to-surface missile**. Designed to operate in GPS-denied environments, it aims to **strike high-value stationary** and relocatable targets, including long-range radar and air defence systems.

30. WEAPON-FREE OUTER SPACE

Context:

Russia blocks a US and Japan-sponsored draft resolution urging against space-based **nuclear weapons** after its amendment **extending the ban to all weapons failed to pass.**

- The resolution called for all states, **particularly those with significant space capabilities**, to contribute to the **peaceful use of outer space and prevent an arms race there.**

However, the **Security Council rejected the resolution** with 13 members in favour, **one against (Russia), and one abstention (China).**

31. CORPORATE SUSTAINABILITY DUE DILIGENCE LAW

Context:

The European Parliament gave its approval for the **Corporate Sustainability Due Diligence Directive (CSDDD)**, a significant step toward its formal adoption by the **European Union.**

- The CSDDD introduces a **legal liability for companies regarding environmental and human rights violations within their supply chains.**
- It applies not only to a company's direct actions but also **to its subsidiaries and supply chain.**
- The CSDDD will be **phased in over five years, affecting larger companies first.**

Despite being diluted from its original proposal, the directive establishes a **standard of corporate due diligence on sustainability issues, focusing on environmental concerns, climate change, and human rights.**

32. MARRAKESH AGREEMENT

Context:

The [World Trade Organization \(WTO\)](#) commemorates the **30th anniversary of the Marrakesh Agreement, a milestone in global trade cooperation**

About Marrakesh Agreement:

The **Marrakesh Agreement**, also known as the **Agreement Establishing the World Trade Organization (WTO)**, was signed on April 15, 1994, in Marrakesh, Morocco by 123 nations.

The agreement defines the WTO's structure, functions, and scope, and incorporates agreements negotiated under the **General Agreement on Tariffs and Trade (GATT)** and agreements concluded during the **Uruguay Round**.

The **WTO officially came into existence on January 1, 1995.**

33. NETWORK AS A SERVICE (NAAS)

Context:

In India's rapidly advancing internet economy, **embracing Network as a Service (NaaS) holds promise** for enhancing user experiences.

What is Network as a Service (NaaS)?

Network as a Service (NaaS) is a cloud-like networking model where network resources are provided to customers on demand. It offers networking functionality without the need for customers to invest in hardware or manage infrastructure directly.

With over 850 million active internet users and a digital economy projected to contribute 20% to GDP by 2026, **NaaS offers a cloud-like networking model**, providing on-demand network resources without the need for direct infrastructure management.

Other such terminologies:

Concept	Explanation	Example
SaaS	Software as a Service (SaaS) delivers software applications over the internet.	Google Workspace (formerly G Suite), Microsoft Office 365, Salesforce, Dropbox

PaaS	Platform as a Service (PaaS) provides a platform allowing customers to develop, run, and manage applications without dealing with infrastructure.	Heroku, Microsoft Azure App Service, Google App Engine
IaaS	Infrastructure as a Service (IaaS) delivers virtualized computing resources over the Internet, allowing users to rent servers, storage, and networking resources.	Amazon Web Services (AWS), Microsoft Azure, Google Cloud Platform (GCP), DigitalOcean

34. CLIMATE TECHNOLOGY CENTRE AND NETWORK (CTCN)

Context:

The **Climate Technology Centre and Network (CTCN)** celebrates its **10-year anniversary** as a key player in **advancing climate technology and innovation.**

About Climate Technology Centre and Network (CTCN):

- Established as the **implementation arm of the United Nations Framework Convention on Climate Change (UNFCCC) Technology Mechanism** and hosted by the **UN Environment Programme (UNEP)**, the CTCN facilitates the development and transfer of **environmentally sound technologies for low-carbon and climate-resilient development.**
- It operates through a **global network of over 760 civil society, finance, private sector, and research institutions**, providing technical assistance and capacity building to developing countries upon request.
- Over the past decade, **the CTCN has funded over 300 technical assistance projects across 112 developing nations**, supporting them in meeting their sustainable development commitments under the Paris Agreement.
- Through projects spanning various sectors such as **green building standards, drought risk modelling, industrial energy efficiency, and policy development for e-mobility, the CTCN aims to catalyse climate resilience and innovation globally.**

MAPPING

INTERNATIONAL

1. PHILIPPINES

Context:

India delivered the **first batch of BrahMos supersonic cruise missiles** to the Philippines, marking a significant step in their defense collaboration.

