INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

NORTHERN LIGHTS IN INDIA

The Indian Institute of Astrophysics in Bengaluru recently captured a rare occurrence of aurora in Ladakh, India, on camera. This is the first time that such an occurrence has been witnessed in Ladakh

auroras, also known as polar lights, are a natural phenomenon that occurs in the high-latitude regions of the earth's atmosphere, particularly in the arctic and antarctic regions

01 MAY - 06 MAY 2023

WEEKLY CURRENT AFFAIRS

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FACTS FOR PRELIMS(FFP)

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GS PAPER 1

SOCIETY

1. SEXUAL HARASSMENT IN SPORTS

POSH Act 2013

Context: An investigation has revealed that as many as 16 out of 30 national sports federations in India don't comply with the Prevention of Sexual Harassment (PoSH) Act

Major Provisions of POSH Act 2013

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

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What is Internal Complaints Committee?
The ICC is the **first port of call for any grievance** under the PoSH Act, and it needs to have a **minimum of four members** with at **least half of them women** and **one external member**, preferably from an **NGO or an association** that works for women's empowerment or a person familiar with issues related to sexual harassment, like a lawyer.

Status of various federations on ICC:

Federation	ICC Status
Gymnastics Federation of India, Table Tennis Federation, Handball Federation, Wrestling Federation, Volleyball Federation,	No ICC
Judo Federation of India, Squash Rackets Federation, Billiards & Snooker Federation	ICC has only three members
Badminton Association of India, Archery Association, Basketball Federation, Indian Triathlon Federation	ICC has no external member

Common issues faced by women in sports:

Issue	Examples
Lack of funding and support	For example, the **US women's soccer team** has won more titles than the men's team **but has been paid less**.
Gender-based discrimination	Female athletes may face discrimination based on their gender, such as being told they are not as strong or capable as male athletes. E.g., Indian sport is characterised by a d**angerous combination of political nexus and male domination** of positions of power.
Sexual harassment and abuse	Tennis player **Ruchika Girhotra from 1990** dared to raise her voice against the then president of the tennis federation and IG Haryana Police; Chinese Tennis **star Peng Shuai** accused former Chinese Vice Premier Zhang Gaoli of sexual assault (2018); **USA Gymnastics sexual abuse scandal**
Lack of media coverage	Women's sports events are often given less media coverage compared to men's events, which can limit their visibility and opportunities for sponsorship.
Decreased Quality Training	Inferior facilities and equipment, lack of quality trained coaches
Stereotyping and objectification	Female athletes may be objectified and stereotyped based on their **appearance rather than their athletic abilities**.
Social Attitudes and Disfigurement	Discrimination based on **sexual orientation and gender identity**, negative performance evaluations, and loss of starting position
Ethical Issues	Some of the ethical issues faced by sexual harassment of women in sports include **abuse of power, violation of trust, infringement of human rights,** and **the creation of hostile and unsafe** environments.

Steps needed and those taken to address the issues faced by women in sports:

Step	Example
Education and Awareness	For instance, the **International Olympic Committee's (IOC) Athlete365** program offers educational resources on a range of topics including athlete safeguarding.

Policy and guidelines development	**Sports Authority of India** has issued guidelines that mandate **female coaches to accompany female athletes** during travel.
Reporting and complaint mechanisms	**Sexual Harassment Electronic Box (SHe-Box)** provides single-window access for women to register their complaints of sexual harassment.
Accountability and enforcement	**National Human Rights Commission (NHRC)** issued notices to the Union Youth Affairs and Sports Ministry and the Sports Authority of India on the reported inappropriate behaviour of a coach.
Support and empowerment	Ministry of Youth Affairs and Sports launched the **Khelo India Scheme** in 2018 to promote sports at the grassroots level, with a special focus on encouraging the participation of girls.

Conclusion:
To address the issues faced by women in sports. It will require a concerted effort from various stakeholders, including governments, sports organizations, and civil society, to create a safe and equitable environment for women in sports.

Insta Links:
What triggered Indian Wrestlers' Protests?

Mains Links
Q. How has women's participation in sports changed over time? Enlist the challenges and limitations that women in sports face and measures taken to empower them.

