



INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

PUSHPAGIRI KSHETRAM

13th-century Hindu temple ruins have been recently unearthed northeast of the Durga temple, atop a hillock in the Pushpagiri Kshetram of Vallur Mandal in Kadapa district.

27 FEBRUARY - 04 MARCH 2023

WEEKLY CURRENT AFFAIRS

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GSI

Factors responsible for the location of primary, secondary, and tertiary sector industries

INDIA'S TEA TALES

Context:

India has taken several steps to boost the output, create a niche brand for Indian tea and ensure the welfare of the families associated with the tea industry.

- Indian tea exports are expected to achieve more than **95% of its target of about US \$ 900 million**.

Tea in India	
About	Tea is a popular beverage made from the Camellia sinensis plant and is the second most consumed drink in the world.
Origin	Tea is believed to have originated in northeast India, north Myanmar, and southwest China , with evidence of consumption in China over 5,000 years ago .
Growth Conditions	Tea requires a hot and humid climate , temperatures of 20°-30°C , and 150-300 cm of well-distributed annual rainfall . It grows well in slightly acidic soil with porous subsoil in the hill ranges .
Health Benefits	Tea consumption can promote health and wellness due to its anti-inflammatory, antioxidant, and weight-loss effects .
International Tea Day	It is observed on May 21st every year and was designated by the United Nations General Assembly in December 2019.
Production	India is the second-largest producer of tea globally (largest black tea producer), with the majority of its annual tea production coming from Assam and West Bengal . The southern part of India also produces tea.
Consumption	India is among the world's top tea-consuming countries , with 80% of its production consumed domestically.
Export	India is 4th largest tea exporter globally and exports to over 25 countries. The majority of tea exported is black tea, with Darjeeling, Assam, and Nilgiri tea being among the finest in the world.
Geographical Indication (GI) Tag	Darjeeling tea, known as the "Champagne of teas," was the first GI tag product.
Regulator	The Tea Board of India (a statutory body under the Ministry of Commerce) is responsible for developing and promoting the tea industry in India. <ul style="list-style-type: none"> HQ: Kolkata, formed in 1953 Foreign Offices: Dubai and Moscow
Employment	Indian tea Industry is employing 1.16 million workers directly and an equal number of people are associated with it indirectly



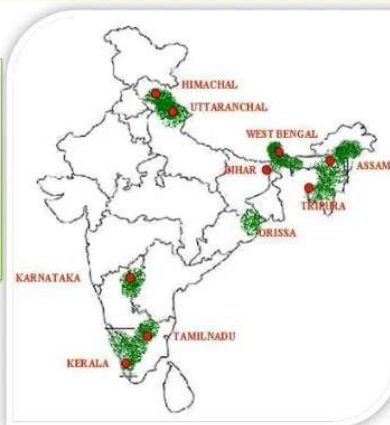
Mains Links:

Q. Tea industry is facing a number of problems resulting in low production of tea and tea leaves. Examine. (250 Words)

Major 3 Tea producing regions:

1. Darjeeling (North-Eastern India)
2. Assam (far North-East India)
3. Nilgiri (South India)

All 3 differ in style and flavour.



Initiatives by the Tea Board of India:

- **Promotion for packaged Tea of Indian origin:** Financial reimbursement - up to 25% of the cost is given.
- **Subsidies for Domestic Exporters** to participate in International Fairs and Exhibitions.
- **Tea Development and Promotion Scheme (2021-26):** To enhance the productivity and quality of production in India through— Plantation development of small tea farmers; Supporting the tea producers and traders in market promotion activities; Worker's welfare; Online Licensing System; **Chai Sahyog Mobile App**
- **Formation of Self Help Groups (SHG),** Farmer Producer Organisations (FPO) and Farmer Producer Companies (FPCs).
- The assistance of **education stipend to the wards** of Small Tea Growers

Conclusion:

You can write the keyword "AROMA" for Tea promotion:

'AROMA'

- **A= Assistance** to small growers
- **R= Re-energise** to create infrastructure and augment exports and focus on high-value markets
- **O= Organic:** Promote organic and GI tea
- **M= Modernisation:** Strengthen local supply chains.
- **A= Adaptability:** Make tea plantations meet the challenges of climate change.

Prelims Links

Q. With reference to the "Tea Board" in India, consider the following statements: (UPSC 2022)

1. The Tea Board is a statutory body.
2. It is a regulatory body attached to the Ministry of Agriculture and Farmers Welfare.
3. The Tea Board's Head Office is situated in Bengaluru.
4. The Board has overseas offices in Dubai and Moscow.

Which of the statements given above are correct?

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

Ans: D

Q. Consider the following States: (UPSC 2022)

1. Andhra Pradesh
2. Kerala
3. Himachal Pradesh
4. Tripura

How many of the above are generally known as tea-producing States?

- (a) Only one State
- (b) Only two States
- (c) Only three States
- (d) All four States

Ans: C

According to the **Tea Board of India Annual Report 2019-2020**, generally known tea producing States are **Assam, Tripura, West Bengal, Tamil Nadu, Kerala, and Himachal Pradesh.**

Geophysical phenomena

HEAT WAVES- WHAT ARE THEY AND WHY DO THEY HAPPEN?

Direction:

This article is in continuation of our previous article on

Insta Links:

Mind map: [Tea Industry in India](#)

heat waves in northern India.

Context:

The India Meteorological Department (IMD) warned that the **maximum temperatures** over **northwest, west, and central India** would be **3-5° C** higher than the long-term average.

What is heat wave?

- According to the IMD, a region has a **heat wave** if its **ambient temperature deviates by at least 4.5-6.4° C** from the long-term average.
- There is also a heat wave if the **maximum temperature crosses 45° C** (or **37° C** at a hill-station).

Origin of Heat Wave in India:

A study published in **Nature Geoscience** offers some clues as to **how different processes** contribute to the **formation of a heat wave**.

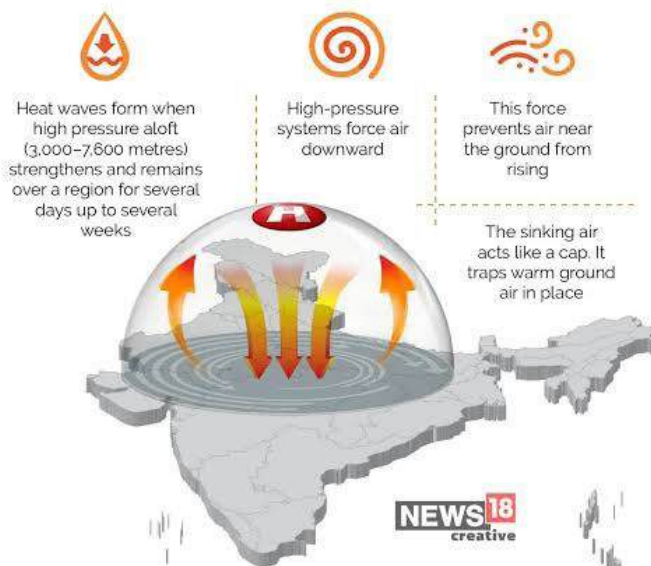
- In spring, India typically **has air flowing in from the west-northwest**. The Middle East is warming faster than other regions in latitudes similarly close to the equator, and **serves as a source of the warm air that blows into India**.
- Air flowing in from the **northwest rolls in over the mountains of Afghanistan and Pakistan**, so some of the compression also happens on the leeward side of these mountains, entering India with a bristling warmth.
- The air flowing in over the **oceans is expected to bring cooler air**, but the **Arabian Sea is warming faster than most other ocean regions**.
- The strong upper atmospheric westerly winds that come in from the Atlantic Ocean over to India during spring control the near-surface winds. The energy to run past the earth near the surface, against the surface friction, can only come from above. This **descending air compresses and warms up to generate some heat waves**.
- Global warming** tends to warm the upper atmosphere faster than the air near the surface. This in turn means that the **sinking air is warmer due to global warming, and thus produces heat waves as it sinks and compresses**.



ANATOMY OF A HEATWAVE

What causes a heatwave?

Heatwaves are generally the result of trapped air. They occur when a system of high atmospheric pressure moves into an area and lasts two or more days.



EARTH'S WICKEDLY HOT INNER-MOST REALM

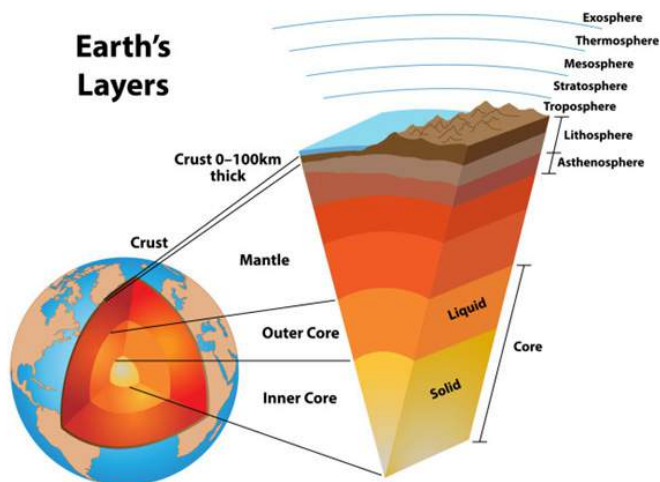
Context:

An intensive study of **Earth's deep interior**, based on the **behaviour of seismic waves** from large **earthquakes**, confirmed the existence of a **distinct structure inside our planet's inner core** - a **hot innermost solid ball of iron and nickel** about **800 miles (1,350 km)** wide.

Layers of the Earth:

- The planet's internal structure comprises four layers: **a rocky crust on the outside, a rocky mantle, an outer core made of magma, and a solid inner core**.
- The inner core's outer shell and its newly confirmed innermost sphere both are hot enough to be molten but are a **solid iron-nickel alloy because the incredible pressure at the centre of the Earth renders it a solid state**.
- The inner core is **slowly growing at the expense of the outer core** by solidifying molten materials as Earth gradually cools.

Earth's Layers



Related News:

New studies reveal insights about Earth's mysterious mantle

Context: According to a new study, the mantle — a **2,900 km thick layer of solid rock** sandwiched between the **Earth's upper crust and lower core** — has been hiding two layers.

- One is the **"low viscosity" zone** in the upper mantle.
- The other layer is the **low-velocity zone, which is also a part of the upper mantle**.

Significance of this layer:

- Affects how Earth **transports heat and mixes materials** between the crust, core, and mantle over time.
- The mantle's **viscous properties govern convection** — the transfer of heat between areas of different temperatures, enabling plate tectonics.
- The viscosity of the rocks in the transition zone between the upper and the lower mantle determines whether a **plate sinks below another one (subduction)** through it.

Insta Links:

- Interior Structure of the Earth

GS2

Issues and challenges pertaining to the federal structure

5 YRS AFTER PUNCHHI PANEL WORK 'COMPLETED', CENTRE SET TO INVITE STATE VIEWS AGAIN

Context:

Union Ministry of Home Affairs (MHA) has decided to start the process of seeking the states' comments on the issue afresh.

What is Punchhi Commission Report?

The Punchhi Commission was constituted in 2007 under the chairmanship of former Chief Justice of India Madan Mohan Punchhi. In 2010, the Commission submitted its report to the Centre in seven volumes.

- Deliberation on the report was carried out by Inter-State Council (ISC's) Standing Committee in 2017 and 2018.
- However, the report is yet to be implemented and the government has said that it will seek the state's view on the report again.

The objective of the commission: To examine and review the operation of the current agreements between the Union and States.

Major recommendations of the Commission:

Commission	Recommendation
On Finance Commission	<ul style="list-style-type: none"> • Efficient inclusion of States in the formulation of final terms of the contract • Review of current cesses and surcharges to reduce contribution to gross tax income • Turn Finance Commission Division into a full-fledged department

Commission	Recommendation
On Governor	<ul style="list-style-type: none"> • Governor to be from outside the State and not involved in regional politics • Governor to be nominated after consulting with Chief Minister • Establishment of a committee for selecting governors • Repeal of the Constitution's Doctrine of Pleasure • Guaranteed tenure of Governor with a fair chance to object to removal • Impeachment of Governor by state legislature
On Articles 355 and 356	<ul style="list-style-type: none"> • Changes to Articles 355 and 356 of the Constitution to limit misuse of authority by the centre
On Communal Violence	<ul style="list-style-type: none"> • Communal Violence Bill amendment to allow temporary deployment of forces in State without State's permission
On Concurrent List	<ul style="list-style-type: none"> • Consultation with States through inter-state council before laws are filed on concurrent list issues
On Internal Security	<ul style="list-style-type: none"> • Development of National Integration Council for issues involving internal security
On pocket veto	<ul style="list-style-type: none"> • Clause mandating notice to the State within six months of the President's decision to use pocket veto power
On centres' diplomatic power	<ul style="list-style-type: none"> • Restriction of the union's ability to negotiate treaties to those involving subjects on the State list

Commission	Recommendation
On Selection of Chief Ministers	<p>Principles for selecting Chief Minister (number-wise priority):</p> <ol style="list-style-type: none"> 1. Broadest support in Legislative Assembly 2. Head of the party with an absolute majority 3. A coalition of parties established before elections 4. Largest single party with the backing of other parties 5. A post-election coalition of parties with members forming a government and others supporting from outside

Conclusion:

Although some of the ideas of the commission have been put into practice, such as having the governor come from outside the state, there is a need for further deliberations and give concrete forms of useful recommendations as per current needs.

Insta Links:

For Sarkaria Commission Recommendations and ARC Recommendations: Click here: Recommendations on Centre-state relation

Mains Links:

Q. Discuss how the recommendations of the Punchhi Commission, if implemented, would ensure smoother Centre-State relations in the context of the governor's jurisdiction. (250 words).

Constitutional Bodies.

APPOINTMENT OF CEC AND ECS: WHAT HAS THE SUPREME COURT ORDER CHANGED?

Context:

A five-judge Constitution Bench of the SC **unanimously ruled that a high-power committee** consisting of the **PM, the Leader of Opposition in LS and the CJI** must pick the CEC and ECs.

How are the [Chief Election Commissioner \(CEC\)](#) and Election Commissioners (ECs) currently appointed?

Articles related to Elections	
324	Superintendence, direction and control of elections to be vested in an Election Commission.
325	No person to be ineligible for inclusion in, or to claim to be included in a special, electoral roll on grounds of religion, race, caste or sex.
326	Elections to the House of the People and to the Legislative Assemblies of States to be on the basis of adult suffrage.
327	Power of Parliament to make provision with respect to elections to Legislatures.
328	Power of Legislature of a State to make provision with respect to elections to such Legislature.
329	Bar to interference by courts in electoral matters.

The Election Commission (Conditions of Service of ECs and Transaction of Business) Act 1991:

- An amendment to the above act (in 1993) made the CEC and the ECs equal by giving all three the **status of an SC judge**, retiring at the age of **65 years/after 6 years** (whichever is earlier).
- This means, all three Commissioners now had **equal decision-making powers**, as both would act unanimously and **in case of difference of opinion, the majority view** would prevail.

[Powers of the Election Commission](#): as envisaged in the Constitution, by the Supreme Court of India & the Parliament

- Babasaheb Ambedkar**: The whole election machinery should be in the hands of a Central Election Commission.
 - He further acknowledges that there is **nothing in the Constitution to prevent the nomination of an ineligible person to the position of CEC or another EC.**
- Parliament subsequently enacted the RPA 1950 and 1951**: To define and enlarge the powers of the Commission.
- The SC (in 1977)**: The words ‘**superintendence, direction and control**’ as well as ‘**conduct of all**

elections’ are the broadest terms, not defined by the Constitution.

[Reputation of the ECI & the need for reforms](#)

- The Commission has earned **public trust** by working as an **independent and neutral authority**.
- This achievement has been made possible as the Commission enjoyed **autonomy and its functioning insulated** from the interference of the executive and judiciary.
- However, there were growing concerns on that front. **For example**, the top court noted that the **appointment of Arun Goel as EC had been carried out with “lightning speed”**.

Recommendations to [reform the system](#):

- Ambedkar noted that the provisions in the **American Constitution**: check (through the Senate) upon the extravagance of the President in making such appointments.
- The 2nd ARC** in 2007 recommended that a collegium headed by the PM be formed to make recommendations to the President regarding appointments of the CEC and ECs.

SC’s observations during its recent verdict:

- The judgment has brought the appointment process on par with that of the [CBI Director](#).
- A CEC (like SC judges) can be removed from office only by way of a parliamentary process. However, **no such protection of tenure is available** to the ECs (removed by the President if CEC recommends).
- A person weak-kneed before the powerful (executive) cannot be appointed as an EC.
- Fierce **independence, neutrality and honesty** envisaged in the institution require an **end to government monopoly and “exclusive control”** over appointments.

Conclusion:

- The judgment recognises the fine distinction between **conventional democracy (majority alone matters)** and **constitutional democracy (Constitution matters)**.
- The judgment revives the era of [judicial activism](#), ensuring a **more independent** Election

Commission.

Insta Links:

[Election Commissioner shouldn't be a 'yes-man': Supreme Court](#)

Government policies and interventions

TOWARDS TRANSPARENCY IN OTT REGULATION

Context:

Even after two years of issuing the [Information Technology \(Intermediary Guidelines and Digital Media Ethics Code\) Rules](#) there has not been much improvement in the regulation of OTT platforms.

- India's approach can be termed as a **light-touch 'co-regulation'** model where there is **'self-regulation' at the industry level and final 'oversight mechanism' at the Ministry level.**

Issues plaguing OTT regulation:

- Lack of awareness:** The Rules mandate the display of contact details relating to grievance redressal mechanisms and grievance officers on OTT websites/interface. **However, compliance is very low.**
- While the Rules require disclosure of grievance details by publishers and self-regulating bodies, the reporting formats **only capture the number of complaints received and decided**
- Ambiguity around content regulation**
- Jurisdictional issues:** Many OTT platforms are based outside India, which makes it difficult to enforce regulations and hold them accountable.
- Freedom of expression concerns.**

Solutions:

- Mandatory periodic **campaigns in print and electronic media about the grievance redressal mechanism**
- The interpretation of age rating (UA 13+, for example) and the content descriptors ('violence', for instance) could be in the **respective languages of the video (apart from English).**
- An **independent body** may undertake a periodic

audit.

- The Ministry could consider facilitating a dedicated **umbrella website wherein the details of applicable Rules, content codes, advisories, contact details** for complaints/appeals, etc. are published.

Examples from other countries:

Singapore

- The **Infocomm Media Development Authority** is the common regulator for different media. Apart from instituting a statutory framework and promoting industry self-regulation, its **approach to media regulation emphasizes on promoting media literacy through public education.**

Insta Links: [Govt. to monitor OTT content](#)

FCRA LICENSE OF THINK TANK CPR SUSPENDED

Context:

The Centre **suspended the Foreign Contribution Regulation Act (FCRA) license** of the Centre for Policy Research (CPR) following **prima facie inputs regarding the violation of funding norms.**

About CPR:

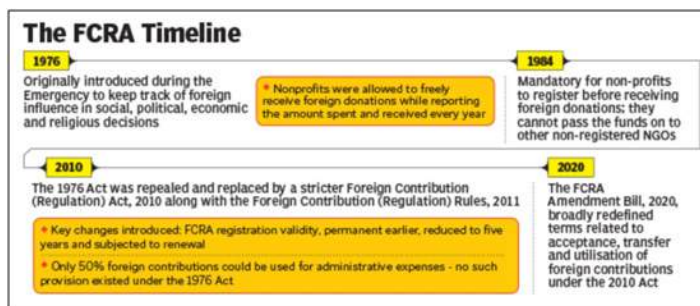
- The Government of India **recognizes CPR as a not-for-profit society** and contributions to the Centre are tax-exempt – according to its website.
- CPR receives grants from the **Indian Council for Social Science Research (ICSSR) and is a Department of Science and Technology-recognized institution.**
- CPR receives grants from a variety of domestic and international sources, including foundations, corporate philanthropy, governments, and multilateral agencies.

What is the FCRA?

- The FCRA was enacted **during the Emergency in 1976** amid apprehensions that foreign powers were interfering in India's affairs by pumping money into the country through independent

organizations.

- The law sought to **regulate foreign donations to individuals and associations**.
- An [amended FCRA was enacted in 2010](#) to “consolidate the law” on the **utilization of foreign funds**, and “to prohibit” their use for “any activities detrimental to the national interest”.
- The law was amended again in **2020**, giving the **government tighter control and scrutiny over the receipt and utilization of foreign funds by NGOs**.



FCRA requires every person or NGO **seeking to receive foreign donations to be**

- registered under the Act,
- to open a bank account for the receipt of foreign funds in the State Bank of India, Delhi, and
- to utilize those funds only for the purpose for which they have been received and as stipulated in the Act.

The Act prohibits the receipt of **foreign funds by candidates for elections, journalists or newspaper and media broadcast companies, judges and government servants, members of the legislature and political parties or their office-bearers, and organizations of a political nature**.

How is FCRA registration granted?

- FCRA registrations are granted to individuals or **associations that have definite cultural, economic, educational, religious, and social programmes**.