The delivery, part of a \$375-million deal signed in January 2022, **enhances the Philippines' maritime defense capabilities.**

India's export of military hardware extends to around 85 countries, with major items including missiles, artillery guns, rockets, and armored vehicles. In FY 2023-24, exports reached a record high of Rs. 21,083 crore. Recently, India **delivered two Dornier 228 aircraft** to Guyana, expanding export ties to Caribbean nations.

About BrahMos Missile (developed jointly with Russia): It's a two-stage supersonic cruise missile known for its **high speed (2-3 Mach)**, propelled by jet engines. Key features include its **"Fire and Forget" principle**, long flight range of 290km, and low radar signature.

The Philippines is a Southeast Asian country made up of more than 7,000 islands and islets. The country is located in the western Pacific Ocean, about 500 miles (800 km) off the coast of Vietnam.



2. EASTER ISLAND

Context:

Scientists recently **discovered 160 species, with at least 50 potentially new to science**, during an expedition across the **Salas y Gómez Ridge to Easter Island**. The findings include various **marine life like squid, fish, corals, molluscs, and sea stars.**

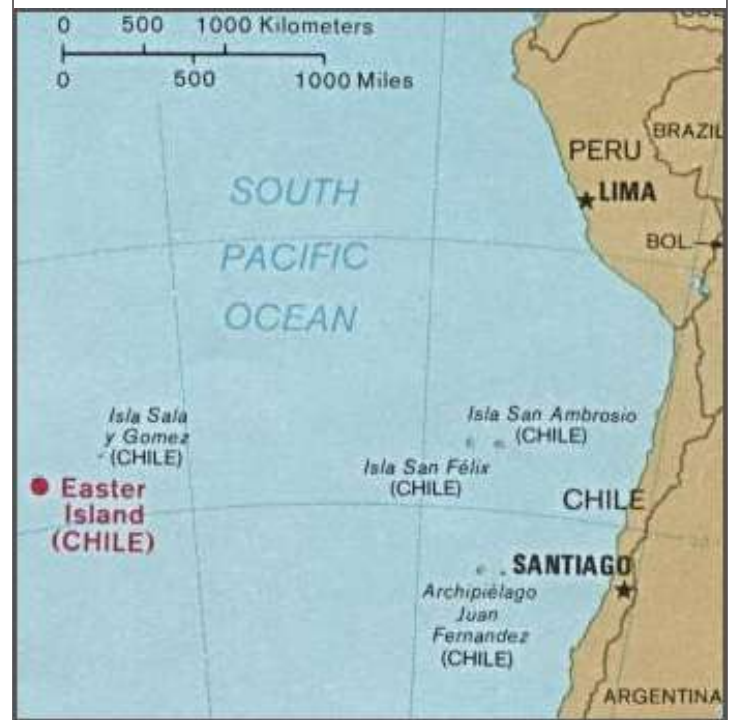
The ridge, home to **over 110 seamounts**, supports diverse ecosystems and is crucial for marine animal migration.

About Salas y Gómez:

It is an **underwater mountain chain in the southeastern Pacific Ocean**, oriented west-east from the **East Pacific Rise to the Nazca Ridge**. Isolated by geographic features like the **Atacama Trench and the Humboldt Current System**, its waters are mostly in areas beyond national jurisdiction.

About Easter Island

It is a **Chilean territory** in the **southeastern Pacific Ocean**. Famous for its monumental statues called **moai**, it became a **UNESCO World Heritage Site in 1995**. Chile annexed the island in 1888, granting citizenship to the Rapa Nui in 1966. It is one of the **world's most remote inhabited islands**, with the nearest land over 2,000 kilometres away.



3. MOUNT EREBUS

Context:

Mount Erebus, **located in Antarctica**, is raining gold on Earth, spewing out approximately **80 grams of gold worth \$6000 daily**, according to NASA's Earth Observatory. However, the **remote location** makes it impossible for anyone to claim this fortune, ruling out any possibility of a gold rush.