DEVELOPMENTAL ISSUES, URBANIZATION, THEIR PROBLEMS AND THEIR REMEDIES

2. SMART CITIES MISSION

Context:
The Union Housing and Urban Affairs Ministry (MoHUA) has e**xtended the deadline for the Smart Cities Mission** from June 2023 to June 2024.

What is the Smart Cities Mission?
- It is an initiative of the MoHUA launched as a **Centrally Sponsored Scheme** on June 25, **2015**.
- To **promote cities** that provide core infrastructure, and a clean and sustainable environment, **100 cities** (to be developed as Smart Cities) have been selected through a two-stage competition (from January

2016 to June 2018).
- 66 of the cities are small (less than 1 million population) and are implementing two-thirds of the projects.

It aims to:
- **Drive economic growth** through comprehensive work on social, economic, physical and institutional pillars of the city and
- **Improve the quality of life** through smart solutions.
- **Focus on sustainable and inclusive development** by the creation of replicable models which act as lighthouses to other aspiring cities.

The six fundamental principles on which the concept of Smart Cities is based are:

What kinds of projects were proposed?
- The project includes making certain stretches of pedestrian-friendly roads into more capital-intensive ones like **laying water pipelines and constructing STPs.**
- In addition, **some PPP infrastructure projects** like multi-modal transport hubs, common mobility cards and public bike sharing are included.
- All 100 cities have also constructed **Integrated Command and Control Centres** to monitor all security, emergency and civic services.
  - During the peak of the Covid-19 pandemic, **these were converted into emergency response units** by many of the cities.

What is the status of the projects?
- The projects were supposed to be completed within five years, but in 2021 the Ministry **changed the deadline for all cities to June 2023**.
- As of March 2023, the 100 cities have issued work orders for **7,799 projects worth Rs 1.80 lakh crore**.
- **50 out of the 100 cities** have completed **75% of the projects** and would be able to complete the remaining works by June.
- However, they would need **more time to carry out the documentation, dissemination and institutionalisation** of the best practices and innovations.

Significance of extending the deadline to June 2024:
It will enable all 100 smart cities to not only complete their projects but also document and disseminate the learnings from the mission.

Insta Links: Smart Cities Mission (SCM)

IMPORTANT GEOPHYSICAL PHENOMENA

3. EL NIÑO LIKELY TO BRING EXTREME WEATHER ACROSS THE WORLD

Context: According to the World Meteorological Organisation (WMO), the world should prepare for the development of El Niño, which is often associated with **increased heat, drought or rainfall** in different parts of the world**.**

THE EL NIÑO PHENOMENON
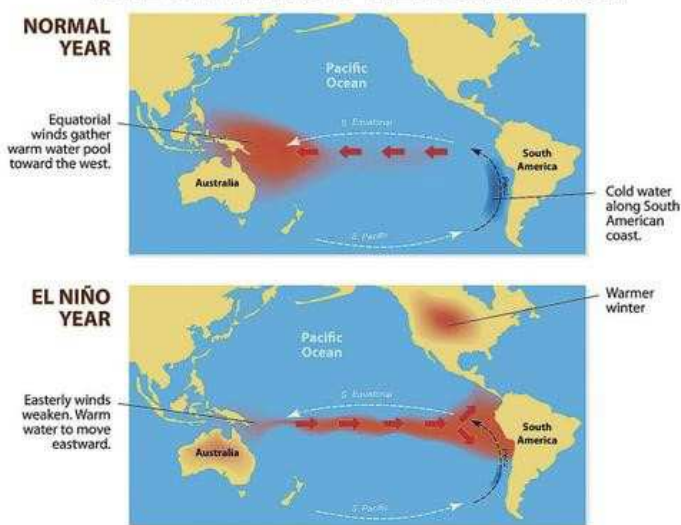
Background:
- **La Niña** has now ended after persisting for three years and the tropical Pacific is currently in an **ENSO-neutral state** (neither El Niño nor La Niña).
- There is a **60% chance for a transition from ENSO-neutral to El Niño** during May-July 2023.
- **2016** was the warmest year on record because of the **confluence of a very powerful El Niño event and global warming.**

The typical impacts of El Niño include:
- **Increased rainfall** in parts of southern South America, the southern US, the Horn of Africa and central Asia.
- **Severe droughts** over Australia, Indonesia, and parts of southern Asia.
- **Warm water** during summer in the northern hemisphere can fuel **hurricanes** in the central/eastern Pacific Ocean and can **hinder hurricane formation in the Atlantic Basin.**

Potential threats due to an El Niño event:
- **A new spike in global heating** will increase the

chance of breaking temperature records (in 2024).
- **50:50 chance** of the global temperature **temporarily reaching 1.5°C** above the pre-industrial era.