For how long is the approval granted and when is it suspended? [Click on this link](#)

Mains Link:

Examine critically the recent changes in the rules governing foreign funding of NGOs under the Foreign Contribution (Regulation) Act (FCRA), 1976. **UPSC 2015**

Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes;

CLEAN-TECH AS THE NEXT BIG THING IN RURAL INDIA

Context:

Women from rural India are adopting **clean energy-based livelihood technologies** (from solar refrigerators to silk-reeling machines) to catalyse their businesses and **transform women’s livelihoods at the grassroots**.

Highlights of a study (by CEEW):

- Out of the 13,000 early adopters of clean tech livelihood appliances, **more than 80% are women**.
- **Distributed renewable energy (DRE)**-powered technologies provide an additional advantage to women farmers **by enhancing income opportunities** through mechanisation.
- They also **free women from several gender-assigned manual activities** that are laborious.
- By 2030, India is expected to see **30 million women-owned MSMEs** employing around 150 million people.

Challenges in scaling up these accomplishments:

- **Novelty and a high starting price of these technologies**
- Perceived as **high-risk purchases**, especially by women users
- **The relatively lower risk appetite** of rural women due to **socioeconomic reasons**
- Limited avenues to avail financing
- Lack of established market linkages
- Limited mobility/networks of women outside their villages

Way ahead - How to scale up this impact?

- Leverage the experience of early women adopters.
- Organise hyperlocal events and demos - create

spaces for women to network, and become aware.

- Enable easy finance to purchase products. Financiers should consider the technologies themselves as **collateral while easing the loan application process**.
- Ensure adequate after-sales services and buy-backs.
- **Support backwards and forward market linkage** - finding and connecting producers to consumption hubs in urban areas.
- **Collectivising women or establishing business models** that enable them to sell to an intermediary can ensure a regular revenue stream.
- **Enable policy convergence**. Efforts towards promoting livelihoods for women from State rural livelihood missions, agriculture departments, etc., must be converged.
- **Leveraging the reach of government institutions** is imperative.

Best practice: Kissan Dharmbir, an energy-efficient food processor manufacturer, engaged an Agra-based micro-entrepreneur using the processor to produce jams, as a **demo champion**.

Conclusion:

Similar to how it takes a village to raise a child, a village of politicians, investors, financiers, and technology promoters, is required to fully realise the potential of rural women and clean technologies.

Insta Links:

[Schemes for women farmers](#)

Mains Links:

Q. Examine the role of the 'Gig Economy' in the process of empowerment of women in India. (UPSC 2021)

ILO-UNICEF JOINT REPORT ON SOCIAL PROTECTION FOR CHILDREN

Context:

Only **26.4 per cent (just 1 in 4 children)** of children aged 0-15 years are shielded by social protection, leaving the remaining **73.6 per cent** exposed to poverty, exclusion

and multidimensional deprivations, noted a new United Nations (UN) report titled - **More than a billion reasons: The urgent need to build universal social protection for children**.

Need for Social Protection:

- Social protection policies are **powerful tools for alleviating poverty for children and their families at risk of falling into poverty** and helping all children deprived of key services.
- Social protection can also shield children from **other major risks, such as [child labour](#) and forced labour**.

Key findings of the report:

- **2.4 billion Children in this world need adequate social protection.**
- Nearly 1.77 billion children aged 0-18 years **lack access to a child or family cash benefit**, a fundamental pillar of a social protection system
- **Regional disparities**
- **One billion children live in [multidimensional poverty](#)** without access to education, health, housing, nutrition, sanitation or water.
- **Gender disparity**
- Children **with disabilities or living in a household with a family member with a disability** are more vulnerable to poverty

Stats on India in the report:

- The report stated that **31 states in India had implemented the national '[PM CARES for Children' scheme](#)**. So far, only **4,302 children** have received support from the scheme.

Recommendations given to achieve universal social protection for children:

- Provide a comprehensive range of benefits that supports children and families through a **life-cycle approach**.
- Authorities are advised to **provide child benefits through national social protection systems** that also connect families to crucial health and social services, such as **free or affordable quality childcare**.
- **Increase budget allocation for children: Ensure sustainable and equitable financing of social protection systems**

- Build social protection systems that are rights-based, inclusive, gender-responsive, informed by social dialogue and able to effectively respond to multiple shocks and crises, and that can therefore deliver for children and families.
- Guarantee access to decent work and adequate employee benefits.
- Ensure that social protection systems are adapted to developments in the world of work to enhance economic security for parents, caregivers and their families.

Conclusion:

Following the above recommendations will help us achieve the **Sustainable Development Goals (SDG)** of achieving substantial social protection coverage by 2030.

Insta Links:

[ILO: World Social Protection Report 2020-22](#)

Mains Link:

Q. Examine the main provisions of the National Child Policy and throw light on the status of its implementation. **UPSC 2016**

Mechanisms constituted for vulnerable sections.

PROTECTION OFFICERS FOR DOMESTIC VIOLENCE CASES

Context:

The SC has sought more information about [Mission Shakti](#) as it is concerned about a persistent lack of protection officers to handle [domestic violence](#) cases.

Background:

- Appointment of protection officers (ideally women) is mandated under Section 8 of the [Protection of Women from Domestic Violence Act, 2005](#).
- These officers have a pivotal role:
 - Help victims file complaints,
 - Give Information to the police,
 - Provide immediate protection and support,
 - Inform victims about their legal rights

and

- Support them through the court proceedings.
- With 4.4 lakh cases pending across the districts, a protection officer would be saddled with over 500 cases.
- Even though Mission Shakti provided for the “one-stop centres”, it is unclear how many of them employ protection officers.

The Protection of Women from Domestic Violence Act 2005:

- The law, which is overseen by the Union Ministry of Women and Child Development (MWCD), provides a definition of “domestic violence” for the first time.
- Domestic violence includes not only physical violence, but also emotional, verbal, sexual and psychological abuse.
- It is a civil law meant primarily for protection orders, rather than criminal enforcement.

Mission Shakti:

- It is an integrated-umbrella scheme of MWCD aimed at strengthening interventions for women safety, security, and empowerment during the 15th Finance Commission period 2021-22 to 2025-26.
- It has two sub-schemes -



- Under **Samarthya**, a new component of **Gap Funding for Economic Empowerment** has also been added.

Insta Links:

[The Protection of Women from Domestic Violence Act, 2005](#)

Mains Links:

Q. “Though women in post-Independent India have excelled in various fields, the social attitude towards women and the feminist movement has been patriarchal.” Apart from women education and women

empowerment schemes, what interventions can help change this milieu? (UPSC 2021)

IFR REVIEW

Context:

Individual Forest Rights (IFR), without which forest dwellers stand to be evicted from their native habitations, have been awarded to very few applicants across the country.

Background:

- [The Scheduled Tribes and Other Traditional Forest Dwellers \(Recognition of Forest Rights\) Act 2006 \(FRA\)](#), recognizes the rights of the forest-dwelling communities to forest resources.
- The Act encompasses -
 - **Individual rights: Rights of Self-cultivation and Habitation**
 - **Community Rights: Grazing, Fishing, and access to Water bodies in forests, access to biodiversity, etc.**
- It also provides **rights to the allocation of forest land for developmental purposes** to fulfil the basic infrastructural needs of the community.
- In conjunction with the [Land Acquisition Rehabilitation and Settlement Act 2013](#), **FRA protects the tribal population from eviction** without rehabilitation and settlement.
- **The Gram Sabha** is a highly empowered body under the Act, enabling the tribal population to have a decisive say in the determination of local policies and schemes impacting them.

The procedure for granting the IFR:

- Gram Sabha → sub-divisional-level committee (SDLC) → district-level committee (DLC)
- **The Forest Rights Committee (FRC)** is elected from Gram Sabhas in order to assist a Gram Sabha in the process of vesting the rights/reviewing the decision of the above committees.
- As per the FRA, **IFR claims cannot be rejected because of a lack of documents.**

Challenges:

- [High rate of IFR claim rejection](#). According to the MoTA, **almost half** the IFR applications that were previously rejected and sent for review

were rejected once again.

- In 2019, the SC directed the states to evict (1,191,273 tribals across 20 states) those FRA claimants whose IFR claims were rejected.

The SC (in 2019), while staying its eviction order asked states:

- To supply information on the number of rejections,
- Procedure followed,
- Reasons for rejection and
- If the tribals had been given the chance to produce evidence before the rejection of claims.

Best practice (MP Govt.'s Van Mitra Portal): To simplify the process, an online portal called **MP Van Mitra** would allow the claimants whose claims had been rejected to re-apply for review.

Insta Links:

[ST commission holds its ground on the impact of new Forest \(Conservation\) Rules on Forest Rights Act](#)

Issues relating to Health

TRENDS IN MATERNAL MORTALITY 2000 TO 2020

Context:

Every day in 2020, approximately 800 women died (a woman every two minutes) globally from preventable causes related to pregnancy and childbirth

Background:

- **Sustainable Development Goal (SDG) 3** (target 3.1) is **to reduce maternal mortality to less than 70 deaths per 100 000 live births by 2030.**
- The report has been published by the United Nations Maternal Mortality Estimation Inter-Agency Group (**MMEIG**) - comprising WHO, UNICEF, UNFPA, the WB Group and the UNDESA/Population Division has collaborated on a new round of estimates (2000 to 2020).
- The report presents **global, regional, and country-level estimates** and trends for maternal

mortality (between 2000-2020).

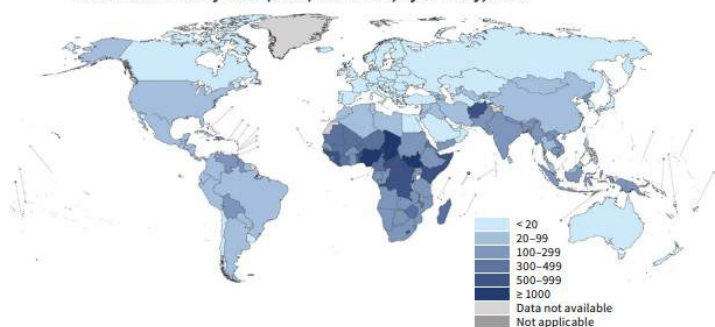
India

- As per the Sample Registration System (SRS) report by the Registrar General of India (RGI), the **Maternal Mortality Ratio (MMR) of India** has **reduced** from 130 per 100,000 live births in 2014-16 to **113 per 100,000 live births** in 2016-18.

Findings:

- The global MMR in 2020 was estimated at **223** maternal deaths per 100 000 live births, down from 227 in 2015 and 339 in 2000 - a reduction of one-third (34.3%) over the full 20-year period.
- Three countries had more than 10 000 maternal deaths in 2020:
 - India (24 000)**
 - DR Congo (22 000)**
 - Ethiopia (10 000)**

Maternal mortality ratio (MMR) estimates, by country, 2020



Strategic framework for Ending Preventable Maternal Mortality (EPMM):

Guiding principles for EPMM

- Empower women, girls and communities.
- Protect and support the mother-baby dyad.
- Ensure country ownership, leadership and supportive legal, technical and financial frameworks.
- Apply a human rights framework to ensure that high-quality reproductive, maternal and newborn health care is available, accessible and acceptable to all who need it.

Cross-cutting actions for EPMM

- Improve metrics, measurement systems and data quality to ensure that all maternal and newborn deaths are counted.
- Allocate adequate resources and effective health-care financing.

Five strategic objectives for EPMM

- Address inequities in access to and quality of sexual, reproductive, maternal and newborn health care.
- Ensure universal health coverage for comprehensive sexual, reproductive, maternal and newborn health care.
- Address all causes of maternal mortality, reproductive and maternal morbidities, and related disabilities.
- Strengthen health systems to respond to the needs and priorities of women and girls.
- Ensure accountability to improve quality of care and equity.

Insta Links:

[Maternal death rate declining: report](#)

Mains Links:

Q. In order to enhance the prospects of social development, sound and adequate healthcare policies are needed particularly in the fields of geriatric and maternal healthcare. Discuss. (UPSC 2020)

MENSTRUAL LEAVE AND ITS GLOBAL STANDING

Context:

The Supreme Court **refused to entertain a PIL about menstrual leave for workers** and students across the country, calling it a policy matter.

About Menstrual leave/period leave:

- Menstrual leave refers to **all policies that allow employees or students to take time off when they are experiencing menstrual pain or discomfort**. In the context of the workplace, it refers to policies that allow for both **paid or unpaid leave, or time for rest**.

Examples from India:

- Zomato in 2020**, announced a **10-day paid period of leave per year**, and **Swiggy and Byjus** have also followed suit.
- Among State governments, **Bihar and Kerala** are the only ones to introduce menstrual leave to women.
- The Bihar government, then headed by **Lalu Prasad Yadav**, introduced its menstrual leave policy in 1992, allowing employees **two days of paid menstrual leave every month**.
- Kerala** announced that the State's Higher Education department grants menstrual and maternity leaves for students in universities that function under the department.

Global Examples:

- Spain** became the **first European country** to grant paid menstrual leave to workers, among a host of other **sexual health rights**.
- Japan** introduced **menstrual leave as part of labour law in 1947** after the idea became popular with labour unions in the 1920s. At present, under **Article 68**, employers cannot ask women who experience difficult periods to work

during that time.

- **Indonesia introduced a policy in 1948, amended in 2003**, saying that workers experiencing menstrual pain are not obliged to work on the first two days of their cycle.
- In the **Philippines**, workers are permitted two days of menstrual leave a month.
- **Taiwan** has an Act of **Gender Equality in Employment in place**. Under Article 14 of the Act, employees have the **right to request a day off as period leave every month, at half their regular wage**.
- South Korea takes a slightly different route, allowing for **monthly physiologic leave under Article 73 of their labour law, allowing all female workers to get a day off every month**.
- Among the African nations, **Zambia introduced one day of leave a month without needing a reason or a medical certificate, calling it Mother's Day**.
- Companies across nations, such as **Nike and Co-exist**, have introduced menstrual leave as an internal policy.

Insta Links:

[Kerala announces menstrual leave: Time to talk period](#)

Indian Foreign Policy

INDIA SHOULD STICK TO THE MIDDLE PATH IN THE NEW WORLD DISORDER

Context:

India should follow a path of multi-engagement and not multi-alignment.

Background:

- India has consistently resisted international pressure to criticise Russia and its actions.
- For example, India has once again abstained from voting on a UN General Assembly resolution that condemns Russia's invasion of Ukraine.

The global order in international relations:

- After the end of the 2nd World War: A bipolar

world, led by the U.S. and the Soviet Union, emerged.

- Following the disintegration of the Soviet Union (1991): Unipolarity replaced bipolarity, with the U.S. being its centre.
- However, there have been discussions about whether American unipolarity has passed and a new world order (multipolar) has emerged.

Signs of the new world order:

- China's rapid rise
- Russia's aggressive foreign policy - the invasion of Ukraine, challenged the post-Cold War security equilibrium in Europe.
- The U.S.'s ability to shape geopolitical outcomes is clearly in decline (withdrawal from Afghanistan).

Impact of this transition (from uni to multipolarity):

- Leaving the world in flux. Lack of clarity on which direction the world is headed makes policy-making harder for middle powers like India.
- While many governments (including India, Russia and China), welcome multipolarity, the U.S. remains the world's most powerful military power.

India and the Non-alignment success:

- When India became independent, the Cold War was in its early stages.
- India's non-alignment foreign policy doctrine (equidistant from both blocs) did well in managing most of its (ideological and geopolitical) challenges.
- Criticised as too idealistic, India has actually been flexible in readapting itself to the changes in the global and regional equations.
- In the 1970s, after China started moving closer to the U.S., India started tilting towards the Soviet Union but stayed out of any Soviet-led military alliances.
- When the Soviet Union collapsed, India sought to transform its ties with the U.S. and integrate itself with the global economy in the new era of globalisation.
- But it also maintained close defence and strategic ties with Russia and built a vibrant economic

partnership with China.

A new set of challenges for India in the new global disorder:

- U.S.-China's great power contest in Asia is unfolding right in India's neighbourhood.
- The power imbalance between India and China, tempted India to join the American bloc.
- Abandoning its strategic autonomy and joining the U.S.-led bloc would limit India's options, besides provoking China.
- Border disputes between India and China.
- China has developed a strategic partnership with Pakistan and is raising its influence in other South Asian and Indian Ocean countries.
- So, on all fronts (including challenges to India's maritime influence), India faces the heat of China's rise.

Other challenges faced by India:

U.S. withdrawal from Afghanistan and the Taliban's return to power.

How Russia's invasion of Ukraine has complicated the situation for India?

- Russia is a traditional partner with which India has deep defence ties.
- As the West has moved to isolate Russia with heavy sanctions, India is under huge pressure to take a more critical position on Russia's actions.
- The West's move to isolate Russia in Europe would push the country further into the Chinese embrace.

Way ahead for India:

- Learning from China. In the 1970s, China broke away from the Soviet communist fold and built a quasi-alliance with the U.S. and helped the 'imperialist bloc' defeat the Soviet communists.
 - **Once China acquired enough economic and military power, it started gradually challenging the U.S.**
- Therefore, India's primary focus should be on transforming itself economically and militarily, bridging the gap with China.
- India should present itself as a natural stabilising power in South Asia and the Indian Ocean

Region, and a source of prosperity.

- To address its continental security challenges, India has to work with Eurasian powers such as Russia and Iran, both of which are at odds with the U.S.

Conclusion:

India should opt for multi-engagement (not multi-alignment) for a multipolar world, creating new pillars of the new global order through engagement and partnership with middle powers.

Insta Links:

A global order caught up in a swirl of chaos

Mains Links:

Q. "The long-sustained image of India as a leader of the oppressed and marginalised nations has disappeared on account of its newfound role in the emerging global order.' Elaborate (UPSC 2019).

Bilateral relations

INDIA-GERMANY RELATIONS

Context:

India and Germany will enhance cooperation on innovation and technology.

- Recently, German Chancellor Olaf Scholz came to India on a bilateral visit.

India- Germany cooperation aims at benefiting humanity and is firmly guided by their shared democratic values and respect

Various dimensions of India-Germany Relations:

Dimension	Description	Examples
Political	Cooperation in political and diplomatic matters	<ul style="list-style-type: none"> • The G4 nations (Brazil, Germany, India, and Japan) support each other's bids for permanent seats on the United Nations Security Council

Dimension	Description	Examples
Economic	Trade, investment, and economic co-operation	<ul style="list-style-type: none"> The total bilateral trade between the two countries stood at over US\$24 billion (2021) Germany has a Bilateral Trade and Investment Agreement (BTIA) with India via the EU
Scientific and Technological	Cooperation in science, technology, and innovation	<ul style="list-style-type: none"> Max Planck-India Mobility Grants Indo-German Science & Technology Centre Triangular Development Cooperation: It represents development projects in third countries by India and Germany
Cultural and Educational	Exchange of cultural and educational resources	<ul style="list-style-type: none"> India and Germany signed a Comprehensive Partnership on Migration and Mobility meant to ease travel for research, study and work for people in both countries
Defence	Cooperation in defence and security	<ul style="list-style-type: none"> India and Germany have cooperated in areas such as defence technology, maritime security, and peacekeeping operations. Joint naval exercises: The first ever Franco-Indian-German military exercise is expected to take place in 2024 Germany's 2020 Indo-Pacific guidelines have identified India as one of its most important partners in the region. Germany has come on board with the Indo-Pacific Oceans Initiative (IPOI)

Dimension	Description	Examples
Environmental	Cooperation in environmental and sustainability issues	<ul style="list-style-type: none"> India-Germany Solar Partnership Green Urban Mobility Scheme Green and Sustainable Development Partnership (GSDP): Germany to provide Euro 10 billion to India till 2030 to support Green growth Indo-German Science and Technology Centre Indo-German Green Hydrogen Task Force was constituted in 2022. Germany cooperates with India to the tune of 1.3 billion Euros a year in development projects (90% of which serves the purpose of fighting climate change)

Insta Links:

India-Germany Relations

Mains Links:

Q. Ties between India and Germany have the potential to work together but they should overcome disagreements on global issues. Comment. (250 Marks)

Prelims Links (UPSC 2017)

Q. 'Broad-based Trade and Investment Agreement (BTIA)' is sometimes seen in the news in the context of negotiations held between India and

- (a) European Union
- (b) Gulf Cooperation Council
- (c) Organization for Economic Cooperation and Development
- (d) Shanghai Cooperation Organization

Ans: (a)

INDIA AND ITALY ELEVATE TIES TO STRATEGIC PARTNERSHIP

Context:

Italian Prime Minister Giorgia Meloni is on a visit to India.

In recent years, **India-Italy relation has been mired by the [MB Enrica Lexie case](#)** (In February 2012, two Indian fishermen were killed off the coast of Kerala, India, aboard St. Antony. Two Italian marines were arrested and jailed. This caused diplomatic issues between the two countries.)