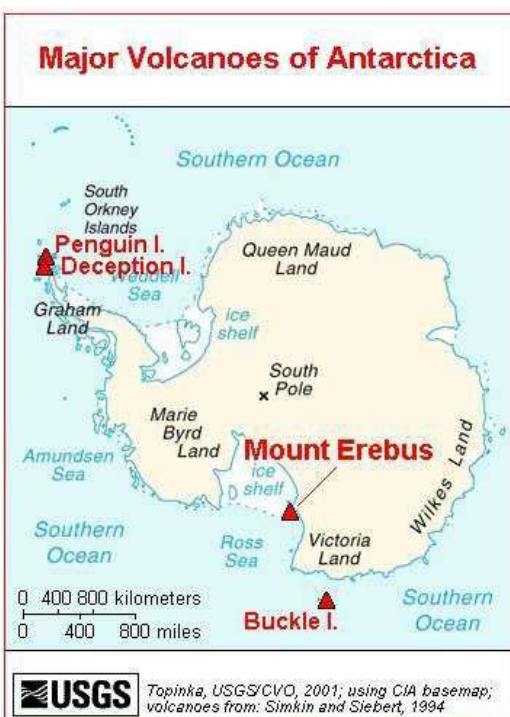
How is Gold Being formed in the Volcano?

Gold is being **formed and ejected in Mount Erebus**, an Antarctic volcano, through a geological process involving **the release of gases from deep within the Earth**. These gases contain tiny particles of gold, which crystallize as they rise to the surface. When the volcano erupts, these gas pockets burst open, dispersing the **crystallized gold far and wide**, including in the surrounding area.

About Mount Erebus:

Mount Erebus, **located on Ross Island, Antarctica**, is the **southernmost active volcano** on Earth. As a stratovolcano, it features a conical shape with layers of hardened lava, tephra, and volcanic ash. Notably, Mount Erebus is renowned for its **persistent lava lake**, active since at least 1972, making it one of the few long-lived lava lakes globally.

It is the **tallest active volcano in Antarctica**. It stands out as the **most violent, with a tragic history**, including the infamous Mount Erebus disaster, where an **Air New Zealand plane crashed into it, killing 257 people** due to an optical illusion known as **'whiteout'**.



4. SCHENGEN AREAS

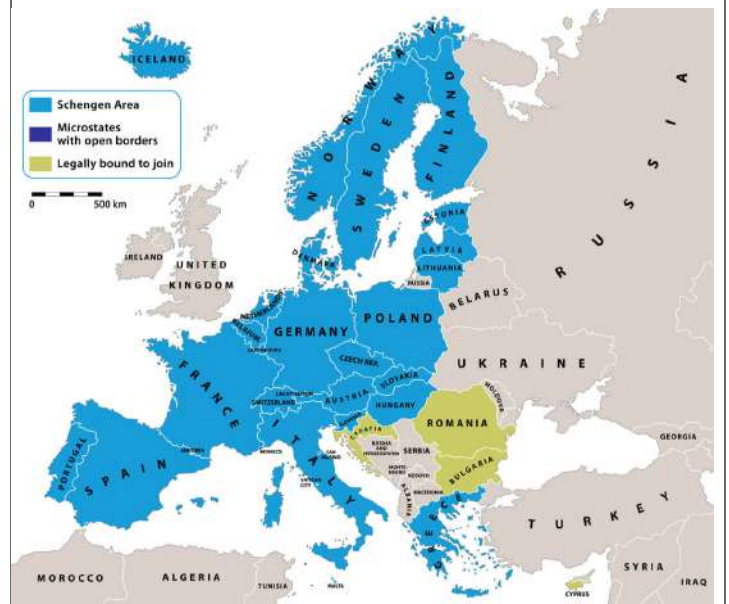
Context:

Indian nationals can now obtain **long-term multi-entry Schengen visas** with a validity of two years, provided they have lawfully used two visas within the previous three years.

This decision, announced by the European Union, **aims to facilitate travel for individuals with an established travel history, subject to passport validity**. The move comes as part of the **EU-India Common Agenda on Migration and Mobility**, aiming to enhance cooperation on migration policy. The Schengen visas allow **short stays of up to 90 days within a 180-day period** in the Schengen area, comprising 29 European countries, including 25 EU states and four non-EU states.