Likely impact on India:
- Normally, El Nino is **good for the northeast monsoon** [Oct-Dec in the peninsular region] but **bad for the southwest monsoon** (dry periods during June-Sept).
- **The monsoon season** (~70% of India's annual rainfall) is crucial to India's agriculture - a lifeline for about 60% of the country's net cultivated area.
- Monsoon **drives farm produce, rural spending**, inflation, jobs, and industrial demand.
- Good farm output **checks food inflation, raises rural incomes and helps inject demand** into the economy.

Challenge ahead for India:
- IMD forecasted a "**normal**" monsoon at 96% (+/-5%) of the long-period average (LPA is 87 cm for the period of 1971 to 2020).
- An unusually cold start to summer **could delay the start of the monsoon season.**

Way ahead - EW4All:
- The Early Warnings For All Initiative (EW4All) was formally launched by the UN Secretary-General in November 2022 at the **COP27** meeting in Sharm El-Sheikh.
- The Initiative calls for the **whole world to be covered by an early warning system by the end of 2027.**

Insta Links: El Nino and Monsoon

GS PAPER 2

JUDICIARY

1. ARTICLE 142

Context:
The Supreme Court of India has ruled that **it can directly grant divorce** to couples under **Article 142 (1)** of the Constitution, which allows it to do **"complete justice"** in any cause or matter.

What did SC say?
The court can waive the **mandatory six-month waiting period for divorce under The Hindu Marriage Act (HMA), 1955,** and allow the dissolution of the marriage on grounds of an **irretrievable breakdown** even if one of the parties is not willing.

Significance of the decision:

The decision enables couples to bypass the time-consuming process of obtaining a decree of divorce through family courts, which have a large number of similar cases pending.

About Article 142:

Topic	Information
Article 142 (1) provides discretionary power to the Supreme Court as it states that the SC in the exercise of its jurisdiction may pass such decree or make such order as is necessary for doing complete justice in any cause or matter pending before it.	
Application	Release of AG Perarivalan, one of the life convicts in the Rajiv Gandhi assassination case; Cleansing of Taj Mahal and granting justice to many undertrials; Ayodhya dispute case
Significance	It has been invoked to protect the rights of different sections of the population and serves as a check on the government, acting as a system of checks and balances with the legislature. It provides complete justice to various deprived sections of society or protects the environment
Example of judicial over-reach	Ban on the sale of alcohol along national and state highways where the court extended the ban to State highways as well
Negative Impact	Article 142 has some negative aspects such as ambiguity, promoting judicial overreach, and unaccountability. The phrase "complete justice" is still unclear and judgments passed by the Supreme Court have created confusion.

GOVERNMENT POLICIES AND INTERVENTIONS FOR DEVELOPMENT IN VARIOUS SECTORS AND ISSUES ARISING OUT OF THEIR DESIGN AND IMPLEMENTATION

2. LABOUR DAY

Context:

May 1 is widely known as Labour Day/International Worker's Day - a day to celebrate the contribution of workers worldwide.

Background:
- The origin of Labour Day dates back to the 19th century - when a nationwide strike of 1886 for an eight-hour workday culminated in a violent movement in Chicago, US.
- In 1889, the International Socialist Conference declared May 1 would be an international holiday for labour/May Day/Labour Day/Workers Day.
- In India, the first Labour Day (initiated by the Labour Kisan Party of Hindustan) was celebrated on May 1, 1923, in Madras.

The primary objective of Labour Day:
- To acknowledge the hard work and dedication of the working class,
- Create awareness about their rights, and
- Protect them from exploitation.