Various dimensions of the India-Italy relationship are as follows:

Dimension	Examples
Diplomatic ties	<ul style="list-style-type: none"> India and Italy established diplomatic relations in 1947. India and Italy have elevated their bilateral relationship to the level of strategic partnership 2020-2024 Action Plan for bilateral relations
Trade	<ul style="list-style-type: none"> In 2022, bilateral trade has reached \$15bn between both the countries Italy is among India's top 5 trading partners in the EU. The balance of trade has been in India's favour since the early eighties. India invited Italy to partner in 'Make in India' and 'Aatmanirbhar Bharat Abhiyan' with a focus on the areas of renewable energy, green hydrogen, IT, telecom, and space among others.
Investment	<ul style="list-style-type: none"> Establishment of a 'Startup Bridge' between India and Italy (2023) India-Italy Strategic Partnership on Energy Transition announced in 2021 Italian car manufacturer Fiat has been operating in India since 1997 Indian IT company Tata Consultancy Services (TCS) has a large presence in Italy, with over 2,500 employees in the country.
Cultural ties	<ul style="list-style-type: none"> Settimana della Lingua Italiana nel Mondo (Week of the Italian Language in the World) celebrated the Italian language and culture in India Year-long Festival of India in Italy 'Srijan' Indian community in Italy is the third largest community of Indians in Europe after the UK and the Netherlands.
Science	<ul style="list-style-type: none"> Italian space agency (ASI)-ISRO working group in heliophysics
Education	<ul style="list-style-type: none"> Italy is a popular destination for Indian students studying abroad. India and Italy have also signed agreements for academic and research cooperation.
Defence	<ul style="list-style-type: none"> Indian Army played a significant role in the liberation of Italy in the 2nd world war Memorandum of Understanding (MoU) on defence cooperation signed in 2023 Organise joint military exercises and training courses on a regular basis India-Italy Joint Working Group on Counter-Terrorism India also welcomed Italy's engagement in the Indian Ocean Rim Association (IORA) and Italy's new status as a Development Partner of ASEAN

Insta Links:

[Shaping a trilateral as Rome looks to the Indo-Pacific](#)

Mains Link:

Q. Elucidate upon the potential of a trilateral relationship between India, Japan & Italy.

Prelims Link:

Q. Region often mentioned in the news: (UPSC 2022)

- | | |
|-----------------|----------|
| 1. Anatolia | Turkey |
| 2. Amhara | Ethiopia |
| 3. Cabo Delgado | Spain |
| 4. Catalonia | Italy |

How many pairs given above are correctly matched?

- (a) Only one pair
 (b) Only two pairs
 (c) Only three pairs
 (d) All four pairs

GS3**Development and employment****UNEMPLOYMENT RATE DIPS TO 4.1% IN 21-22****Context:**According to the latest annual [Periodic Labour Force](#)

[Survey \(PLFS\)](#), released by the National Statistical Office (NSO), India's unemployment rate dropped to a five-year low in July-June 2021-22 to **4.1%**

PLFS	
About	Key indicators
<p>Launched by the NSO in 2017, to estimate the key employment and unemployment indicators -</p> <ul style="list-style-type: none"> For example, the Labour Force Participation Rate (LFPR), etc., in the short time interval of three months for the urban areas only in the Current Weekly Status (CWS). In both usual status and CWS in both rural and urban areas annually. <p>NSO is the Statistics Wing of the Union Ministry of Statistics and Programme Implementation, which includes the Central Statistical Office (CSO), the Computer Center and the National Sample Survey Office (NSSO).</p> <p>Prior to the PLFS, the NSSO (now known as NSO) used to bring out data based on household socio-economic surveys once in five years.</p>	<ul style="list-style-type: none"> LFPR: Percentage of persons in the labour force (working or seeking work) in the population. Worker Population Ratio (WPR): Percentage of employed persons in the population. Unemployment Rate (UR): Percentage of persons unemployed among the persons in the labour force. Activity Status: <ul style="list-style-type: none"> Usual Status: Determined on the basis of the reference period of the last 365 days preceding the date of the survey. CWS: Determined on the basis of a reference period of the last 7 days preceding the date of the survey.

Findings of the latest PLFS:**Annual survey ("usual status"):**

- UR **declined for the 4th consecutive year** since it was launched in April 2017.
- The UR for rural women (2.1%) was lower than for rural men (3.8%) in 2021-22, whereas in urban areas, the rate was high for females (7.9%) as compared to males (5.8%).
- The LFPR had increased significantly in the last five years from 37.5% in 2018-19 to 55.2% in 2021-22.
- The rural LFPR in the survey stood at 57.5% (up from 57.4% in 2020-21), whereas its urban equivalent saw an increase to 49.7% (from 49.1%).

Quarterly survey (CWS):

- For urban India, UR stagnated (after declining for five consecutive quarters till July-September FY23,) at **7.2%** in the December quarter.
- The LFPR increased marginally to 48.2% from 47.9% in the September quarter.
- Youth unemployment** (for the 15-29 age group) marginally increased to **18.6%** in the December quarter, primarily driven by a **rise in the female youth UR**.

Insta Links:[Unemployment has decreased, says Labour Survey](#)

Mains Links:

Q. How globalization has led to the reduction of employment in the formal sector of the Indian economy? Is increased informalization detrimental to the development of the country? (UPSC 2016)

Prelims Links: (UPSC 2020)

Q. With reference to the Indian economy after the 1991 economic liberalization, consider the following statements:

1. Worker productivity (Rs per worker at 2004-05 prices) increased in urban areas while it decreased in rural areas.
2. The percentage share of rural areas in the workforce steadily increased.
3. In rural areas, the growth in the non-farm economy increased.
4. The growth rate in rural employment decreased.

Which of the statements given above is/are correct?

1. 1 and 2 only
2. 3 and 4 only
3. 3 only
4. 1, 2 and 4 only

Ans: 2

Energy

IEA'S ANNUAL REPORT

Context:

The [International Energy Agency \(IEA\)](#) released the annual **Methane Global Tracker report in 2023**.

Background:

The report has come after energy giants (Shell, BP, ExxonMobil) reported record profits last year as the [Russia-Ukraine war](#) drove up oil and natural gas prices.

Findings of the report:

- **The energy sector** accounts for around **40%** of the total average methane emissions from human activity.
- **Oil and natural gas companies** are known to release methane into the atmosphere when natural gas is flared or vented.
- It is also released through **leaks** from valves and

other equipment during the drilling, extraction, and transportation process.

- **Fossil fuel companies** emitted 120 million metric tonnes of methane into the atmosphere in 2022 and have done nothing to find and fix leaking infrastructure.

Recommendations in the report:

- Methane cuts (by 75%) from the energy sector are among the **cheapest options to limit near-term global warming** (lower global temperature rise by nearly 0.1 degree Celsius by mid-century).
- **Reducing wastage** by measures such as leak detection, repair and upgrading leaky equipment would cost **less than 3% of the net income** received by the oil and gas industry in 2022.
- Methane emissions can be reduced with the help of the **right policies and implementation and cheap and readily available technology**.

Why is curbing methane emissions essential?

Methane (CH ₄)	Efforts
<ul style="list-style-type: none"> • A greenhouse gas (GHG) responsible for 30% of the warming since preindustrial times, second only to carbon dioxide (CO₂). • However, it is 80 times more potent at warming than CO₂. • According to the IPCC, the world must cut methane emissions by at least 30 % by 2030. 	<p>Global</p> <ul style="list-style-type: none"> • Global Methane Pledge - Both the US and the EU have planned to cut methane emissions by 30% (by 2030) compared with the 2020 levels. • UNEP's International Methane Emissions Observatory (IMEO) strategy - To get policy-relevant data into the right hands for emissions mitigation. • Methane Alert and Response System (MARS) - Launched at the COP27 to the UNFCCC in Sharm El-Sheikh, Egypt <p>Indian</p> <ul style="list-style-type: none"> • In India (3rd largest emitter of CH₄) ~20% of its anthropogenic CH₄ emissions come from agriculture (manure management), coal mines, municipal solid waste, etc. • According to the Ministry of New and Renewable Energy, a nationwide strategy to boost biogas production has received significant funding.

Insta Links:

[How can methane released in livestock belches be reduced?](#)

Prelims Links: (UPSC 2022)

Q. Among the following crops, which one is the most important anthropogenic source of both methane and nitrous oxide?

1. Cotton
2. Rice
3. Sugarcane
4. Wheat

Ans: 2

INDIA WANTS ENERGY TRANSITION ON ITS OWN TERMS

Context:

India is unlikely to reach an agreement - 'just energy transition partnership' (JETP) - with richer nations this year.

Background:

- According to the IEA, **India is the world's third-largest power consumer.**
- Last year, the country faced **one of its worst power crises** as a heatwave swept across the nation.
- **Coal use will peak in India between 2030 and 2035**, meanwhile, the country needs funding to strengthen its renewable grid and infrastructure.

About JETP with India:

- **The Ministry of External Affairs** is considering JETP proposals as India helms the G20 presidency.
- The **G7** industrialised nations, together with Norway, Denmark and the EU, believe a JETP with India **will financially empower it to reduce emissions from power production.**

Similar pacts:

- JETPs with **South Africa and Indonesia** are all about coal phase-out.
- \$15.5 billion for **Vietnam** to help it transition

away from coal, with most of the money as loans.

How does a JETP with India seem unlikely?

- International funding rests on India committing to a **timeline to phase out coal**, which is not viable for the country as it will see an **increase in energy demand and the possible increase in coal capacity.**
- Hence, India wants a JETP on its own terms - **no phase-out of coal** and funds for clean energy expansion in the form of **grants**, not loans.

Coal vs renewable energy debate in India:

- India has recently **relaxed environmental consultations** on coal mine expansions, **boosted its coal production** and cited **coal as critical for energy security** in global climate dialogues.
- But the country still aims to reduce coal from the current 50% of its energy mix to about 30% by 2030, while **building 500 GW of new renewable capacity by 2030.**
- With renewable energy storage capacity currently weak and expensive, India will **phase out coal only when it is sure the transition will not cause power disruptions.**

Challenges for India:

- At least five Indian states depend heavily on the **country's coal economy.**
- To ensure **clean and affordable energy** for all while moving away from fossil fuel.
- To meet its renewable energy targets, India will have to invest an average of **\$27.9 billion annually up to 2029**, but its budget allocations aren't sufficient.

Way ahead:

- India's transition efforts need to be **mindful of people's energy aspirations** and alternate livelihood for workers.
- Even if we cannot cut down on coal, we have to prepare for a **phase-down.**

Conclusion:

India may be able to use its position as G20 leader this year to steer discussions on a deal toward **just transition** while scaling renewable capacity and investments in new technologies.

Insta Links:

[India's just energy transition is more than a coal story](#)

Mains Links:

Q. Do you think India will meet 50 per cent of its energy needs from renewable energy by 2030? Justify your answer. How will the shift of subsidies from fossil fuels to renewables help achieve the above objective? Explain. (UPSC 2022)

'KING COAL'

Context:

After a 3-year pandemic break, the [coal industry in India](#) welcomed back its major conference (Coaltrans India conference) with a positive forecast of demand, increased production from new mines and strong demand for imports.

The prosperous future of the coal industry in India:

- **Increased output:** The production in the first 10 months of FY22 reached **698.25 million tonnes**, up 16% over the same period a year ago.
 - **It will jump to around 1.4 billion tonnes per annum by 2030 from around 1 billion tonnes currently.**
- **Acceleration in Imports:** India's imports (10.19 mt in February) of seaborne thermal coal are likely to accelerate, especially since the government mandated power plants to operate at full capacity as the summer demand peaks.
- **Increased imports of coking coal:** It is expected that coking coal imports will rise from around 63 mt a year currently to around 100 mt by 2030, given the expected increase in **steel production**.
- **Increased private participation:** Private mining companies are expected to make a bigger contribution to domestic output as they start bringing mines to production.

Challenges:

- Can **Coal India**, the state-controlled miner that accounts for about **80%** of the country's total output, continue to ramp up production?
- India's commitment to **"phase down"** coal-fired power generation and achieve [net zero carbon emissions by 2070](#).

- Will India be able to source sufficient imports at a price that its utilities can afford?

Whether this additional coal the industry expects to produce will actually be needed?

No	Yes
<ul style="list-style-type: none"> • India is rapidly rolling out renewable energies • The share of renewables was at 27% in 2022 and is expected to rise to at least 40% by 2030 • In the 2021-22 FY, some 15.5 GW of renewable capacity was installed, but only 1.4 GW of new coal-fired generation 	<ul style="list-style-type: none"> • Rising power demands • Thermal generation still accounts for 59% of India's total capacity • India is building new (32 GW) coal-fired power plants • Each GW of generation requires around 3 million tonnes of coal annually

Conclusion:

Overall, it appears the positive mood of India's coal sector is justified, especially in the short term. But their forecast of enormous growth in output and demand for many years may turn out to be too optimistic.

Major Coalfields and Mining Centres



Insta Links:

[India wants energy transition on its own terms - without phasing out coal and with more grants](#)

Awareness in the fields of IT

DEBATING THE ROAD TO POLICY CONSENSUS ON CRYPTO ASSETS

Context:

Digital technology is playing an important role in achieving India's G20 Presidency goal ("Vasudhaiva Kutumbakam" or "One Earth, One Family, One Future").

Background:

- The Indian Presidency's priority is to make the **digital financial system more efficient, secure, and stable**.
- For this to happen, **financial sector regulatory reforms** are essential.
- However, there is **no comprehensive global policy framework for [crypto assets](#)**, despite the rapid evolution of the crypto universe.
- The global standard-setting bodies (such as the [FATF](#), Financial Stability Board (FSB), Basel Committee on Banking Supervision (BCBS), etc) have been **coordinating the regulatory agenda**.

Probable benefits of crypto assets:

- Cheaper and faster cross-border payments
- More integrated financial markets
- Increased [financial inclusion](#)

Challenges:

- **Greater interconnectedness** between crypto assets and the traditional financial sector
- **Complexity and volatility** around crypto assets
- Critical digital infrastructure/platforms
- Global information gaps pertaining to the crypto asset

Status of [Crypto regulation](#) in India:

- RBI has announced [Central Bank Digital Currency](#) (CBDC), a sort of official cryptocurrency, for retail as well as wholesale users in 2022 on a pilot basis.

How can the Indian G20 Presidency shape Global Policy Dialogue on Crypto Assets?

- **Broaden the discussion on crypto assets:** Beyond financial integrity concerns and capture the macroeconomic implications and widespread crypto adoption in the economy.
- **Inform policymakers:** On the broader macroeconomic and financial stability implications of crypto assets.
- **Highlight the consequences of crypto adoption:** On the internal and external stability of a country's economy as well as on the structure of its financial system.

Way Forward: [IMF's 9 points crypto asset action plan](#) -

- **Safeguard monetary sovereignty and stability** by strengthening monetary policy frameworks and **do not grant crypto assets legal tender status**.
- Guard against excessive capital flow volatility and **maintain the effectiveness of capital flow management measures**.
- **Analyse and disclose fiscal risks** and adopt unambiguous tax treatment of crypto assets.
- Establish legal certainty of crypto assets and address legal risks.
- **Develop oversight requirements** for all crypto market actors.

- Establish a joint monitoring framework across different domestic agencies and authorities.
- **Establish international collaborative arrangements.**
- Monitor the impact of crypto assets on the stability of the international monetary system.
- Strengthen **global cooperation to develop digital infrastructures.**

Insta Links:

[Digital rupee pilot project launching: what is it and how will it work?](#)

Environmental Conservation

THE CASE FOR OPEN, VERIFIABLE FOREST COVER DATA

Context:

The article highlights how India mapped its forest cover over four decades and why making the data freely available will improve the quality of this vital policy input.

Forest and tree cover in India:

- While the **Forest Survey of India (FSI)** started publishing its **biennial** State of Forest reports in **1987**.
- Since 19.53% in the early 1980s, India's **forest cover has increased to 21.71% in 2021**.
- The country's **total green cover** now stands at **24.62%**, which was arrived after adding 2.91% tree cover estimated in 2021.
- The forest maps are based on the images purchased from the **National Remote Sensing Agency (NRSA)**, another arm of the government (Dept of Space).

How have these figures arrived?

- **All plots of 1 hectare or more, with at least 10% tree canopy density**, are counted within forest cover (irrespective of land use/ownership).
- All land areas with tree **canopy density of 70% or more** are considered **very dense forests**, 40% and more - **dense forests** and those between 10-40% - **open forests**.
- **Isolated or small patches of trees** (less than 1

hectare) and not counted as forest are assessed for determining **tree cover**.

Issues with green cover data in India:

- Green cover data in India disregards the **UN benchmark** that does not include areas predominantly under agricultural and urban land use in forests.
- **Recorded forest area vs green cover**
 - In India, land recorded as forest in revenue records or proclaimed as forest under a forest law is described as a **Recorded Forest Area**.
 - Divided into **Reserved, Protected and Unclassed forests, Recorded Forest Areas** account for **23.58%** of India.
- **The inclusion of commercial plantations**, orchards, village homesteads, urban housings, etc., as dense forests.
- **The steady replacement of natural forests with plantations** is worrisome, as natural forests support a lot more biodiversity and stock a lot more carbon.
- **The outcome of the refinement of satellite images** was that the forest cover fell within the forest area while it increased outside.
- **Lack of manpower** limits the FSI's scope for verifying the quality of remotely sensed data in the field.
- **The FSI never made its data freely available for public scrutiny** and bars the media from accessing its geo-referenced maps.

Best practice:

Brazil maintains an open web platform, **TerraBrasilis**, for queries, analysis and dissemination of data on deforestation, forest cover change and forest fire.

Conclusion:

- India is one of the few countries to have a scientific system of periodic forest cover assessment that provides **valuable inputs** for planning, policy formulation and evidence-based decision-making.
- **Making the field data freely available** to the public can enable them to volunteer to verify the country's forest data on the ground.

Insta Links:**State of Forest Report 2021****Prelims Links: (UPSC 2021)**

Consider the following statements:

Statement 1: The United Nations Capital Development Fund (UNCDF) and the Arbor Day Foundation have recently recognized Hyderabad as the 2020 Tree City of the World.

Statement 2: Hyderabad was selected for recognition for a year following its commitment to growing and maintaining urban forests.

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

- Both Statement 1 and Statement 2 are correct and Statement 2 is the correct explanation for statement 1
- Both statement 1 and Statement 2 are correct but Statement 2 is not the correct explanation for Statement 1
- Statement 1 is correct But Statement 2 is not correct
- Statement 1 is not correct but Statement 2 is correct

Ans: 4

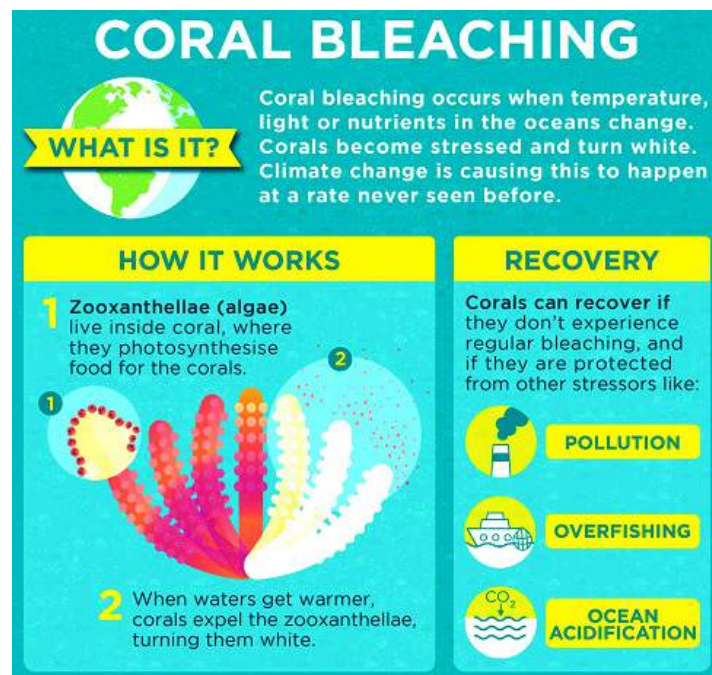
CORAL REEFS DAMAGED: WHAT'S THE BIG DEAL?

Context:

[Coral reefs](#) are not looking too healthy as [increased ocean temperature](#) caused by climate change is the main cause of coral bleaching events.

Coral reefs:

- These are **limestone structures** (found in more than 100 countries) built by thousands of tiny coral creatures called **polyps** and belong to tropical areas.
- The planet has **already lost about half of its shallow-water corals** in the past three decades.
- At the current rate, up to **90%** of them will disappear by the middle of the century.

**Significance of reefs:**

- Coral reefs (rainforests of the sea) **cover less than 0.5%** of the earth's surface, but they have **rich biodiversity** - home to about 25% of all marine species.
- A vast resource of potential scientific discoveries (pharmaceuticals of tomorrow). **For example**, the anticancer agent Ara-C is found in sea sponges on a Caribbean reef.
- About one billion people source their food or **income** directly from reefs.
- Provide shelter and function as nursery grounds** for some commercially important fish (grouper and snapper), as well as invertebrates (lobster).
- Flood protection protects coastal communities** from storm surges and waves.
- Reduces coastal erosion.
- With climate change triggered extreme weather events, **reefs will play an even more important role**.

What if reefs are not protected?

- Threats to marine biodiversity.**
- Potential food shortages** especially when combined with failing crops from climate change.
- Mass migration**, as people try to avoid famine and flooding.