About the Schengen area:

It is the world's largest free travel area, encompassing 27 countries. This includes **23 of the 27 EU members** and all members of the **European Free Trade Association (Iceland, Liechtenstein, Norway, and Switzerland)**. Originating in 1985 as an intergovernmental project among five EU countries - France, Germany, Belgium, the Netherlands, and Luxembourg - it facilitates seamless travel across participating nations.



5. BLUE WHALES MAKES A COMEBACK IN SEYCHELLES

Context: Blue whales, the largest mammal on Earth, have made a remarkable return near the **Seychelles after a 60-year absence**. Commercial whaling activities decimated their populations, **leading to an 89-97% decline**. However, recent expeditions conducted by researchers

revealed sightings of **up to 10 blue whales in the region**, a surprising and encouraging discovery.

About the Blue Whales:

It is the **largest and loudest animal on the planet** and inhabits all oceans **except the Arctic**. With an **estimated lifespan of 80 to 90 years**, they typically swim alone or in pairs, occasionally forming small groups. Their diet consists **mainly of krill and marine crustaceans**. Threats to blue whales include vessel strikes and historical commercial whaling, leading to their **endangered status** according to the IUCN.

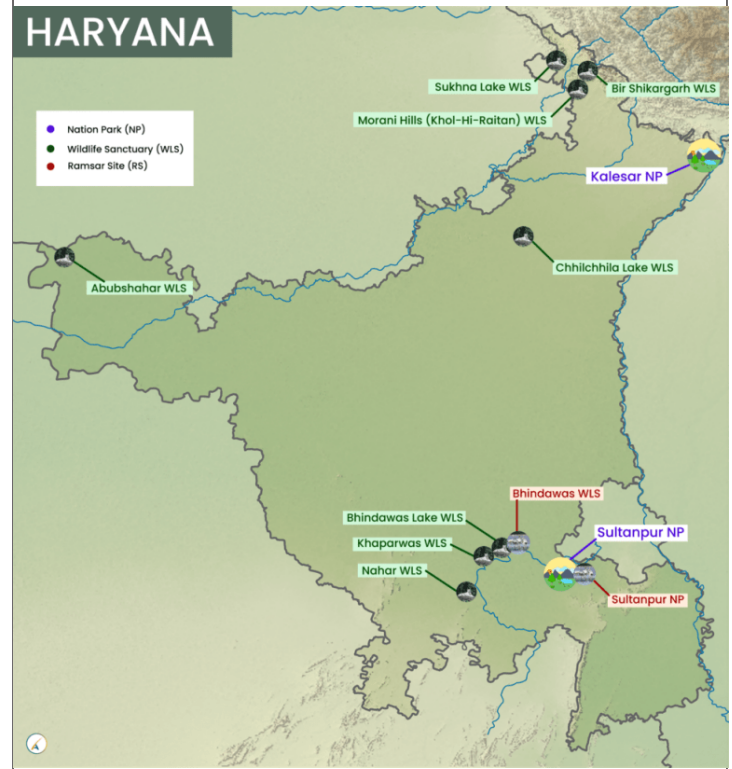
About the Republic of Seychelles

It is **Africa's smallest country** and is an **archipelago of 155 islands** situated in the Indian Ocean, southeast of mainland Africa. Seychelles boast beaches, coral reefs, nature reserves, and unique wildlife, including **giant Aldabra tortoises**. It is located in the northeast of **Madagascar**, with Kenya about 1,600 kilometres to the west.



About Kalesar Wildlife Sanctuary (Yamunanagar, Haryana):

It lies within the **Shivalik foothills of the Himalayas**. Its name derives from the **Kalesar forest and Kalesar Mahadev temple** situated within its bounds. Established as a national park on December 8, 2003, it holds historical significance, having served as **hunting grounds for Mughal and British rulers**. The sanctuary boasts the historic Kalesar Fort, possibly constructed during Aurangzeb's reign. Once a prime tiger habitat, the population dwindled in the late 19th century, leading to a hunting ban. Bounded by the Yamuna River to the east, it **shares borders with Rajaji National Park to the northeast**



NATIONAL

6. HARYANA'S KALESAR WILDLIFE SANCTUARY

Context:

The Supreme Court has **halted the construction of four dams inside Haryana's Kalesar Wildlife Sanctuary**, citing concerns about the negative impact on wildlife and the ecosystem.