Current trends in the labour market worldwide:
Three years after the COVID-19,
- Small and micro-enterprises/people have been hard hit by inflation
- Lack of opportunities
- Real wages have fallen, and poverty inequality is rising

Indian labour market - Major issues:
- Surplus labour force: Without the commensurate rise in job opportunities in the labour market.
- Unskilled labour force: Leading to a rise in indecent/poor quality jobs like manual scavenging, etc.
  - For example, 8 people died in Gujarat (in April 2023) while cleaning sewers, despite the practice being declared illegal across the country.
- Low absorption of skilled labour
- Labour market imperfections: Such as lack of adequate information regarding jobs, numerous labour laws, etc.
- The workers in the unorganised sector: Constitute about 93% of the total workforce in the country → not covered under social security measures → most affected during COVID-19 pandemic.
- Unemployment: Causing problems like disguised unemployment, seasonal unemployment, open unemployment and educated unemployment.
- Son of the soil doctrine: For example, Haryana enacted a new law reserving 75% of private sector jobs with monthly salaries up to ₹30,000 for locals.

Labour reforms	
Global	• The International Labour Organization (ILO) is a UN agency to advance social and economic justice by setting international labour standards. • In 1919, the ILO adopted the Hours of Work (Industry) Convention (British India ratified in 1921), limiting the number of working hours to eight a day and 48 hours a week.

	• **The Declaration of Philadelphia** (1944) restated the traditional objectives of the ILO and highlighted two new directions: **the centrality of human rights to social policy, and the need for international economic planning.**
India	• Labour falls under the **Concurrent List** of the Constitution. • The central government replaced the **29 existing labour laws** with **four Codes.** • **These Codes regulate** (i) Wages, (ii) Industrial Relations, (iii) Social Security, and (iv) Occupational Safety, Health and Working Conditions. • **eShram:** This portal will help build a comprehensive National Database of Unorganised Workers (NDUW) in the country. • **PM Shram Yogi Maan-dhan (PM-SYM):** Meant for old age protection and social security of Unorganised workers. • **Aam Admi Bima Yojana:** Providing social security to unorganised sector workers.

How to prioritise social justice for a sustainable and stable future?

- **Policies and actions must be human-centred.**
- **Focusing on 'decent work':** The most effective way to reduce inequality, and poverty and ensure social protection is a 'Decent Work for All' - **SDG 8.**
- **Addressing the long-term structural transformations:** By ensuring that **new technology creates and supports employment**, and skills training, treating demographic changes/migration as a 'dividend'.
- **Reinvigorate labour institutions and organisations:** To make social dialogue effective and vigorous.
- **Review laws and regulations**: To make them up-to-date - protecting workers and supporting sustainable businesses.
- **Creating a global platform:** To recommit to international cooperation and solidarity and to create greater policy coherence, **a Global Coalition for Social Justice** is needed.

Conclusion:

Social justice should be the keystone of labour reforms at the level of national, regional and global policies and actions. This will help in achieving equitable and resilient societies.

Insta Links: New labour codes give a free hand to employers: Unions

Mains Links:
Q. "Success of the 'Make in India' programme depends on the success of the 'Skill India' programme and radical labour reforms." Discuss with logical arguments. (UPSC 2015)

WELFARE SCHEMES FOR VULNERABLE SECTIONS

3. THE FINANCIAL INCLUSION OF WOMEN

Context:
It is challenging to achieve financial inclusion (FI) for women until they actively participate in the formal financial industry.

What is FI?
The process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low-income groups at an affordable cost. (RBI)

Why do women need FI?
- FI is considered **a critical indicator of development** and is identified as an **enabler for at least eight of the 17 SDGs**.
- **For women**, access to bank accounts, loans, insurance, and other financial services, results in direct improvements in outcomes of **health, education, employment → economic independence → empowerment**.
- In turn, such progress helps achieve the collective goals of **eradicating poverty, promoting inclusive growth, and reducing inequality.**

The scheme promoting FI in India:

Pradhan Mantri Jan Dhan Yojana

Context: According to a recent RTI application, only 329 claims out of 647 claims filed for accident insurance cover under the PMJDY have been settled in the past two financial years.

About PMJDY

	Information
About	It aims to ensure access to financial services, namely, basic savings & deposit accounts, remittance, credit, insurance, pension in an affordable manner.
Benefits under PMJDY	No requirement to maintain any minimum balance in PMJDY accounts and interest is earned on the deposit in PMJDY accounts; Rupay Debit card is provided to the PMJDY account holder; An overdraft (OD) facility up to Rs. 10,000 to eligible account holders is available.