Way ahead:

- Local restoration efforts by transplanting coral
- The establishment of **marine protected areas**

which work like national parks

- Stopping run-off from agricultural and effluence
- **Controlling climate change**, which presents the biggest single threat to the future of coral reefs

Insta Links:

NATURE AND YOU- SAVE CORAL REEFS

Prelims Links: (UPSC 2022)

Q. "Biorock technology" is talked about in which one of the following situations?

1. Restoration of damaged coral reefs
2. Development of building materials using plant residues
3. Identification of areas for exploration/extraction of shale gas
4. Providing salt licks for wild animals in forests/protected areas

Ans: 1

MYANMAR TEAK TRADE: HIGHLY PRIZED, HIGHLY DODGY

Context:

After the military junta took control of Myanmar, **the state-owned company, which had exclusive rights over the country's precious timber and teak trade**, also came under the military.

- There were several timber auctions since the coup and sales of this **"conflict" wood, pro-democracy supporters allege**, are a key revenue stream for the military regime.

Importance of Myanmar teak:

- Teak from Myanmar's **deciduous and evergreen forests** is considered the **most tensile and durable hardwood, resistant to water and termites**.
- It is in demand for **high-end furniture, veneer and ship decking** – much sought-after by the **luxury yacht industry**.

Illegal harvesting of timber and teak from Myanmar:

- There have been increased instances of illegal trade of Myanmar timber; **Global Forest Watch** says the country, over the last two decades, has

lost forest cover roughly the size of Switzerland.

- **International NGO Environmental Investigation Agency (EIA) released data**, which showed that over 70% of the logs exported from Myanmar between 2000-2013, **were illegally harvested**.

Global regulations to tackle illegal trade:

- **The European Union introduced the EU Timber Regulation (EUTR)**, which put the onus on timber merchants to do **sufficient due diligence to disallow illegal timber from entering their markets**.
- **Myanmar itself banned the export of whole logs**.

Impact on Indian Traders:

- Following the ban on the export of whole logs, a new regulation came in for only **teak in "sizes" to be exported**.
- **India is looked upon as a leakage country for illegally exporting timber**.

Loopholes present:

- Claiming that the price for the timber was paid **before the 2021 coup**.
- Trade data reveals some **Indian companies simply put "Asia" in the column for the origin of the wood**, without specifying which country
- **In transit passes they signed; traders wrote "imported" in the space for declaring where the teak was purchased from**.

Solutions:

- **Strengthen enforcement of existing laws**
- **Increase transparency in the supply chain**
- **Enhance international cooperation**
- **Address the demand side of the problem:** Illegal logging persists because there is a market for illegal timber.
- **Tighten regulations on Indian traders:** India needs to strengthen its regulations on the import of timber and crack down on companies that are involved in illegal trade.

Environmental pollution and degradation

UNPACKING THE NEW SET OF E-WASTE RULES

Context:

In a time of increased urbanisation, digitalisation and population growth, the problem of [managing e-waste](#) is an ongoing challenge.

Background:

- The first set of **e-waste Rules (2011)** introduced **Extended Producer Responsibility (EPR)** - which made 'producers' responsible for the safe disposal of e-waste once the consumer discards them.
- E-waste rules 2016** (amended in 2018) included provisions to promote '**authorisation**' and '**product stewardship**', stakeholders such as the '**Producer Responsibility Organisations**' (PRO) were also introduced in these rules.
 - PROs acted as an intermediary between producers (bidding for contracts) and formal recyclers (arranging for 'certified and authorised' recycling).
- The MoEFCC notified a new set of e-waste rules - [E-Waste \(Management\) Rules 2022](#).



Key provisions of the E-Waste (Management) Rules 2022:

- Unlike the earlier rules (seeking authorisation by stakeholders), the new rules provide for the '**Registration of Stakeholders**' (manufacturer/producer/refurbisher/recycler).
- A '**digitalised systems approach**' may now standardise the e-waste value chain through a common digital 'portal'.

- The above provisions **will reduce the frequency of 'false trail'** - falsely revealing 100% collection on paper while collecting/weighing 'scrap' to meet targets.

Issues with the 2022 rules:

- Weak monitoring system** and a **lack of transparency**. For example, many recyclers undertake activities only up to the pre-processing/segregation stage and channelise e-waste to the informal sector, which is a pure violation of the law.
- Two important stages of efficient e-waste recycling - **component recovery** and **residual disposal** - are briefly touched upon.
- It does away with PRO and dismantlers** and vests all the responsibility of recycling with authorised recyclers.
- The informal sector**, which plays a crucial role (95% of e-waste is channelised) in e-waste handling, draws no recognition in the new rules.

Way ahead:

- Ensuring the requirement of the **recovery tangent**.
- The activities of the recyclers must be recorded → tracing the quantity of [e-waste](#) that went for recycling.
- A robust collection and recycling system** on the ground.
- Stakeholders **must have the right information and intent** to safely dispose of e-waste.
- There is a need for **increased consumer awareness**, strengthening reverse logistics, building capacity, improving existing infrastructure, adopting green procurement practices, etc.

Best practice:

- '**Karo Sambhav**', a Delhi-based PRO, has integrated informal aggregators in its collection mechanism → e-waste entered a safe and structured system → informal sector has an advantage in terms of financial and legal security.
- IIT Hyderabad** launched M.Tech courses in e-Waste Resources.

Insta Links:

[Government notified E-waste \(management\) rules](#)

2022

Mains Link:

Q. What are the impediments in disposing of the huge quantities of discarded solid wastes which are continuously being generated? How do we safely remove the toxic wastes that have been accumulating in our habitable environment? (UPSC 2018)

Prelims Links: (UPSC 2019)

Q. In India, 'extend producer responsibility' was introduced as an important feature in which of the following?

1. The Bio-medical Waste (Management and Handling) Rules, 1998
2. The Recycled Plastic (Manufacturing and Usage) Rules, 1999
3. The e-Waste (Management and Handling) Rules, 2011
4. The Food Safety and Standard Regulations, 2011

Ans: 3

OUR FORESTS ARE UNDER THREAT - HERE'S HOW THEY ARE CERTIFIED

Context:

The **certification industry** offers a **multi-layer audit system** that seeks to authenticate the origin, legality, and sustainability of forest-based products such as timber, etc.

Background:

- With [climate change](#), [deforestation](#) has become a **critically sensitive** issue globally.
- Forests absorb large amounts of CO₂, keeping a check on [global warming](#).
- At the [Glasgow climate meeting \(2021\)](#), more than 100 countries took a pledge to stop and reverse deforestation by **2030**.
- **Europe and the US** have passed laws that regulate the entry and sale of forest-based products in their markets. This is where the **certification industry** comes in.
- The industry, through **independent third-party audits**, helps in establishing whether forests were being **managed in a sustainable manner**.

Two major international standards for sustainable management of forests and forest-based products:

- Developed by Forest Stewardship Council (FSC) - More popular and expensive
- Developed by Programme for Endorsement of Forest Certifications (PEFC) - Endorses the 'national' standards of any country

How will they work?

- Organisations like FSC/PEFC are only the **developers and owners of standards** like, for example, the ISO/BIS.
- They are **not involved in the evaluation and auditing** of the processes.
- That is the **job of certification bodies** authorised by the FSC or PEFC.

Two main types of certification on offer:

- Forest management (FM)
- **Chain of Custody (CoC):** Guarantees the traceability of a forest product like timber throughout the supply chain from origin to market.



Forest certification in India:

- Though the industry has been operating in India for the last 15 years, **forests in only one state (UP) are certified**.
- **41 divisions** of the UP-Forest Corporation (UPFC) are PEFC-certified and are managed according to the standards developed by the nonprofit **Network for Certification and Conservation of Forests (NCCF)**.
- Some other states too obtained certification. However, all of these expired over time.
- **Many agroforestry projects** (paper mills, etc), meant for captive use of the industry, too have forest management certification.

Challenges:

- There are a large number of CoC certifications, but the **dropout rate is 40%**.
- **India's wood import bill is Rs 50,000-60,000 crores per year.**
 - **India's forests contribute just about five million cubic metres (5%) of wood every year.**
 - **Almost 85% of the demand is met by trees outside forests (ToF) and about 10% is imported.**
- India allows the export of only processed wood, not timber.

Way ahead:

- **India-specific standards:** Since ToF are so important, new certification standards are being developed for their sustainable management.
- **The government's own standards:** The corruption in the private certification space has come under sustained criticism.

Conclusion:

A simple, transparent, easy to adopt and internationally accepted **indigenous system of certifications** will take into account India's national circumstances and will make available sustainably grown and managed forest products in the domestic market.

Insta Links:

[India's first forest-certification scheme gets global recognition](#)

GLOBAL CO2 EMISSIONS ROSE LESS THAN INITIALLY FEARED IN 2022, SAYS IEA

Context:

According to the IEA's 'CO2 Emissions in 2022' report, global energy-related carbon dioxide (CO2) emissions rose by **under 1% in 2022**.

Background:

- The report is the first in a new series, the **Global Energy Transitions Stocktake**, which will bring together the IEA's latest analysis in one place.

- This will make it freely accessible in support of the first Global Stocktake in the lead-up to the **COP28 Climate Change Conference** (Dubai, UAE).

About the report:

- It covers CO2 emissions from **all energy combustion and industrial processes**.
- It also includes information on **methane and nitrous oxide emissions**, providing a complete picture of energy-related greenhouse gas emissions in 2022.

Important takeaways from the report:

- Global energy-related CO2 emissions grew by **0.9%/321 million tonnes** in 2022, reaching a new high of more than **36.8 billion tonnes**.
- The rise in emissions last year was **far smaller** than the exceptional jump of **over 6% in 2021**.
- However, the report called for **stronger actions to accelerate the clean energy transition** to move the world towards **meeting its energy and climate goals**.

Reasons behind better results in 2022:

Growth of solar, wind, electric vehicles, heat pumps and energy efficiency helped limit the impacts of increased use of coal and oil amid the global energy crisis.

Region-specific findings:

- **China's emissions were broadly flat in 2022** due to strict Covid-19 measures.
- **The EU emissions fell by 2.5%**, thanks to the record deployment of renewables and energy savings measures in response to **Russia's invasion of Ukraine** also contributed.
- **In the US, emissions grew by 0.8%** as buildings increased their energy consumption to cope with extreme temperatures.
- Excluding China, **emissions from Asia's emerging and developing economies increased by 4.2%**, reflecting their rapid economic and energy demand growth.

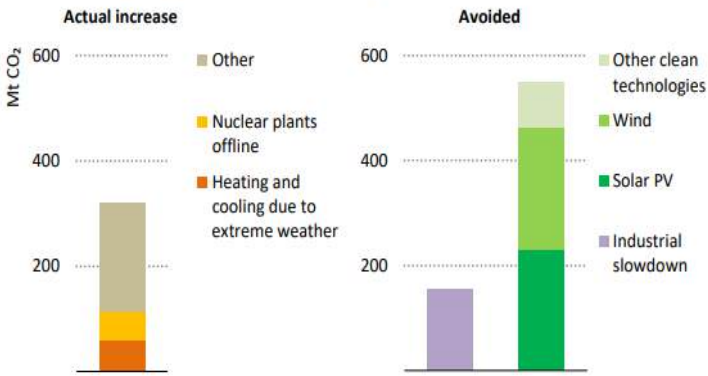
Fuel-by-fuel analysis:

- CO2 emissions from **coal** grew by **1.6%** as the global energy crisis continued to spur a wave of

gas-to-coal switching in Asia.

- The increase in coal emissions balanced the **1.6%** decline in emissions from **natural gas** as supplies were limited by [Russia's invasion of Ukraine](#).
- CO₂ emissions from **oil** grew by **2.5%** (came mainly from the aviation sector) but still remained below pre-pandemic levels.

Change in global CO₂ emissions by driver, 2021-2022



Insta Links:

[Who should pay for climate damage?](#)

Prelims Links: (UPSC 2020)

Which one of the following statements best describes the term 'Social Cost of Carbon'? It is a measure, in monetary value, of the

1. Long-term damage done by a tonne of CO₂, emissions in a given year
2. Requirement of fossil fuels for a country to provide goods and services to its citizens, based on the burning of those fuels
3. Efforts put in by a climate refugee to adapt to live in a new place
4. Contribution of an individual person to the carbon footprint on the planet Earth

Ans: 1

Disaster and disaster management.

HOW TO MAKE INDIA EARTH-QUAKE PREPARED

Context:

The Delhi HC asked the state government to file a status report and action plan on the structural safety of buildings in Delhi.

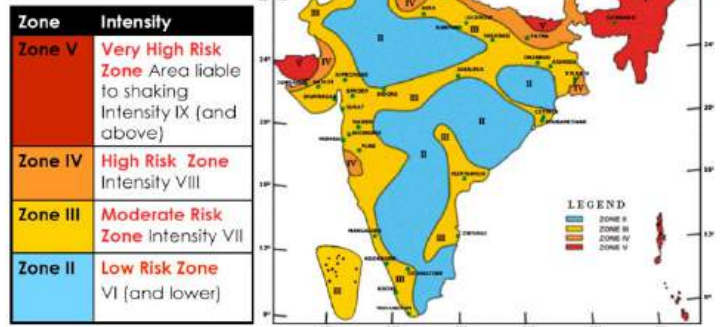
Background:

Nearly **59%** of the Indian landmass is vulnerable to earthquakes and the concerns that have been raised by the court need a policy response.

Seismic Zone

Map of India: -2002

About **59 percent** of the land area of India is liable to seismic hazard damage



India's current policy on earthquake preparedness:

- Operates primarily at the **scale of structural details**
- **National Building Codes:** Includes specifying dimensions of the structural members - columns, beams, etc.
- **National Retrofitting Programme 2014:** Under the programme, **the RBI directed banks to deny loans** for buildings that do not meet the earthquake-resistant design.

Issues with the policy:

- It ignores the buildings that were **constructed before such codes were published in 1962**
- It assumes infallibility in the processes of enforcement - **relying only on penalisation and illegalities**
- It treats earthquakes as a **problem of individual buildings** - in complete isolation from their urban context.
- **None of the urban renewal programmes** - including the Smart Cities Mission - have devised an urban policy for earthquake preparedness

Way ahead:

- **Earthquake preparedness** needs to act -
 - **In the realm of policy and not just legal enforcement.**
 - **At the scale of building details as well as that of cities.**

GS4

Ethics in human actions

WHY DO WE GET COMPASSION FATIGUE

Context:

Images of traumatic events online, insensitive news, pandemics, etc. have attributed to the rising **instances of compassion fatigue in recent years.**

Best practices (Japan and San Francisco):

- **Japan** has invested heavily in technological measures (skyscrapers with counterweights, small houses on flexible foundations, public infrastructure with automated triggers) by cultivating an industry around earthquake mitigation and fostering expertise.
- **San Francisco** is the world's most famous earthquake-prone city which implemented policy changes similar to Japan.
- **The Gujarat government:** Immediately adopted (after the 2001 Bhuj earthquake) new **town planning schemes that widened roads** and created routes for evacuation and relief work.
- **Programmes like the ongoing Urban 20 meetings:** An excellent opportunity for international knowledge exchange on earthquake preparedness.

Conclusion:

A policy on earthquake preparedness will require a **visionary, radical and transformative approach.** It would be unwise to wait for another earthquake to learn how to be better prepared for one.

Insta Links:

[A devastating quake in Turkey recalls the tragedies awaiting India](#)

About Compassion Fatigue:

- Compassion fatigue is a state of **emotional exhaustion and burnout that can result from continuously** caring for and empathizing with others who are **experiencing pain or suffering.**
- It **causes us to lose our capacity to react and help those in need.**

Instances of how compassion fatigue develops:

- **Violence in digital media formats like video games and films can desensitize people's responses to suffering or violence in real life.**
- The consequence of **seeing violent images is that you become numb to them and you think violence is no big deal.**
- **Soldiers:** Being in war – develops compassion fatigue.
- **Doctors and Nurses**

Why Compassion fatigue occurs:

- **Compassion fatigue is a form of emotional protection**
- The psychological mechanism **behind compassion fatigue is desensitization.**
- Desensitization to violence and trauma can be an important **adaptive strategy for people whose work involves frequent exposure to traumatic events, like soldiers, aid workers, and doctors.**

Example:

Research shows how the conflict in Israel and Palestine escalates violence in children.

What Are the Signs of Compassion Fatigue?

Compassion fatigue can affect social workers in many ways, and it is important to recognize the signs as soon as possible. The issue can manifest itself in the following categories:



Sources: The American Institute of Stress, Cigna, PublicSource

How to reverse compassion fatigue:

- Use social media to create **empathy and compassion among people**
- Take care of yourself: Self-care is essential to avoid burnout.
- Practice mindfulness: Mindfulness meditation
- Seek support
- Take time off

Role of educational institutions in inculcating values.

REVISITING TWO CASES OF MEDICO DEATHS

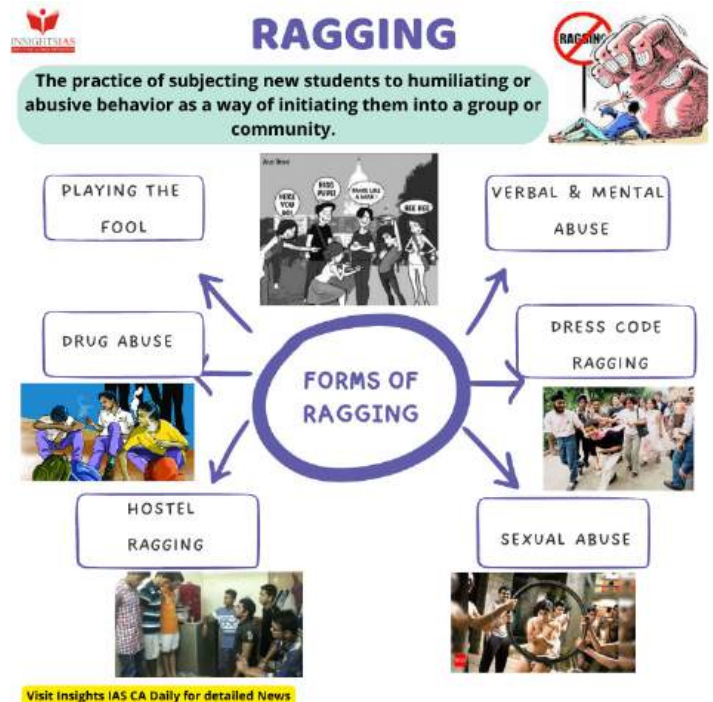
Context:

A first-year postgraduate medical student at the **Kakatiya Medical College Dr Preethi** was reportedly harassed by a male senior, following which she tried to end her life.

About Ragging:

Ragging, also known as hazing refers to the **practice of subjecting new students to humiliating or abusive behaviour as a way of initiating them into a group or community.**

- Ragging can take many forms, including **physical and emotional abuse, harassment, bullying, and even sexual assault.**
- Apart from **ragging, hazing, fagging, bullying, pledging and horseplaying** are different terms.



Previous instances of ragging in India:

TAMIL NADU – PON NAVARASU

- Tamil Nadu passed the country's first anti-ragging legislation in 1997 based on the Pon Navarasu case.
- Navarasu, son of the then vice-chancellor of the **University of Madras**, was murdered. John David, a senior student of his college, **confessed to the crime days later and surrendered to judicial custody.**
- During a ragging session, Navarasu was **assaulted, and forced to strip and lick David's footwear, he was violently beaten up and killed when he refused to do so.**

MAHARASHTRA - Payal Tadvi

- Payal Tadvi, a second-year MD student at Mumbai's **TN Topivala National Medical College (TNMC)**, had spoken to her friends about **caste discrimination and harassment within the campus.**
- She belonged to the Adivasi Tadvi Bhil community and was found dead in Mumbai.

Data on caste discrimination in colleges:

- A parliamentary panel found rampant caste bias within **All India Institute of Medical Sciences (AIIMS)**, as MBBS students from **Scheduled Castes and Scheduled Tribes failed repeatedly in their exams.**
- The examiners tend to ask the **name of the stu-**

dents and try to judge/ know if a student belongs to SC/ST community.

Laws against ragging in India:

- Indian Penal Code
- UGC Regulations on Curbing the Menace of Ragging in Higher Educational Institutions, 2009
- Other institute-specific regulations

Ethical issues associated with ragging:

- Violation of **human dignity**
- Infringement of **individual rights**
- Promotion of **unhealthy behavior**
- **Compromise of academic** standards
- **The legal and moral responsibility** of educational institutions

Solutions:

- Strict rules and regulations
- Awareness campaigns
- Counselling and support
- Orientation programs
- Monitoring and surveillance

FACTS FOR PRELIMS


GSI




Indian Heritage and Culture

ARTS AND ARTISTS PRIME MINISTER NARENDRA MODI MENTIONED IN MANN KI BAAT

Context:

Recently Prime Minister in Mann Ki Baat - spoke of **several musical instruments and folk artists who he hoped would “continue to inspire everyone at the grassroots towards making performing arts more popular”.**

Musical Instruments	Features	Key proponents
Sursingar 	Stringed musical instrument -similar to the sarod, but which is older and produces deeper notes. made of wood and has a gourd attached to a hollow wooden handle with a metal fingerboard. The strings usually four in number made of brass or bronze, are plucked with a metal pick.	Joydeep Mukherjee

Mandolin 	Stringed instrument , usually with eight strings that are plucked with a pick.	Uppalapu Nagamani, Sajjad Hussain
Dance	Features	Key Proponents
Karakattam 	Ancient folk dance of Tamil Nadu in which performers in colourful saris dance with a pot (karakam) on their head to invoke Mariamman, the goddess of the rain.	V Durga Devi
Perini Natyam 	Dance dedicated to Lord Shiva was “quite popular during the Kakatiya dynasty. ”	Raj Kumar Nayak

RENAMING OF CITIES

14TH RASHTRIYA SANSKRITI MAHOTSAV

Context:

President of India addressed the 14th Rashtriya Sanskriti Mahotsav at Bikaner, Rajasthan

About the festival:

- It is an **annual** flagship festival of the **Ministry of Culture**
- Organized** in different states of India to **promote National Unity and integrity** through cultural exchange
- Started in 2015** to exhibit the rich cultural heritage of the country
- Participation:** All the **seven zonal Cultural Centres and academies** under the Ministry of Culture

Context:

Supreme Court said that the **attempts to erase the imprints of foreign invaders** on cities and towns by rechristening them with their ancient identities were fraught with danger.

- Recently, **Maharashtra's Aurangabad and Osmanabad cities** have been renamed **Chhatrapati Sambhaji Nagar and Dharashiv** respectively

Process of changing the name of a city or place in a state:

- State Assembly:** A resolution is proposed by any Member of the Legislative Assembly as a request to change the name of a particular city or place in the state.
- Discussion:** In the discussion, the reasons for and possible consequences of altering the name are discussed

- **The passing of the resolution in the state assembly:** Only a simple majority is required.
- **The resolution sent to central government:** The resolution as a proposal is submitted to the Ministry of Home Affairs.
- **Approvals:** The Home Ministry seeks approval from the Ministry of Railways, Intelligence Bureau, Department of Posts, Survey of India, and Registrar General of India.
- **A 'No Objection' certificate** is issued by the Ministry if the proposal is approved by the ministry and all the agencies.
- After getting approval from the ministry, the **State Government can issue an official notification** in the Gazette.

There is **no constitutional provision** which talks about changing the name of a city or any area in a state.

STUPA

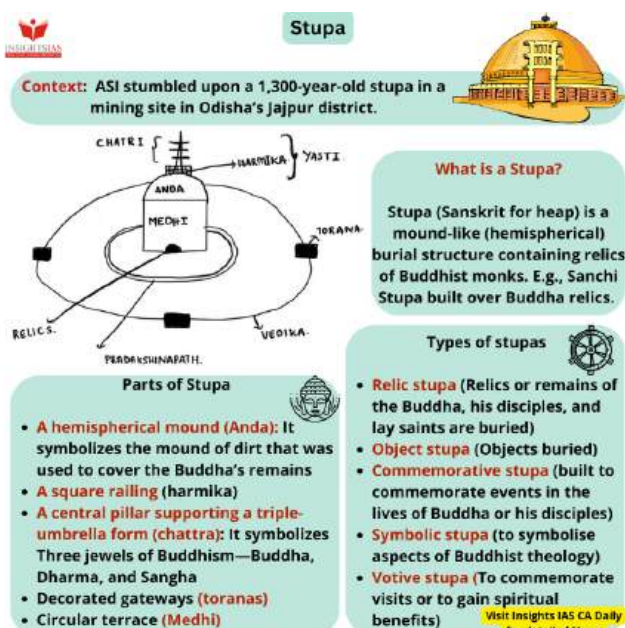
Context:

The Archaeological Survey of India (ASI) stumbled upon a **1,300-year-old stupa** in a mining site in **Odisha's Jajpur district**.

- The site is being used for supplying Khondalite stones to the **12th Century Shree Jagannath Temple in Puri**

Features:

- A stupa could be **4.5-metre tall**
- May belong to the **7th or 8th century**



What is a Khondalite Stone?

- **Khondalite** (named after the Khond tribe of Odisha and Andhra Pradesh) is a foliated metamorphic rock
- It is also called **Bezwada Gneiss and Kailasa Gneiss**
- These stones were widely used in **ancient temple complexes**

13TH-CENTURY TEMPLE DISCOVERED AT PUSHAGIRI KSHETRAM

Context:

13th-century Hindu temple ruins have been recently **unearthed northeast of the Durga temple**, atop a hillock in the **Pushpagiri Kshetram of Vallur Mandal in Kadapa district**.

- The hillock, also known as **Pushpachala**, is famous for the **chain of temples dedicated to the pantheon of Hindu gods with the river Penna flowing southwest**.
- Pushpagiri is referred to as **Hari-Hara Kshetra**, as there are a number of temples dedicated to both **Shiva and Vishnu**.

Features of the temple:

- The architectural features of the ruins **reveal a style which is contemporary to a temple at Vallur**, built by the **Kayastha rulers in the 13th Century AD**.
- The Kayasthas, including the great **Ambadeva**, were **subordinated to the rulers of the Kakatiya dynasty**. They ruled the region with Vallur as the capital.



Festival in News

THE ANCIENT FORTIFIED CITY OF SISUPALGARH

Context:

Land grabbers damaged a portion of the wall of the **fortified ancient city of Sisupalgarh**, a **majestic archaeological heritage** that has survived over **2,600 years**, on the **outskirts of Bhubaneswar**.

About Sisupalgarh:

- **Sisupalgarh**, believed to have been built **around the 7th to 6th century BCE**, served as the capital of the **Kalinga kingdom** and was an **important centre of trade and commerce** during ancient times.
- The urban centre had an area of **1.2 km by 1 km**, and it was **surrounded by a moat** (a deep wide trench around the walls of a castle or fortress that is usually filled with water).
- The **water management system of the city was unique**. The fortification was carried out in the **4th to 3rd century BCE** when King **Kharavela** took up the repair of the city **2,100 years ago**.

The excavation of the Sisupalgarh site **was first taken up in 1948**, when it was declared a **Centrally Protected Monument** under the provisions of the **Ancient Monuments Preservation Act, 1904**.



UNYING FESTIVAL

Context:

Union Minister of Ports, Shipping & Waterways and Ayush attended the colourful **Siang Unying Festival** - which is an important festival of the **Adi community** at **Boleng, Arunachal Pradesh**.

- Unying is a **spring festival** marking the beginning of the spring season and the **new year of the Adi community**

Adi community:




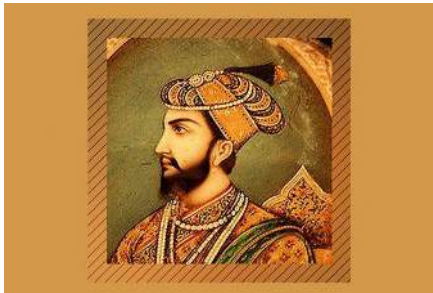

- **Origin:** Southern china in the **16th century**.
- **Inhabitation:** lower part of the **Lower Dibang Valley district**, especially the **Roing and Dambuk areas of Arunachal Pradesh**.
- **Occupation:** Dependent on agriculture - wet rice cultivation and shifting cultivation.
 - **Experts in making cane and bamboo items.**
- **Other Festivals:** **Solung** (a harvesting festival where animal sacrifices and rituals are performed) and **Aran** (a hunting festival where all the male members of the family go hunting) are **two major festivals of the Adi tribes**.

Modern History/Personality

AURANGABAD TO SAMBHAJI NAGAR – HISTORY OF THE PLACE

Context:

After the **approval of the Ministry of Home Affairs**, the name of **Aurangabad** has been changed to **Chhatrapati Sambhaji Nagar**.

Historical features of Aurangabad/Sambhaji Nagar	Information
Aurangzeb's tomb 	<p>Aurangzeb is buried in Khuldabad, near Aurangabad in Maharashtra, India</p>
Tomb of Dilras Banu Begum 	<p>Built by Aurangzeb in Aurangabad in 1660 for his wife, Bibi ka Maqbara is half the size of the Taj Mahal and covered in burnished stucco. Introduces a new architectural style of the 17th and 18th centuries</p>
Chhatrapati Sambhaji Nagar 	<p>Recently rechristened name for Aurangabad -Named after Shivaji's son who was captured and humiliated by Aurangzeb</p>
Mohammed Bin Tughlaq 	<p>Who brought the entire population of Delhi to Daulatabad in 1327</p> <p>Shifted his capital to Daulatabad resulting in casualties</p> <p>Fort in Daulatabad was the capital of the Yadava dynasty and later became part of the Ahmednagar Sultanate</p>
Ajanta-Ellora caves 	<p>Located in Aurangabad</p> <p>Ajanta caves are 30 rock-cut Buddhist monuments from the second century BC</p> <p>Ellora caves are the largest rock-cut Hindu temple with 100 caves dating back to Rashtrakuta and Yadava dynasties</p> <p>Both are UNESCO World Heritage Sites and predate the Mughal and Maratha periods in Aurangabad's history</p>

Geography

WESTERLIES GOVERNED TRANS-HIMALAYAS

Context:

A recent study has shown that the Westerlies had a bigger impact on the climate and landscape of the **Trans-Himalayan region** than the Indian Summer Monsoon.

- They also found that the **Westerlies and the Indian Summer Monsoon** had **periodic shifts** in defining the climatic variations of the region.

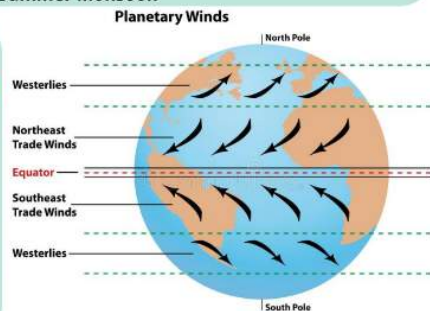
Westerlies



Context: A recent study has shown that the **Westerlies had a bigger impact on the climate and landscape of the Trans-Himalayan region** than the Indian Summer Monsoon.

What are Westerlies?

Westerlies are the **Permanent winds** that blow in the middle latitudes. They blow from the **subtropical high-pressure belts towards sub-polar low-pressure belts**. The westerlies of the Southern hemisphere are more robust and constant than the westerlies of the Northern hemisphere.



During the Mid-Holocene Thermal Maxima (about 6000-7000 years ago), glaciers in the Trans-Himalayas were moving forward because of the Westerlies.

Trans-Himalaya ranges in India include the Karakoram, Zaskar and Ladakh ranges that run through Ladakh and Himachal Pradesh.

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How the researchers came to this conclusion?

The researchers collected **sediments from glacial lakes in the Ladakh Range**, which provided a record of climate change over the last seven thousand years.

Significance of the study:

- It will help us **understand past climate changes**, **assess the impact of global warming** and climate variability, and help us plan for the future of the region.
- The **Himalayan region** is very important because it is one of the **most glaciated mountain regions** on Earth, outside the poles.

SALT FLATS AROUND THE WORLD ARE COVERED IN A SIMILAR PATTERN OF RIDGES.

Context:

In salt flats across the world, the salt on the surface forms ridges that join together in a patchwork of pentagons and hexagons.

What are salt flats?

- A salt flat is a **natural landscape in which a large area of flat land is covered by salt**.
- World's most well-known salt flat is the **Salar de Uyuni in Bolivia** contains more than half of the planet's [lithium reserves](#).
- A salt flat **forms from a natural water body whose recharge rate is lower than the evaporation rate**. The underlying soil is highly saline: even if the water table is shallow, the groundwater is too salty for humans to drink.

How are the shapes form?

- The researchers began with the hypothesis that the salt on the surface is influenced by the salt flowing through the soil below. They found that the **salt penetrated deeper into the soil exactly below the ridges**, and remained shallow under the flat areas.

To mitigate the deleterious effects of salt flats, **experts have recommended covering them in a shallow layer of water**, so that the salt is deposited on the surface more uniformly and less salt is carried away by winds.



Tribes in News

BANJARA DHARMAGURU SANTH SEVALAL MAHARAJ JAYANTI

Context:

For the first time ever, the year-long commemoration of the birth anniversary of Santh Sevalal Maharaj, the Spiritual & Religious Leader of the Banjara Community is being celebrated by the Ministry of Culture, Government of India.

About Santh Sevalal Maharaj:

- Santh Sevalal Maharaj was born in the **Shivamogga district of Karnataka**.
- He is considered a **social reformer and spiritual teacher** of the Banjara community. He travelled across the country with his **Ladeniya Troup** to serve especially the forest dwellers and nomadic tribes.
- Due to his **extraordinary knowledge, excellent skills and spiritual background** in Ayurveda and Naturopathy, he was able to **dispel and eradicate myths and superstitions prevalent** in the tribal communities and brought about reforms in their way of life.

Banjara Community

- Banjara is a **nomadic tribe of India** and was the vital supply chain for villages.
- In 1871, the **Banjaras and several other tribes were brought under the Criminal Tribes Act**.
- The community was denotified in the 1950s but was listed under the **Habitual Offenders Act, 1952**.
- With roots in Rajasthan, Banjaras now live in several states and are known by different names like **Lambada or Lambadi in Andhra Pradesh, Lambani in Karnataka; Gwar or Gwaraiya in Rajasthan**.
- They are listed in various States as **Scheduled Caste (SC), Scheduled Tribe (ST), Other Backward Class (OBC) and Vimukta Jati/denotified tribes**.

GS2

Polity

GRIEVANCE APPELLATE COMMITTEE (GAC) PORTAL

Context:

The MeitY launched the Grievance Appellate Committee (GAC) portal under the IT Rules, 2021.

Purpose:

It will allow people who are dissatisfied with complaints to social media companies on content takedown requests, to be heard by one of three Committees constituted by the government.

Background:

- The [IT \(Intermediary Guidelines and Digital Media Ethics Code\) Rules, 2021](#) were amended last year to require social media companies to respect citizens' rights under the India Constitution - **Articles 14, 19 and 21**.
- Three Committees were formed to receive complaints to put these amendments into action.

FLIP-FLOP? IN JUNE, GOVT WAS OPEN TO IDEA OF SELF-REGULATING INDUSTRY BODY

2021

February: With IT rules, 2021, the government mandates an in-house grievance officer to decide on content-related complaints

2022

6 June: MeitY says it observed the grievance officers handle user complaints 'unsatisfactorily'

6 June: The ministry proposes to bring a grievance appellate committee (GAC) to protect the rights and interests of users; asks for public feedback and inputs

23 June: MoS IT & Electronics

Rajeev Chandrasekhar says the government was open to idea of self-regulating industry body instead of govt-backed committee

27 July: Media reports say the Big Tech start drawing structure of a self-regulatory body

August 5: Chandrasekhar says the government was not interested in becoming an appellate committee, but there could be several GACs

Now: Government official says the MeitY would go ahead with GAC and self-regulatory bodies could only co-exist if they follow the same mechanism that of GAC



THE POWERS OF GOVERNORS REGARDING ASSEMBLY SESSIONS

Context:

The Solicitor General told the SC that the Punjab Governor had summoned the state Assembly for a budget

session.

Background:

- This came minutes before the SC was set to hear a challenge by the Punjab government against the [Governor](#), over his refusal to summon the **Budget session** of Vidhan Sabha.
- The Governor had cited [Article 167 of the Constitution](#), which relates to the duties of the Chief Minister in furnishing information to the Governor.

Can the Governor refuse to summon the assembly?

- **Article 163(1)** of the Indian Constitution says that there shall be a council of Ministers with the Chief Minister at the head **to aid and advise the Governor in the exercise of his functions.**
 - **However, except in cases where s/he is required under this constitution to exercise his/her discretion.**
- **Under Article 174**, a Governor shall summon the House at a time and place, as s/he thinks fit.
 - **Article 174 (2) (a) says a Governor may from "time to time" prorogue the House and 174 (2) (b) allows her or him to dissolve the Legislative Assembly.**
- A joint reading of the two provisions leaves the Governor with **minimal discretion** in summoning the house. **For example**, when the CM has lost the support of the House and his strength is debatable.
- In 2016, the SC (in Nabam Rebia case) held that **the power to summon the House is not solely vested in the Governor.**

LEGISLATOR FACING DISQUALIFICATION CANNOT ATTEND FLOOR TEST: SUPREME COURT

Context:

According to the Chief Justice of India - allowing an MP or an MLA who is facing disqualification under the [anti-defection law](#) to participate in a [floor test](#) caused by his own doings will defeat the very purpose of the [Tenth Schedule](#).

About Anti-Defection Law:

- Introduced through the **52nd Amendment Act of 1985** - inserted in the **Tenth Schedule of the Indian Constitution**.
- It lays down the process of **disqualification on grounds of defection**.
- The **presiding officer has the authority** to disqualify a member on proven grounds of defection.
- To **prevent the legislators from changing their political affiliations during their tenure in office**.

WHAT IS A WHIP IN A STATE ASSEMBLY OR PARLIAMENT?

Context:

A five-judge Bench led by the Chief Justice of India is hearing petitions filed in the wake of last year's political crisis in Maharashtra – raising the importance of whip.

What is a 'whip' in the House?

- In parliamentary parlance, a whip may refer to **both a written order to members of a party in the House to abide by a certain direction and to a designated official of the party who is authorized to issue such a direction.**
- The term is derived from the **old British practice of "whipping in" lawmakers to follow the party line.**

How serious are whips issued by parties?

The importance of a whip can be inferred from the **number of times an order is underlined.**

- A **one-line whip** underlined once, is usually issued to **inform party members of a vote, and allows them to abstain in case they decide not to follow the party line.**
- A **two-line whip** directs them to be present during the vote.
- A **three-line whip** is the strongest, employed on important occasions such as the **second reading of a Bill or a no-confidence motion, and places an obligation on members to toe the party line.**

What can happen if a whip is defied?

- **United Kingdom** - an MP can lose membership

of the party for defying the whip, but can keep her/ his House seat as an Independent.

- **US** - the party whip's role is to gauge how many legislators are in support of a Bill and how many are opposed to it — and the extent possible, persuade them to vote according to the party line on the issue.
- **India** - rebelling against a **three-line whip** can put a lawmaker's membership in the House at risk. The **anti-defection law** allows the **Speaker/ Chairperson** to disqualify such a member; the only exception is when more than a third of legislators vote against a directive, effectively splitting the party.

DELHI EXCISE POLICY CASE: HOW THE RIGHT AGAINST SELF-INCRIMINATION

Context:

Supreme Court refused to hear a plea by Delhi Deputy Chief Minister Manish Sisodia.

- **Reason:** SC disapproved of Sisodia approaching it directly under **Article 32 of the Constitution** when the remedy of moving the **High Court under Section 482 of the CrPC** was available to him.
- The court had **rejected** Sisodia's arguments that **he had a right against self-incrimination**

What is right against self-incrimination?

Article 20(3): "No person accused of any offence shall be compelled to be a witness against himself."

- Since the onus of **proving the case against the accused (in criminal cases) beyond a reasonable doubt** is on the **state**, a person cannot be compelled to testify against himself or share information that **might go against him in a trial**

About Delhi excise policy case:

Now-scrapped liquor sales policy (2021) allowed **only private shops to sell liquor** and permitted home delivery and unlimited discounts. It relieved the state from the sale of liquor. The policy resulted in a **27% increase in revenue** for the government. However, there were allegations of bending rules and providing undue benefits to liquor vend licensees.

NEWS BROADCASTING AND DIGITAL STANDARDS AUTHORITY (NBDSA)

Context:

NBDSA has asked News18 India, Times Now and Zee News to remove videos of certain programmes after it found them to be in violation of the **Code of Ethics and Broadcasting Standards and Specific Guidelines**

- NBDSA is an **independent body** set up by News Broadcasters & Digital Association (NBDA).

About NBDA:

News Broadcasters & Digital Association (formed in 2007) formerly known as the News Broadcasters Association is a **private association of different current affairs and news television** broadcasters in India, which serves as their representative.

Aim: It protects all its members from persons carrying unfair and/or unethical practices.

Government Initiative and Policies

SWAYATT

Context:

Government e-Marketplace (GeM) commemorates the success of "SWAYATT".

What is SWAYATT?

It is an initiative to promote "**Start-ups, Women and Youth Advantage Through eTransactions**" (SWAYATT) on GeM.

- It was first launched in **February 2019**

Aim:

- To **promote the inclusiveness of various categories of sellers** and service providers on the GeM portal
- It facilitates **training and registrations of women and youth manufacturers** and sellers and encourages participation of the MSME sector and startups in public procurement.

About GeM:

GeM (Section 8 company set up in 2016) is a one-stop National Public Procurement Portal to facilitate online procurement of common use Goods & Services required by various Central and State Government Departments/Organizations/Public Sector Undertakings (PSUs).

- **Under:** Ministry of Commerce and Industry
- It is **mandatory for government agencies** to procure from the portal, goods and services available on GeM.
- The portal also provides the **tools of e-bidding and reverse e-auction** to facilitate government users achieve the best value for their money.

PORTER PRIZE 2023

Context:

The **Union Health and Family Welfare Ministry** has received the **Porter Prize 2023**.

- It recognized the **Government's strategy for managing COVID-19**,
- **Involvement of various stakeholders, especially the involvement of ASHA workers in the industry to create PPE Kits.**
- It was also noted, **"the idea of vaccine development and vaccine manufacturing and the scale that India achieved, was tremendous.**

About Porter Prize:

Porter Prize is named after **award-winning economist Michael E. Porter**. He has brought economic theory and strategy concepts to bear on many of the **most challenging problems faced by corporations, economies, and societies, including market competition and company strategy, economic development, the environment and healthcare.**

CONSTITUTION OF GREATER PANNA LANDSCAPE COUNCIL (GPLC)

Context:

As part of the **Ken-Betwa Link Project (KBLP)** (in the drought-prone Bundelkhand region), a comprehensive **Integrated Landscape Management Plan (ILMP)** has

been prepared for the **conservation of wildlife and biodiversity in Panna Tiger Reserve (PTR) & surrounding areas.**


- To ensure the implementation of the landscape plan, GPLC has been constituted.

Objectives of GPLC:


- Better habitat management esp. for the flag-ship species viz. tiger, vulture, and gharial in the landscape
- Consolidate the landscape for biodiversity conservation
- Provide species-specific and site-specific monitoring strategies

What is Integrated Landscape Management?

It is a **governance strategy that attempts to reconcile the needs of people and the environment** and establish more sustainable and equitable multi-functional landscapes. E.g., Sustainable agricultural production, the delivery of ecosystem services, cultural heritage and values, and rural livelihoods.




Greater Panna Landscape Council (GPLC)



Greater Panna Landscape Council (GPLC) has been formed to ensure implementation of the Greater Panna Landscape Management Plan, for the conservation of wildlife and biodiversity in Panna Tiger Reserve (PTR) and surrounding areas.

The Ken-Betwa River Linking Project



The landscape approach of conservation considers the interconnectedness of natural and social systems within a given landscape to achieve sustainable conservation outcomes.

Ken-Betwa Link Project (KBLP) aims to transfer surplus water from the Ken River in Madhya Pradesh (MP) to Betwa in Uttar Pradesh (UP) to irrigate the drought-prone Bundelkhand region

About Panna Tiger Reserve:

- Formed in 1981, the tiger reserve has been **designated a biosphere reserve in 2011** and included in the **World Network of Biosphere reserves (WNBR)** (3rd such reserve from Madhya Pradesh after Pachmarhi and Amarkantak)
- It is situated in the **Vindhyan Hills nearer to the confluence of the Deccan Peninsula, Upper Gangetic Plain, and Semi-Arid Gujarat Rajputana** reflecting the influence of three bio-geographic regions.

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SMART-PDS SHOULD BE IMPLEMENTED IN ALL STATES/UTS

Context:

The government has asked all the states/UTs to make

efforts to implement SMART-PDS at the earliest

What is SMART-PDS?

SMART-PDS aims to **leverage technology to reduce human intervention and promote automation in the PDS supply chain**, thereby ensuring timely and targeted delivery of food grains to beneficiaries. The system involves **real-time tracking of food grains** from the procurement stage to the distribution stage, enabling authorities to monitor and address any issues or bottlenecks in the supply chain.

Components:

- Smart Ration Card
- Fingerprint Template (beneficiaries' fingerprint template is recorded in these smart ration cards, which records all transactions)

Other Features:

- **Full Form Of SMART-PDS:** Scheme for Modernization and Reforms through Technology in Public Distribution System.
- **Nodal Ministry:** Ministry of Consumer Affairs, Food and Public Distribution
- **Successful Implementation:** Andhra Pradesh
- **Objective:** Introduce a transparent and accountable system and reduce human intervention and promote automation in the existing processes.

Difference between old and new pension schemes:

Feature	Old Pension Scheme	New Pension Scheme
Pension Amount	Fixed, based on years of service and last pay drawn	Depends on the contribution and market performance of investments
Contribution	The government bears the responsibility mostly.	Both employee and employer contribute a fixed percentage of the salary
Portability	Not portable, benefits tied to a specific employer	Portable, benefits can be transferred to another employer
Withdrawal	Limited options, typically only a lump sum payment	More flexible options, including partial withdrawals and systematic withdrawal plans
Applicability	Only to government employees	Available to all individuals (including government employees)

SELECT CENTRAL GOVT EMPLOYEES GET ONE-TIME OPTION TO OPT FOR OLD PENSION SCHEME

Context:

In a major move, a **select group of central government employees** have been given a one-time option to opt for the old pension scheme.

- The employees who joined the central government **services against posts advertised or notified before** December 22, 2003, the **day National Pension System (NPS) was notified**, are eligible to join the **old pension scheme under the Central Civil Services (Pension) Rules, 1972 (now 2021)**.

International News and Organization

BIMSTEC ENERGY CENTRE (BEC)

Context:

India hosted the first meeting of the Governing Board of BIMSTEC Energy Centre (BEC)

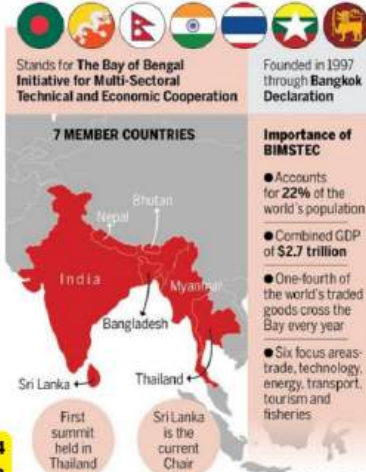
- India's **"Neighborhood first" and "Act East" Policies** were highlighted
- India will establish the **BIMSTEC Energy Centre (BEC)** at the premises of Central Power Research Institute (CPRI), Bengaluru

BIMSTEC

Institutional Mechanism:

- **BIMSTEC Summit** – highest policymaking body comprised of heads of state.
- **Ministerial Meeting** – attended by the External/Foreign Ministers of Member States.
- **BIMSTEC Working Group**
- **Business Forum & Economic Forum**

'BIST-EC', it became BIMSTEC in 2004 after inclusion of Nepal and Bhutan



7 MEMBER COUNTRIES

Importance of BIMSTEC

- Accounts for 22% of the world's population
- Combined GDP of \$2.7 trillion
- One-fourth of the world's traded goods cross the Bay every year
- Six focus areas: trade, technology, energy, transport, tourism and fisheries

First summit held in Thailand

Sri Lanka is the current Chair

SAARC	BIMSTEC
1. Only a regional organisation (South Asia)	1. Interregional organisation (South Asia+ South East Asia)
2. Established in 1985 with the signing of the SAARC Charter in Dhaka.	2. Established in 1997, with Bangkok declaration
3. Issues: Mistrust and suspicion, plagued by regional politics and asymmetric power balance	3. Members maintain reasonably friendly relations and Intra-regional trade has increase by around 6% in a decade.

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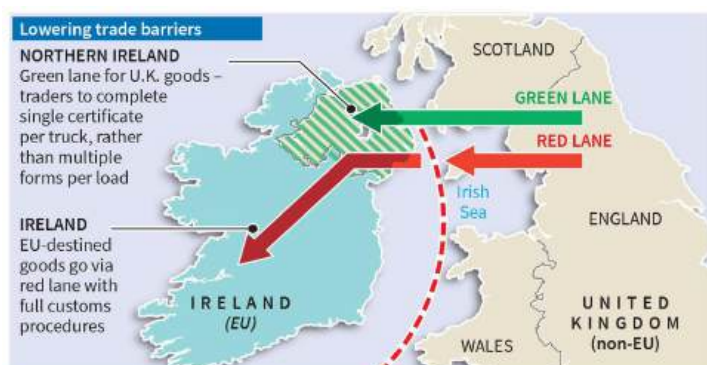
UNDERSTANDING THE WINDSOR FRAMEWORK

Context:

UK and EU recently announced the Windsor Framework (a proposed post-Brexit legal agreement).

- It will address the **problem of the movement of goods** between the **European Single Market** and the United Kingdom in the current **Northern Ireland Protocol**.
- **Northern Ireland Protocol** allows EU customs rules to apply across Northern Ireland.

The framework will allow free trade between **Great Britain and Northern Ireland** through the use of **green and red lanes** for goods flowing into Northern Ireland (Green: for goods that will stay in Northern Ireland and Red: for those that will go to the EU)



GS3

Economy

SOLAR GEOENGINEERING

Solar geoengineering, also called solar radiation modification, involves cooling the earth by radiating **absorbed sunlight** back into space.

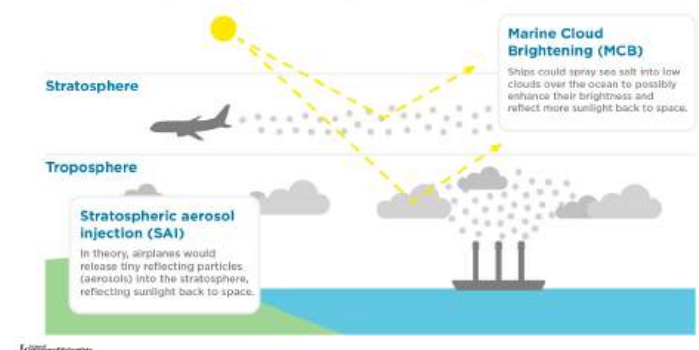
Types of solar geoengineering

- Stratospheric aerosol injection (SAI)
 - SAI includes spraying large quantities of tiny particles (e.g. of Sulphur Dioxides) into the earth's stratosphere to reflect sunlight. The concept of SAI is derived from sulphur clouds released during volcanic eruptions.
- Marine cloud brightening
 - Marine cloud brightening proposes spraying sea salt into low-lying clouds to increase their brightness and the ability to reflect sunlight.

Why is it controversial?

- SAI is particularly controversial because the **reflective effect of aerosols wears off after some time, leading to a net heating effect**.
- According to the Union of Concerned Scientists, solar geoengineering can be a **"moral hazard"** and **slow efforts towards emission reduction as it does not address the root cause of climate change**.

How Might Solar Geoengineering Cool the Earth?



INDIA'S FIRST MUNICIPAL BOND INDEX

Context:

National Stock Exchange (NSE) launched **India's first municipal bond index- IBMX**

- It will track the **performance of bonds issued by municipal corporations**.
- It has **investment-grade credit ratings** (AA category)
- The index includes **municipal bonds issued as per the Securities Exchange Board of India Issue and Listing of Municipal Debt Securities Regulations, 2015**

About Municipal Bond:

A municipal bond is a **type of bond issued by a local government or municipality**, such as a city, county, or state.

When these entities **need to raise money to fund projects** like building schools, roads, or other public infrastructure, they can issue bonds as a way to borrow money from investors.

- The municipal bond market has seen a **three-fold rise** in fundraising since 2017 (to about 6000 crores in 2022)
- The first municipal bond in India was issued by the **Ahmedabad Municipal Corporation** in 1998
- **Indore** issued India's first-ever municipal green bond recently

in **copyright piracy** through the issuing of **"dynamic" injunction orders** (banning all mirror sites with the same banned content)

- India has **generous R&D and IP-based tax incentives**
- India has a **strong awareness-raising effort** regarding the negative impact of piracy and counterfeiting
- India is a **global leader in targeted administrative incentives** for the creation and use of IP assets for SMEs,

Concerns:

- Dissolution of the **Intellectual Property Appellate Board (in 2021)**
- **Under-resourced** and overstretched judiciary
- Limited framework for the **protection of bio-pharmaceutical IP rights**

What is IP?

Intellectual property (IP) refers to creations of the mind, such as inventions; literary and artistic works; designs; symbols, names and images used in commerce.

FATF SUSPENDS RUSSIA'S MEMBERSHIP OVER UKRAINE WAR

Context:

The Financial Action Task Force (FATF) **suspended** Russia's membership.

Reasons for suspension

- Russia's **"Illegal, unprovoked and unjustified"** full-scale military invasion of Ukraine
- **Arms trade** between Russia and United Nations-sanctioned jurisdictions
- **Malicious cyber-activities** emanating from Russia

Despite being suspended, **Russia remains a FATF member** and will only be barred from attending meetings and accessing documents.

INTERNATIONAL IP INDEX

Context:

India ranks 42nd among 55 leading global economies on the International IP Index released by the **U.S. Chambers of Commerce**.

- **Top: USA**

Key findings:

Positive:

- India is ripe to become a **leader for emerging markets** seeking to transform their economy through **IP-driven innovation**.
- India has maintained **continued strong efforts**



Financial Action Task Force



Context: FATF suspends Russia's membership over Ukraine war

About FATF

FATF (est. in 1989 on the initiative of G7, HQ: OECD headquarters in Paris) is an intergovernmental organisation to develop policies to combat money laundering, combat terrorism financing and counter the financing of proliferation of Weapons of Mass Destruction (WMD).

- It sets **Global anti-money laundering (AML)** and **Counter-terrorist financing (CFT)** standards.



FATF is a 39-member body. India became a full member of FATF in 2010

Black List :

It is issued to list countries which are found to be non-cooperative in the global fight against money laundering and terrorist financing.

e.g. Myanmar along with Iran and North Korea

Grey List :

It serves as a warning for countries to be compliant to the directions else face risk of blacklisting.

e.g. UAE, Nigeria, Turkey, Jordan, South Africa and 20 other nations are in Grey List

The countries on Grey/Black list face:

- Economic sanctions e.g. from IMF, World Bank, ADB etc.
- Issues in getting credit/loans
- Sanctions on international trade
- International boycott

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FATF Plenary is the decision making body of the FATF. It meets three times per year—in February, June and October

HOW PRICE SIGNALS GUIDE THE ALLOCATION OF GOODS

About Price Signal:

- Price signal refers to the **information that prices convey to both producers and consumers in a market economy**. Prices signal the **relative scarcity of different goods in an economy** when measured against the competing demands for these goods among consumers.
 - Prices in a way coordinate the production and distribution of goods and services across the modern economy. This allocation of resources in large economies happens despite the absence of a central planner to direct the allocation.

For example: When the **price of water is high due to its limited supply in the market**, consumers will have a greater incentive to use water more sparingly. Water producers, on the other hand, will have a greater incentive to **bring more water into the market**; this is because the high price of water offers them an opportunity to earn higher profits.

3 NATIONAL FLAGSHIP PROGRAMMES LAUNCHED

Context:

Union Ministry of Fisheries, Animal Husbandry and Dairying launched three national flagship programmes.

Genetic Improvement Programme of Indian White Shrimp (Penaeus indicus)	<ul style="list-style-type: none"> • Need: Currently, Shrimp farming predominantly depends on one exotic Specific Pathogen Free stock of Pacific white shrimp (<i>Penaeus vannamei</i>) species • Features: Under PM Matsya Sampada Yojana (PMMSY), the ministry will establish a National Genetic Improvement Facility for shrimp. This will help diversify the species of shrimp and promote indigenous species. <ul style="list-style-type: none"> ○ The Ministry also laid the foundation stone for the Genetic Improvement Facility.
National Surveillance Programme on Aquatic Animal Diseases (NSPAAD)	<ul style="list-style-type: none"> • Need: Despite India being one of the largest fish-producing countries, aquatic disease costs over 7000 cr yearly. Therefore, early detection and managing the spread of diseases are considered crucial for controlling the diseases. • Features: The programme (Central Sector scheme) has been running since 2013. It was made part of PMMSY. Under Phase II, the ministry will develop National Information System on Aquatic Diseases at the Pan India level. • Strengthening the farmer-based disease surveillance system: To ensure that disease cases are reported immediately, investigated, and farmers receive scientific assistance.

Shrimp Crop insurance product developed by ICAR-CIBA

- **Need:** Shrimp farming is labelled as a **risky venture** and banking and insurance institutions are cautious about taking up business in the shrimp sector.
- **Features:** Farmers will be compensated for an 80% loss of input cost in the event of a total loss of Shrimp crop (if the loss is more than 70%, it is called total crop loss)
- **Achievement:** India achieved about **430% growth in shrimp production** during the last decade. The business has become highly profitable leading to the growth and stability of the shrimp farming sector.

1. Support drawing roadmaps for energy transitions
2. Asian version of transition finance
3. **US\$10 billion finance support**
(e.g.) renewable energy, energy efficiency, LNG etc.
4. **Technology development and deployment, utilizing the achievement of 2 trillion yen fund**
(e.g.) Offshore wind power generation, Fuel-ammonia, Hydrogen etc.
5. **Capacity building of decarbonisation technologies, and knowledge sharing through Asia CCUS network**
 - Capacity building of decarbonisation technologies for 1,000 people in Asian countries
 - Workshops and Seminars on energy transitions

INDIAN STATES' ELECTRICITY TRANSITION REPORT

Context:

Karnataka and Gujarat have topped the list of Indian states adopting cleaner energy transition. Whereas, states like Bihar, West Bengal and UP lagged behind in the transition (as per the recent report **Indian States' electricity transition Report**)

About the [Fisheries sector in India](#):

India is the **second major producer** of fish through aquaculture in the world. India is the **4th largest exporter of fish in the world** as it contributes **7.7%** to global fish production.

About [Pradhan Mantri Matsya Sampada Yojana](#): [Click here](#)

About the report:

The report provides **progress and performance of Indian states** on various aspects of the clean electricity transition.

- The report has been released by the Institute for **Energy Economics and Financial Analysis (IEEFA)**

What is Electricity Transition?

It refers to the **shift from fossil-based power production and consumption to renewable energy sources (RES)** like wind and solar.

Four Parameters considered for ranking are:

- **Decarbonisation:** Evaluate states' preparedness to shift from fossil-based power to Renewables
- **Performance of Power System** e.g., Discom's performance rating, outstanding loans
- **Readiness of Power Ecosystem** e.g., Smart metering, feeder segregation
- **Policies and Political Commitments** e.g., circular economy, battery policy etc.

About IEEFA:

The Institute for Energy Economics and Financial Analysis (IEEFA) **examines issues related to energy markets, trends, and policies.**

ASIA ENERGY TRANSITION INITIATIVE (AETI)

Context:

Japan will support India's clean energy transition by including India in the **Asia Energy Transition Initiative (AETI)**, which **supported the Association of South East Asian Nations (ASEAN)** countries towards achieving net zero emissions, including financial **assistance of \$10 billion for renewable energy.**

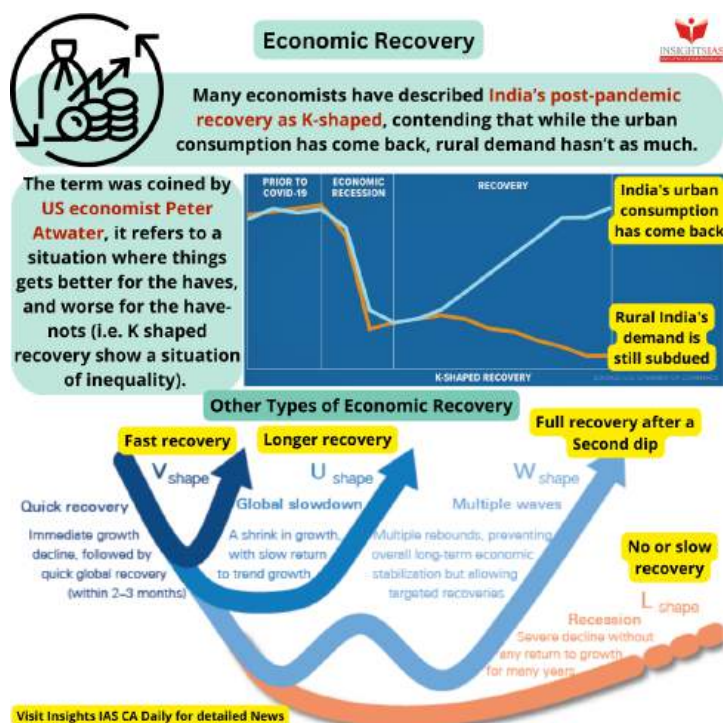
Features under AETI:

'K-SHAPED' ECONOMIC RECOVERY

Context:

Chief Economic Advisor (CEA) V Anantha Nageswaran has said that describing India's recovery as '**K-shaped**' **was wrong** as both rural and urban economies were recovering but at different paces.

- Post Covid 19 Pandemic, India's urban and rural areas have seen different growth rates with urban recovery proceeding at a faster pace than rural recovery.



Under LRS (introduced in 2004), **Indian individuals** can send money outside up to a maximum of **\$250,000** in a year.

- Aim:** LRS simplifies the process of remitting money outside India and encouraging foreign investments by Indian individuals.
- Permissible transactions:** education, travel, medical treatment, gifting, investment in shares or property, etc.
- Non-Permissible transactions:** Trading in foreign exchange or buying lottery tickets.
- LRS is not available to** Corporations, partnership firms, Hindu Undivided Family (HUF), Trusts etc.
- Benefits of LRS:** Individuals can diversify their investments and assets, and also provides an opportunity to finance their foreign education or travel.
- Issues:** Outward remittances can add pressure to the forex reserves of the country and therefore the government has proposed a **20% Tax Collection at Source (TCS)** for any foreign remittance transactions in FY24.

SC NAMES PANEL TO REVIEW INVESTOR PROTECTION NORMS

Context:

SC announced an expert committee to examine **India's investor protection regulatory framework** following the crash in Adani Group securities.

The objective of the committee is threefold:

- To assess the factors that **have led to market volatility**
- To examine if there has been a **regulatory failure in this case**
- To **suggest measures to strengthen the regulatory apparatus** and ensure compliance with the existing framework to protect investors.

However, there has been doubt about the **opacity of the committee's selection process**.

SEBI has also conducted an investigation and will examine Adani stocks' market activity before and after the report's publication.

- The stock market is regulated by SEBI under

LIBERALISED REMITTANCE SCHEME FUNDS

Context:

India's wealthy individuals have **invested all their surplus foreign remittances in various securities** over the last few months to comply with a Reserve Bank of India (RBI) diktat that ended last week.

- In August 2022 RBI had directed that any **money remitted overseas** by Indian residents that remains unutilised for more than 180 days needs to be repatriated back into India.

What is Liberalised Remittance Scheme (LRS)?

SEBI Act 1992 to protect the interest of investors in securities.



Market manipulation



Market manipulation refers to **artificial inflation or deflation of the price** of a security. It involves the literal manipulation of a financial market for personal gain.

Forms of Market manipulation

Pump and Dump: It involves artificially inflating the price of an owned stock through false and misleading positive statements, in order to sell the cheaply purchased stock at a higher price. (e.g. recent case of Arshad Warsi and his wife being barred by SEBI in 'Pump and Dump' scam)



Poop and Scoop: It occurs when a small group of informed people attempts to drive down a stock's price by spreading false information, rumors, and otherwise damaging information ("poop") in order to then buy the stock at a lower price ("scoop")

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Rules to prevent market manipulation

- Public shareholding of at least **25%** by every listed company other than PSU is compulsory
- Disclosure of **related parties' transactions**
- Disclosure of financial statement.
- Framework for preventing **insiders trading**
- SEBI allowed **T+1 settlement** on optional basis
- SCORES** (SEBI Complaints Redress System)- web-based centralized grievance redress system

SAMARTH SCHEME

Context:

Samarth (Scheme for Capacity Building in Textiles Sector) Scheme of the Ministry of Textiles is operational till March 2024

About the Scheme:

Samarth is a **demand-driven and placement-oriented umbrella** skilling programme of the Ministry of Textiles. The scheme was formulated under the **broad skilling policy framework** adopted by M/o Skill Development & Entrepreneurship.

Objective	To create jobs and provide skill- ing opportunities to marginalized sections
Implementation Period	Up to March 2024
Implemented By	Implementing Partners (IPs) comprising Textile Industry/ Industry Associations, State government agencies and Sectoral Organizations of the Ministry of Textiles <ul style="list-style-type: none"> The office of the Development Commissioner (Handicrafts) is implementing the SAMARTH under the component 'Skill Development in Handicrafts Sector' of National Handicrafts Development Programme (NHDP)
Features	Aadhaar Enabled Biometric Attendance System (AEBAS), Training of Trainers (ToT), CCTV recording, a dedicated call centre with a helpline, mobile app, Web-based Management Information System (MIS), online monitoring, and end-to-end digital solution
Courses Offered	184 courses aligned with National Skill Qualification Framework (NSQF)
Target Beneficiaries	Skilling target of 3.47 lakh beneficiaries ; 1.5 lakh beneficiaries trained; more than 85% of beneficiaries trained are women
Placement	Mandatory placement of 70% in entry-level and 90% for upskilling programmes; more than 70% of beneficiaries trained in organized sector courses have been provided placement

Q. Consider the following statements: (UPSC2020)

1. The value of Indo-Sri Lanka trade has consistently increased in the last decade.
2. "Textile and textile articles" constitute an important item of trade between India and Bangladesh.
3. In the last five years, Nepal has been the largest trading partner of India in South Asia.

Which of the statements given above is/are correct?

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

Ans: B

Agriculture

CLEAN PLANT PROGRAM

Context:

With the demand for foreign planting materials of fruits like apples, avocados and blueberries rising over the years, the Central government plans to set up **10 'Clean Plant Centres'**

- **Objective:** To boost domestic production of the selected fruit crops
- **Services offered:** disease diagnostic, therapeutics, multiplying of plants and generation of mother plants
- **Need for 'Clean plant program':** Currently, it is difficult to get disease-free and genuine planting materials for horticultural crops in India.
 - Also, the process of importing plants is very cumbersome, as the imported plants must be kept in quarantine for two years.
 - After the establishment of the Clean Plant Centres, this period will be reduced to six months
- **Nodal Ministry:** Ministry of Agriculture and Farmers Welfare
- **Implementing agency:** National Horticulture Board (NHB)
- **Funding:** 100% be Central government
- It will be set up under the '**Atmanirbhar Clean Plant Program**' (announced in Budget 2023-24)

India is the **2nd largest producer** of fruit in the world (after China)


WHEAT CRISIS

Context:

Agricultural scientists are recommending **additional irrigation for Rabi crops** due to unprecedented heat in February this year.

Impact of heat waves on wheat production:

- **When the temperature rises above the normal range for wheat**, it can reduce photosynthesis, which is essential for plant growth and grain development.
 - Excessive heat can lead to crop damage.
- **Decrease in groundwater levels:** To minimize the impact of heat waves, farmers have to irrigate the field several times. This may reduce the groundwater level in the area.
 - Strong winds can destroy wheat crops if the soil is wet.
- **Increased pest attacks:** Pests like aphids and thrips thrive in warm and dry weather

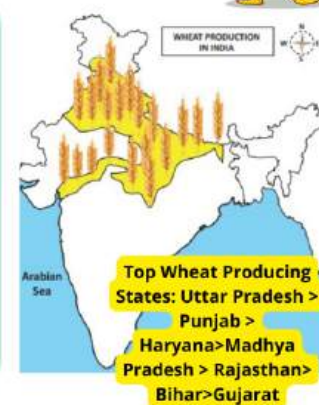


Wheat

Context: Early arrival of summer this year in India are threatening the growth of crops like wheat, vegetables, and pulses

About Wheat:

- **Second most important cereal crop** in India after rice and staple food crop, in north and north-western part of the country.
- **Temperature:** It is a rabi crop that requires a cool growing season (10-15°C (Sowing time) and 21-26°C (Ripening & Harvesting)) with bright sunlight.
- **Rainfall:** Around 75-100 cm.
- **Soil Type:** Well-drained fertile loamy and clayey loamy (Ganga-Satluj plains and black soil region of the Deccan).



WHEAT PRODUCTION IN INDIA

Top Wheat Producing States: Uttar Pradesh > Punjab > Haryana > Madhya Pradesh > Rajasthan > Bihar > Gujarat

India is the **second largest producer of wheat** (after China) with a share of around **13.5% of world total production**, however India accounts for even less than **1% in world wheat export**. Russia is the world's largest exporter of wheat.

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COUNTRY REPORTS ON TERRORISM 2021: INDIA

Context:

"Country Reports on Terrorism 2021: India," prepared by the **US Bureau of Counterterrorism** has acknowl-

edged India's significant effort to scale up counterterrorism infrastructure

Concerns raised:

- Law enforcement agencies in India, including at the border, “**face budgetary, staffing, and equipment constraints**”
- India lacks new **counter-radicalization strategies**
- Counter-radicalization strategies piloted by states are “**uneven and based on local interests and contexts.**”

India implemented UNSCR 2396, i.e., United Nations Security Council Resolution 2396 (It urges member states to stem the threat posed by foreign terrorist fighters (FTFs) through measures on Border control, Criminal justice and Information-sharing and counter-extremism)

General Science

REGULATION OF PHARMA DRUGS

Context:

Amid cases of toxic Indian drugs, the Ministry of Health and Family Welfare will create a centralised system of drug registration under the Central Drugs Control Standard Organisation (CDSCO) to regulate drug quality.

- The ministry will also repurpose **CDSCO's online portal Sugam** which maintains quality checks on new drugs.

About CDSCO

CDSCO (under MoHFW) is **India's national regulatory body** for cosmetics, pharmaceuticals and medical devices. It regulates the quality, safety, and efficacy of drugs including vaccines under the **New Drugs and Clinical Trials Rules 2019, and the Drugs and Cosmetics Act, 1940.**

- CDSCO is headed by the **Drug controller general of India (DCGI)**. DCGI acts as an appellate authority if there is any dispute with respect to drug quality.

BISPHENOL A

Context:

Bisphenol A (BPA) can significantly **shorten the breeding time of southern house mosquitoes** (*Culex quinquefasciatus*) and thereby aid in its quick multiplication

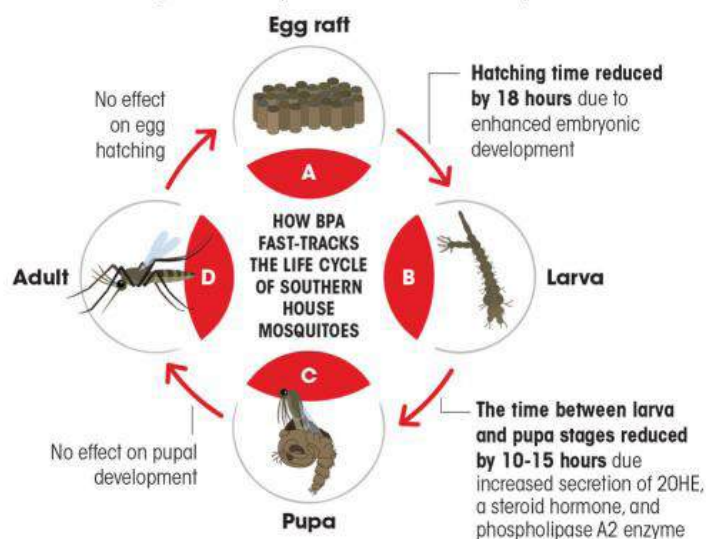
- ***Culex quinquefasciatus*** is a major carrier of the West Nile virus, Rift Valley fever virus and avian pox in tropical and subtropical countries,

What is BPA?

Bisphenol A is a chemical compound primarily used in the manufacturing of various plastics, (softening plastics), paints and other products

Plastics quicken mosquito life cycle

A bisphenol A (BPA) concentration of 1 mg/L in wastewater can shorten the life cycle of mosquitoes from 13 to 10 days



Source: Based on "Bisphenol A acts as developmental agonist in *Culex quinquefasciatus* Say" published in *Environmental Science and Pollution Research* on May 31

Other impacts of BPA:

On humans: It disrupts the endocrine system by interfering with the hormones and affects the brain and prostate gland of fetuses, infants, and children.

- The chemical can cause **high blood pressure, diabetes, and cardiovascular** disease in adults
- It can indirectly aid in the spread of **vector-borne diseases** in humans and animals.

Related News:

A deadly malaria vector from Asia (**Anopheles stephensi**) has recently been detected in Kenya which is likely to stifle Kenya's massive progress in the fight against malaria. The species is reported to spread faster in different climatic conditions.

Science and Technology

FAB 4/CHIP 4 CHIP ALLIANCE

Context:

A semiconductor alliance comprising the **world's top producers of semiconductors**— the US, Taiwan, Japan, and South Korea has been convened recently.

Objective:

- Serve as an early warning and mutual reminder system to ensure a **stable supply chain for chip manufacturers**
- Prevent the occurrence of chip shortages and supply chain disruptions
- To reduce the **world's dependence** on China.

India has limited fabs, or semiconductor fabrication plants, which manufacture chips and mostly is dependent on imports.

AFTER

Context:

AIIMS Delhi has created AIIMS Facial Toolbox for Emotions Recognition (AFTER)

Usages:

- It will make it easier to treat patients with autism, schizophrenia and depression
- **Emotion Recognition Capability** can be detected in people with neuropsychiatric conditions
- **Research in the Indian context:** The interpretation of emotion is **culturally dependent**, so this culturally sensitive database shows promise for use in research settings and needs to be validated in the general population.

'ORGAN ON A CHIP'

Context:

The recent **U.S. Food and Drug Administration Modernization Act 2.0** has approved computer-based and experimental alternatives to animals to test new drugs.

- Although using animals, as drug testbeds, will continue

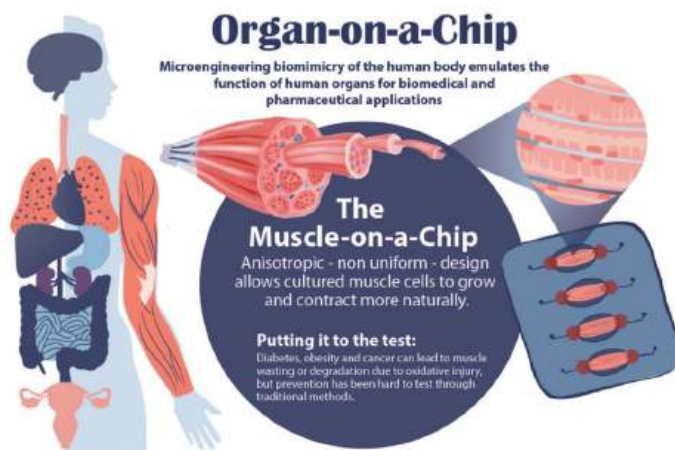
What are Organ-on-a-Chips?

They are **small devices containing human cells** that are used to **mimic the environment in human organs**, including blood flow and breathing movements, serving as synthetic environments in which to test new drugs.

Benefits:

- **Boost the research and development** of Organ chips
- **Reduce the cost** of R&D of drugs
- **Animal models often poorly mimic human diseases**, which has led scientists to develop alternative models
- **Reduce the chances of contamination** and spread of disease from animals being experimented on.
- **Organ chips** can be used to **develop personalized therapies** for individual patients
- **Minimize ethical dilemmas** associated with the use of animals for testing (treatment of animal and their well-being)

In India: Researchers in India are also developing **organ-on-a-chip models**, including a **skin-on-chip model**, which is being tested for studying skin irritation and toxicity, and a **retina-on-chip model**.



VAIBHAV FELLOWSHIP' FOR NRI RESEARCHERS

Context:

Ministry of Science and Technology **unveiled a fellowship to bring Indian-origin researchers** to higher educational institutions in India for a **maximum period of two months per year**

Aim of the fellowship:

It aims to improve the **research ecosystem of India's higher** educational institutions by facilitating academic and research collaborations with the best institutions in the world through the **mobility of researchers from overseas institutions** to India.

Criteria:

Applicant should be NRI or PIO or OCI and must have obtained a Ph.D./M. D/M. S degree from a recognized University.

Other schemes for improving the research ecosystem in India:

- A 3-tiered graded autonomy regulatory system has been initiated
- **Global Initiative for Academics Network (GIAN)** (to invite distinguished academicians, and experts from across the world to teach in India)
- **National Institutional Ranking Framework** was developed in 2015
- **Revitalising Infrastructure and Systems in Education (RISE)** by 2022 (To upgrade the **research and academic infrastructure** in India to global best standards by 2022)
- **Education Quality Upgradation and Inclusion Programme (EQUIP)** (To position at least 50 Indian institutions among the top 1,000 global universities).

India's investment in R&D has remained constant at around **0.6% to 0.7%** of India's GDP. This is below the expenditure of countries like the **US (2.8)**, **China (2.1)**, **Israel (4.3)** and **Korea (4.2)**.

RUSSIAN BOTS TO BOOST INSTAGRAM REACH

Context:

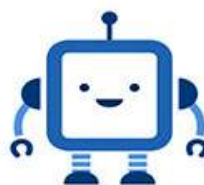
High-profile Instagram accounts, **with up to 40 million followers**, were allegedly using Russian bots to boost reach.

Data about the bot service allegedly linked to Russia was discovered when **it started leaking clients' private data and messages**.

What are bots?

- A bot is a **computer programme designed to work automatically**. It is mainly used to gather information on the **Internet or perform repetitive jobs**.
- Bot accounts are especially **notorious for spamming, spreading crypto scams and fraudulent boosting on social media accounts**.
- Bots accounts have also been linked to **disinformation campaigns, targeting political opponents and baiting audiences across several countries**.

Types of bots:

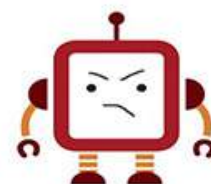


Good Bots:

- Search Engine Crawling
- Website Health Monitoring
- Vulnerability Scanning
- Fetching Content
- Powering APIs

Bad Bots:

- DDoS
- Site Scraping
- Comment Spam
- SEO Spam
- Fraud
- Vulnerability Scanning



Health

BOR THEKERA (GARCINIA PEDUNCULATA)

Context:

Medicinal plant commonly called Borthequera in Assamese found to protect from heart diseases.

About the plant:

- It is an **evergreen tree endemic** to South Eastern Asia.
- Traditionally it is **forbidden for raw consumption**. Sun-dried slices of ripe fruit are used for preparing delicacies like "tenga diya masor jol"

(sour fish curry)

- It has **therapeutic properties** like anti-inflammatory, antibacterial, antidiabetic, hypolipidemic, nephroprotective, and even neuroprotective activity.
- It is also a rich source of **antioxidants**.

MAD COW DISEASE

Context:

Brazil has halted its beef exports to China after a case of mad cow disease was confirmed in its northern state.

- Brazil is **the largest exporter of Beef** in the world while the USA is the largest producer.

About the Disease:

Bovine Spongiform Encephalopathy (BSE) (or simply **Mad Cow Disease**) is a degenerative, transmissible, slowly progressive, and fatal infection that affects the central nervous system of adult cattle.

How is it caused?

It is caused by a **protein called a 'prion'** normally found on the cell surfaces of cattle. However, the normal prion protein changes into an abnormal prion protein and these proteins destroy the nervous system tissue—the brain and spinal cord.

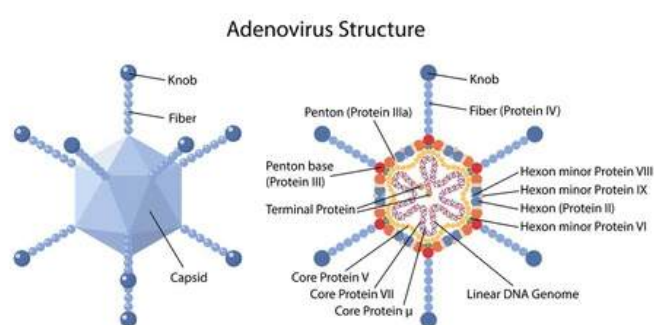
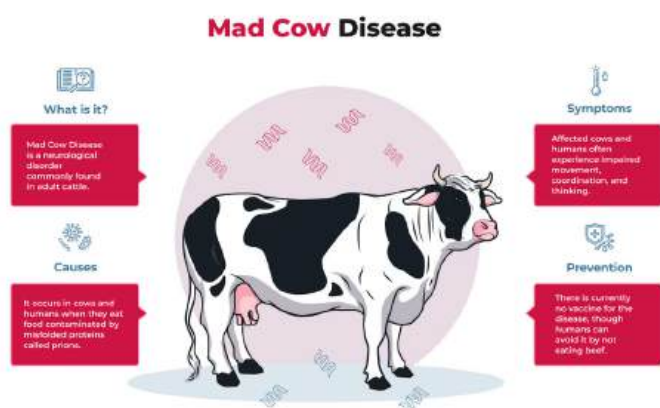
- Adenoviruses (members of the family Adenoviridae) are **medium-sized, non-enveloped** (without an outer lipid bilayer) viruses with an **icosahedral nucleocapsid** containing a double-stranded DNA genome. Their name derives **from their initial isolation from human adenoids in 1953**.
- Adenovirus is **highly contagious**. Infections are common in close-contact settings, such as child-care centers, schools, hospitals, and summer camps.

Symptoms:

- common cold or flu-like symptoms
- fever
- sore throat
- acute bronchitis (inflammation of the airways of the lungs, sometimes called a “chest cold”)
- pneumonia (infection of the lungs)
- pink eye (conjunctivitis)
- acute gastroenteritis (inflammation of the stomach or intestines causing diarrhea, vomiting, nausea and stomach pain)

Treatment:

There is no specific treatment for an adenovirus infection — **the route is largely one of providing supportive care**.



ADENOVIRUS

Context:

West Bengal is in the grip of an **unprecedented adenovirus outbreak**.

About Adenovirus:

DNA VACCINE AGAINST DENGUE

Context:

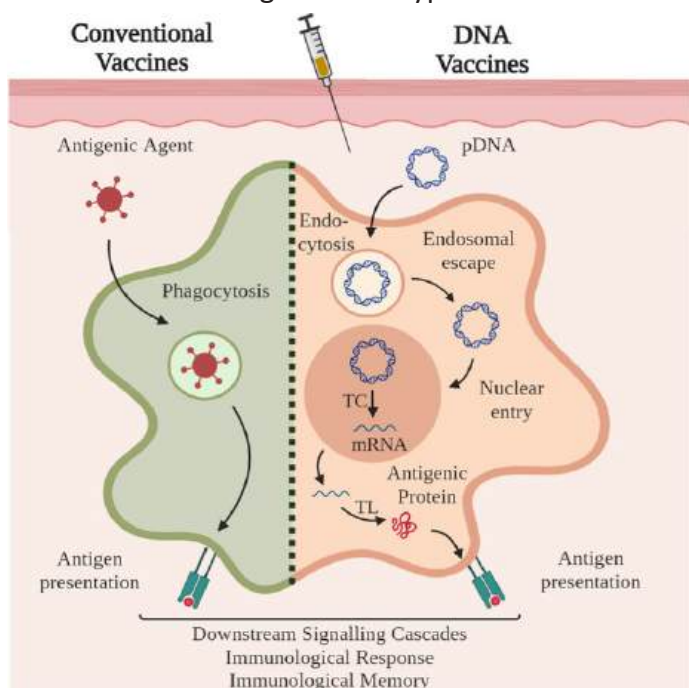
In a significant development in **DNA vaccination research**, India's first and only **DNA vaccine candidate** for dengue has shown promising results.

About DNA Vaccines:

- A DNA vaccine is a vaccine that **puts a specific DNA sequence that codes for an antigen** into an organism's cells to trigger an immune response.
- The world's first DNA vaccine—**ZyCoV-D**, developed by **ZyduS Cadila**—was approved in 2021 for emergency use against **COVID-19**.

Why developing an effective DNA vaccine for dengue is tough?

- Because it is caused by **four closely related viruses—DEN-1, DEN-2, DEN-3 and DEN-4**—called serotypes.
- Each one **interacts differently with antibodies in human blood**. A person infected with DEN-1 is then protected against it for life, but not against the other three serotypes. An ideal vaccine must target all serotypes.



Space

WHAT IS THE ALMA TELESCOPE, THAT WILL SOON GET A 'NEW BRAIN'?

Context:

The [Atacama Large Millimetre/submillimetre Array \(ALMA\)](#) — a radio telescope comprising **66 antennas**—is set to get software and hardware upgrades that will help it collect much more data and produce sharper im-

ages than ever before.

ALMA is operated under a partnership among the **United States, 16 countries in Europe, Canada, Japan, South Korea, Taiwan, and Chile**

What is ALMA?

ALMA is a **state-of-the-art telescope** that studies celestial objects at millimetre and submillimetre wavelengths — they can **penetrate through dust clouds and help astronomers** examine dim and distant galaxies and stars out there. It also **has extraordinary sensitivity, which allows it to detect even extremely faint radio signals**.

Alma Observatory at high altitude in Atacama desert



Why Chile:

- The millimetre and submillimetre waves observed by it are very **susceptible to atmospheric water vapour absorption on Earth**.
- The desert is the **driest place in the world, meaning most of the nights here are clear of clouds and free of light-distorting moisture** — making it a perfect location for examining the universe.

What are some of the notable discoveries made by ALMA?

- One of the earliest findings came in 2013 when it discovered **starburst galaxies earlier in the universe's history than they were previously thought to have existed**.
- ALMA provided **detailed images of the proto-planetary disc surrounding HL Tauri** — a very **young T Tauri star** in the constellation **Taurus**, approximately 450 light years from Earth

- In 2015, the telescope helped scientists observe a phenomenon known as the [Einstein ring](#), which occurs when light from a galaxy or star passes by a massive object en route to the Earth, in extraordinary detail.

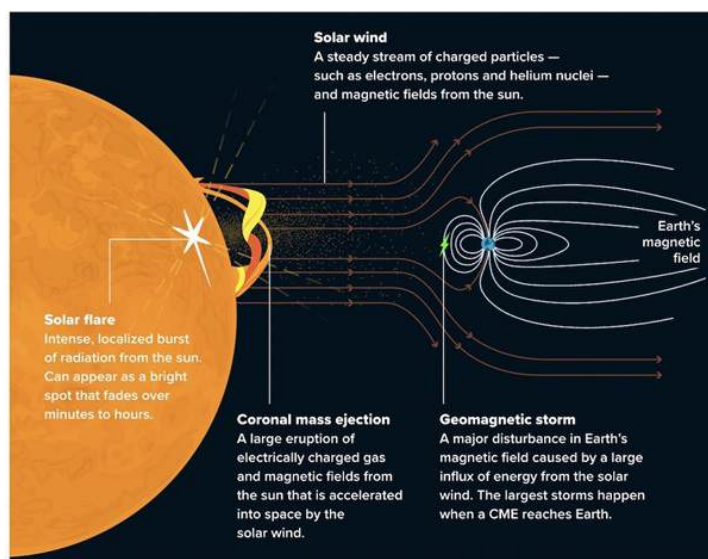
DOES SPACE WEATHER CAUSE FLIGHT DELAYS?

Context:

A new study has revealed that **Bad space weather** can cause safety issues during air travel and result in flight delays.

What is Space Weather?

It describes the conditions in the region of space close to the earth, especially the presence of Solar wind, Coronal Mass ejections, Geomagnetic storms and charged particles emitted by the sun, which can affect human activity and technology.



Environment

WORLD SUSTAINABLE DEVELOPMENT SUMMIT (WSDS) CONCLUDES


WSDS 2023


Context: The 22nd edition of the World Sustainable Development Summit concluded in New Delhi

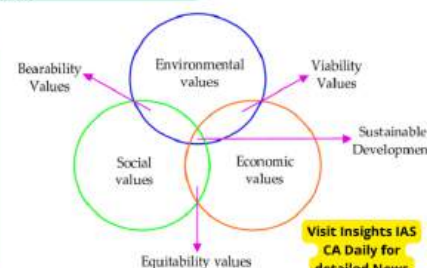
About WSDS:

It is the annual flagship event of **The Energy and Resources Institute (TERI)**. It is the sole Summit on global issues taking place in the **developing world**. It provides a platform for global leaders and practitioners to discuss and deliberate over issues of universal importance.

Theme: "Mainstreaming Sustainable Development and Climate Resilience for Collective Action".

About TERI:

TERI (est. 1974, HQ: New Delhi) is an independent think-tank, multi-dimensional organization, with expertise in research, policy, consultancy and implementation. It conducts research for sustainable development of India and the Global South.



Sustainable development: Development which meets the needs of the present without compromising the ability of future generations to meet their own needs (**Brundtland Commission in its report Our Common Future (1987)**)

Key takeaways from the Summit:

- Government's approach:
 - Focus on the collective approach to environment conservation
 - 10-point Act4Earth Manifesto:** It encapsulated the key messages emerging from the deliberations
 - Need for a paradigm shift from a country-centric approach to a people-centric approach to climate action at the global level.
- Issues discussed:
 - Climate finance
 - Equitable access to sustainable development
 - Need for a balance between reducing fossil fuels and transitioning to renewable energy
 - Green Development Pact
 - Equity and climate justice
 - Driving and financing sustainable development
 - Inclusive green growth
 - Energy transitions

Origin of WS: 2001 (previously known as Delhi Sustainable Development Summit) **TERI established the Sustainable Development Leadership Award (in 2005):** 2022 award was given to Michael Rubens Bloomberg (American Philanthropist)

Related news:

India is falling behind in achieving **more than 50% of the Sustainable Development Goals (SDGs)**, as per the study published in the Lancet journal.

- **Over 75% of Indian districts** are off target for **eight crucial indicators** including poverty, anaemia, child marriage, etc.
- **India is faring well on** bank accounts for women, birth registration, internet use, electricity access, full vaccination, birth registration, and lowering of child marriage.

Climate Change**PHYTOPLANKTON BLOOMS****Context:**

Huge blooms of **phytoplankton** — microscopic algae floating on the ocean's surface — have **become larger and more frequent along the world's coastlines**.

- Marine animals such as **fish and whales** eat **phytoplankton**
- It can be toxic in large amounts, **starving the ocean of oxygen and leading to "dead zones"** that wreak chaos on the food chain and fisheries.

Reason for increase in phytoplankton blooms:

- Warmer sea surface temperatures appear to be behind the boom.
- Changes in climate can also mess with ocean circulation, **affecting the mixing between ocean layers and how nutrients move around the ocean**.
- **Human development also plays a role**. Fertilizer runoff from agriculture can **spike nutrient loads in the ocean, leading to blooms**.



Related News:

WMO: Hottest year ever in next three, 1.5 degrees Celsius to be breached


According to the **World Meteorological Organization's (WMO) latest El Niño Southern Oscillation (ENSO) update**, there is a **93 per cent chance that one of the years until 2026** would be the warmest year ever recorded because of an impending El Niño.

Species in News**AZTEC HUMMINGBIRDS, INDIAN SUNBIRDS****Context:**

A recent study has found that the loss of a **gene (FBP2) in Hummingbirds** has made them more efficient at breaking down sugar molecules to use for energy during their fast-hovering flight.


Hummingbird and Indian Sunbird



A recent study has found that the loss of a **gene (FBP2) in Hummingbirds** has made them more efficient at breaking down sugar molecules to use for energy during their fast-hovering flight.



About Hummingbird

- **Native to the American continent**
- Found in **Iridescent colours**
- Aztecs referred to them as Huitzilin or 'A ray of sun'
- Size: small birds (5 cm long and weighs 2 grams)
- A humming sound comes from the birds' beating the wings up to 50 times per second.
- **Manoeuvrability:** Can fly backwards
- Hummingbirds have the **highest metabolic rate** (calories burnt per minute) among vertebrates.
- **Mimicry and Dance:** Hummingbirds are capable of vocal mimicry like parrots and some songbirds.

VS



About Indian Sunbirds

- They are **unrelated to Hummingbirds** but share many common features through **convergent evolution**.
- They are slightly **larger than Hummingbirds**.
- They can hover briefly (like Hummingbirds), and go for bright, tubular flowers.
- They are **critical pollinators of the 'Flame of the Forest'** (a leguminous tree native to Eastern India and Myanmar, having hanging clusters of scarlet flowers)
- **Habitat:** in Africa, South Asia, the Middle East, and northern Australia.

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About Aztecs:

The Aztecs were a **Mesoamerican culture** that flourished in central Mexico in the post-classic period from 1300 to 1521.

JERDON'S NARROW-MOUTHED FROG (UPERODON MONTANUS)**Context:**

The Jerdon's narrow-mouthed frog, a **montane species found in the Western Ghats**, has been rediscovered after 89 years by a group of zoologists.

- **IUCN:** 'Near Threatened', but researchers are campaigning for it to be classified as 'Endangered.'



About Frogs:

Frogs (amphibians) are both **predators and prey** in many ecosystems. They help control insect populations and are also **indicator species**, meaning their presence or absence can indicate the overall health of an ecosystem. In India, **380 species of frogs** and toads have been recorded to date.

About Western Ghats:

The Western Ghats are mountain ranges spanning six Indian states. It is a hotspot of biodiversity, with **high levels of endemism and evergreen forests**. It is also known as the **Great Escarpment of India** and is a **UNESCO World Heritage Site**.

Defence

MILITARY EXERCISES IN NEWS

India-Japan:

- **Exercise Shinyuu Maitri:** Indian Air Force (IAF) with the Japan Air Self-Defence Force (JASDF).
 - It has been organized on the sidelines of the Indo-Japan Joint Army Exercise, Dharma Guardian.

Multi-nation Exercise that India is participating:

- **Exercise Desert Flag VIII in UAE:** It is an **annual air exercise** in which Air Forces from UAE, France, Kuwait, Australia, etc. participate
- **Exercise Cobra Warrior in the UK:** Exercise Cobra Warrior is **run twice a year** and is the largest air exercise run by the Royal Air Force (UK)


Related News:

PALM 400

Indian Army testing **armed drone variants—'aerial targeting system' called PALM 400**—in Pokhran (Rajasthan). It is an **armed remotely piloted vehicle (RPV)** built by AVision Systems (a joint venture between Israeli and Indian firms). It picks out its target and fires an **armour-penetrating projectile** from the top - where the target's armour protection is the least.

CONTENT FOR MAINS ENRICHMENT (ETHICS/ ESSAY):

Kutirs: Huts of knowledge	<p>The tribal villages in Nayagarh district, Odisha have set up kutirs or small huts at the edge of the forested areas where women of the villages meet once a month to:</p> <ul style="list-style-type: none"> • Share their knowledge on how their families have benefited from the forest resources • Discuss how to best protect the forest • Educate the residents, particularly youth, on how to sustainably manage herbs, shrubs, and fuelwood. <p>Impact: The five villages that set up kutirs applied for community rights and community forest resource rights and three of them received both titles in November 2021.</p>
Strawberry Farming	<p>Farmers belonging to the Chuktia Bhunjia tribe (a PVTG) in Sunabeda, Odisha (in the tropical deciduous forest of the Sunabeda Wildlife Sanctuary) have successfully cultivated strawberries as part of a government-sponsored program.</p> <p>In Mahabaleshwar (Maharashtra), 80% of India's strawberries are produced.</p>
Aadi Mahotsav	A national tribal festival promoted by TRIFED (under the Ministry of Tribal Affairs)

Bendable concrete	<p>Engineers are developing CO₂-infused concrete that sequesters greenhouse gases and is stronger, and even bendable.</p> <p>Issues with Concrete:</p> <ul style="list-style-type: none"> • Cement production accounts for 7% of global carbon dioxide emissions. • Concrete is one of the most-used resources on Earth, with an estimated 26 billion tons produced annually worldwide. It has a high carbon footprint. <p>What is Bendable Concrete?</p> <p>Bendable concrete can bend under pressure without rupturing. It makes infrastructure safer, extends its service life and reduces maintenance costs and resource use.</p>  <p>The image shows two side-by-side photographs of concrete beams being tested in a compression machine. The left photograph, labeled 'CONVENTIONAL CONCRETE', shows a beam that has fractured under pressure. The right photograph, labeled 'BENDABLE CONCRETE', shows a beam that has bent significantly under the same pressure without fracturing.</p>
Bandicoots for manhole cleaning	<p>Bandicoot Robot</p> <ul style="list-style-type: none"> • It is the world's first robotic scavenger (indigenously made by Kerala-based Genrobotics) • It recently bagged the 'Kerala Pride' award <p>Under the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act (PEMSR), 2013, Manual scavenging is banned in India. National Action for Mechanised Sanitation Ecosystem (NAMASTE) is an initiative by MoSJ&E and MoHUA.</p>
'Anmol Jeevan Abhiyan' (RJ's Barmer District)	<p>The district has seen a surge in cases of women allegedly jumping to their deaths with their children in tanks and wells following marital disputes.</p> <p>In response, the district administration, UNICEF, and Action Aid have launched the 'Precious Life Campaign', which encourages the addition of hand pumps and locked covers to the large tanks or 'tankas' traditionally built for collecting rainwater in the rural areas.</p> <ul style="list-style-type: none"> • The hand pumps- prevent accidents and suicides + provides water. • Tankas with locked covers reduce the accessibility and prompts those with suicidal tendencies to have second thoughts. • A round-the-clock helpline • The 'Har Din Hai Man Ka Din' awareness programme has been introduced in schools. <p>Impact: The campaign has already equipped 130 tankas in one panchayat area with hand pumps, and the reports of suicides have gradually reduced.</p>

<p>‘math is not for a girl’</p>	<p>Various research has shown that the representation of females in Science, Technology, Engineering, and Mathematics (STEM) or other math-intensive fields and careers remains far from ‘fair’ or desirable.</p> <p>More social norms than ‘ability’</p> <ul style="list-style-type: none"> • “science and maths are meant for boys and arts and humanities for girls” is reflective of the kind of stereotyping that parents, relatives/neighbours, and even schoolteachers push. <p>There is a need for developing interventions that enhance attendance and academic performance for girls.</p> <ul style="list-style-type: none"> • Targeted behavioural interventions can curb the gender stereotyping at the household, societal, and school levels. • References to female mathematicians in textbooks, female names, and characters in word problems, and providing exposure to female role models in STEM fields in the course curriculum are among other simple tweaks that are worth trying and likely to be beneficial.
<p>Cultural Burns and the Koala</p>	<p>New research: Traditional fire burning practices or ‘cultural burns’ by indigenous Australians can help protect the iconic koala.</p> <ul style="list-style-type: none"> • ‘Cultural Burns’ - cooler, lower, and slower than hot fires, encouraging the regeneration of suitable native plants while controlling other species (like banksias and wattle) to reduce the risk of fire reaching the canopy where koalas lived. • The United Nations has noted that traditional knowledge of land management, including the use of fire to manage fuel, can be an effective way of reducing wildfire hazards. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>‘Koala’ - They are arboreal herbivorous marsupial native to Australia. The koala is one of 110 priority species that the Australian government aims to save from extinction over the next 10 years.</p> </div>
<p>Other Effective Area-based Conservation Measures (OECMs)</p>	<p>OECMs are areas outside of protected areas that are governed and managed to achieve effective conservation of biodiversity.</p> <ul style="list-style-type: none"> • Examples of OECMs: agricultural systems, conserved water catchments, locally managed marine areas, and other high conservation value areas. • Recognised by Convention on Biological diversity guidelines in 2018. <p>Significance:</p> <ul style="list-style-type: none"> • Provide support for effective long-term conservation efforts outside of designated protected areas. • Promote equitable governance, and positive conservation outcomes, supporting threatened species recovery, supporting sustainable livelihoods, and addressing climate change.

Climate Justice	<p>Climate justice is a concept that addresses the just division, fair sharing, and equitable distribution of the burdens of climate change and its mitigation and responsibilities to deal with climate change.</p> <ul style="list-style-type: none"> A group of 16 countries, led by Vanuatu, is seeking an advisory opinion from the International Court of Justice (ICJ) on “What are the legal consequences for states that have caused significant harm to the climate system and vulnerable states”. The Commission of Small Island States on Climate Change and International Law has also sought the advisory opinion of the International Tribunal for the Law of the Sea (ITLOS) on the specific obligations of countries about preventing, controlling, and reducing pollution of the marine environment.
Ornamental fish aquaculture in Lakshadweep	<p>The Lakshadweep islands are introducing community-based ornamental fish aquaculture.</p> <ul style="list-style-type: none"> Technical support from the ICAR-National Bureau of Fish Genetic Resources (NBF-GR) helped train 77 women in ornamental fish aquaculture. <p>Values that can be extracted from the example:</p> <ul style="list-style-type: none"> Empowerment of women Importance of sustainable economic activities in regions with limited resources. Use of environment-friendly techniques in aquaculture. Collaboration between government agencies and local communities for development.

Social Justice

WHO INDIA: AGAINST HEARING DISABILITY

- Rizwana**, a final year MBBS student at the Government Medical College Hospital, Kottayam, was born with a **hearing impairment**.
- However, her **parents' determination and grit** made it possible for her to hear and speak normally, even though she received **cochlear implantation at the age of six**.
- Her story is being used by **WHO India** to promote **early newborn screening and consistent** interventions, which can help save many hearing-impaired children from a lifetime of disability.

WHO India: Using Rizwana's story to promote early newborn screening and consistent interventions



Rizwana, a final year MBBS student

Cochlear Implant Scheme (children up to the age of 5 years are operated free of cost) is being run under **Assistance to Disabled Persons for Purchase / Fitting of Aids and Appliances (ADIP) scheme** (Ministry of Social Justice and Empowerment)

WHO estimates that **63 million people in India** have hearing impairment, and at least 60% of children with congenital hearing disorders can be saved through universal hearing screening and early interventions.

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Women Empowerment

NAGALAND GETS ITS FIRST WOMEN MLAS



Nagaland gets its first women MLAs

Hekani Jakhalu and Salhoutuonuo Kruse made history by becoming the first woman to be elected to the 60-member Nagaland Assembly (in the 2023 Nagaland Assembly elections) since **Nagaland gained statehood in 1963**.



Hekani Jakhalu (left) and Salhoutuonuo Kruse

North-Eastern States are **socially empowered but politically underrepresented**. Meanwhile, States such as **Bihar, Rajasthan, and West Bengal**, which fare poorly in various women empowerment indicators, have had better representation of women in their legislatures.

Reasons for this phenomenon:

- **Patriarchal Culture**
- **Lack of Political Will:** The political leadership in the North East region has not prioritized women's political representation, and there is a lack of political will to address the issue.
- **Poor Infrastructure:** Lack of roads, electricity, and water supply can make it difficult for women to participate in politics, particularly in rural areas.
- **Low Literacy Levels:** Despite higher rates of school attendance for women in the region, overall literacy rates are low, particularly in rural areas.
- **Insurgency and Conflict:** Many women in the region may not feel safe engaging with political processes, particularly in areas that are affected by conflict.

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Sports

VALUE-BASED EDUCATION IN SPORTS



Value based education in Sports



The National Anti-Doping Agency (NADA) and National Council of Educational Research and Training (NCERT) have signed a Memorandum of Understanding (MoU) to enhance value-based sports education among school children and teachers.

Aim: The collaboration aims to raise awareness about clean sport and promote sports values.



List of values that can be derived from sports:

-  **Teamwork**
-  **Leadership:** Learning to lead and take charge when the situation demands it.
-  **Discipline:** Understanding the importance of following rules and regulations
-  **Fair play and Sportsmanship:** Learning to win and lose gracefully and respecting opponents.
-  **Perseverance:** The importance of not giving up.
-  **Responsibility:** Taking responsibility for one's actions and decisions.
-  **Integrity:** The importance of being honest, transparent, and ethical
-  **Self-confidence:** Learning to believe in oneself and one's abilities, and being able to take calculated risks.

Key activities:

- Developing **e-content on sports values and ethics**
- Promoting the **UNESCO Value Based Sports Education toolkit** in every classroom.

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Our founder & director, **Vinay Sir**, with **120 toppers of UPSC CSE-2021** at the Felicitation Ceremony conducted at Bengaluru.



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