Insurance Facility under PMJDY	• Account holders are eligible for two types of insurance covers –
	  ○ A life insurance cover of Rs. 2 lakhs under the Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY)
	  ○ An accidental insurance cover of Rs. 2 lakh under the Pradhan Mantri Suraksha Bima Yojana (PMSBY).
	• Premium of Rs. 330 per annum and Rs. 12 per annum, respectively.
	• More than 50% of PMJDY account holders are women
	• No premium is charged from account holders for the accident insurance cover for death or permanent disability.
	• To avail the insurance, the beneficiary must have performed at least one successful transaction with their debit card 90 days prior to the date of the accident.

Challenges to PMJDY	Lack of Awareness, Limited Infrastructure, Limited Resources, Dependence on Cash Transactions
Other Initiatives to Increase Financial Inclusion in India	Digital Identity (Aadhaar), National Centre for Financial Education (NCFE), Centre for Financial Literacy (CFL) Project, Expansion of financial services in Rural and Semi-Urban Areas, Promotion of Digital Payments

The Pradhan Mantri Jan Dhan Yojana (PMJDY):

- **56%** of all these new accounts are owned by **women**, which implies remarkable FI that has significantly reduced the gender gap, **from 17% in 2011 to 6% in 2017**.

Direct Benefits Transfer (DBT):

- Since its inception in **2013**, the Indian government has cumulatively transferred **Rs. 16.8 trillion to beneficiaries through DBT. This has led to the FI of women,** as they constitute a good number of beneficiaries under the schemes.

Challenges:

- Women still lack participation in the formal financial industry. **For example,**
  - Most women **only access their PMJDY accounts to withdraw** the benefit transfers from the various government initiatives.
  - Most of them do not use these accounts for **savings, to build a credit history or avail of any financial products** such as insurance and loans.
- **Inaccessibility:** Most financial services are beyond the reach of most women, particularly in the rural hinterland.
- **Concerns around privacy and confidentiality:** Hesitation to discuss personal financial matters with strangers.
- **The lack of collateral** due to limited access to assets and property impedes their ability to avail of loans.
- **They have less influence** over the family's important financial choices → leading to wastages or use of benefits for non-essential purposes.

How to address these concerns?

- Promote women's access to and literacy in digital tools.
- **Promote the use of digital payments among women.**
- Appoint **more women Business Correspondents (BCs).**
- Deepen **convergence with self-help groups**.
- **Collect gender-disaggregated data** and develop strategies to form **women-centric approaches.**
- **Promote digital credit for medium and small businesses.**

Some best practices:

- **The Bank Sakhis programme** by the National Rural Livelihoods Mission **trains SHG members** to work as BCs in rural districts.
- **The PM Mudra Yojana** targets the financial inclusion of women by providing collateral-free loans up to Rs. 1 million for small and micro enterprises.

Way ahead:

Digital payment solutions can be easily redesigned to enable access to information that are key stumbling blocks to the FI of women.

Insta Links: Women and financial inclusion

Prelims Links: UPSC 2016

Q. The establishment of 'Payment Banks' is being allowed in India to promote financial inclusion. Which of the following statements is/are correct in this context?

1. Mobile telephone companies and supermarket chains that are owned and controlled by residents are eligible to be promoters of Payment Banks.
2. Payment Banks can issue both credit cards and debit cards.
3. Payment Banks cannot undertake lending activities.

Select the correct answer using the code given below.

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

Ans: 2

ISSUES RELATING TO POVERTY AND HUNGER

4. POVERTY ESTIMATION IN INDIA

Context:

There has been no official estimate of poverty in India after 2011-12. However, many private estimates are available.

Poverty estimation in India:

INDIA'S POVERTY ANALYSIS

Poor as percentage of Indian population in 2011–12

C Rangarajan methodology	29.5
Suresh Tendulkar methodology	21.9
World Bank (a)	21.2
World Bank (b)	12.4

Note: Poverty line in the Suresh Tendulkar methodology was expenditure of ₹33 a day in urban areas and ₹27 a day in rural areas. In the Rangarajan methodology, it was ₹47 a day in urban areas and ₹30 a day in rural areas.

IN WORLD BANK REPORT
(a) expenditure of $1.25 a day per person on purchasing power parity of ₹18.75, and
(b) expenditure of $1.90 a day per person on purchasing power parity of ₹28.5
As the methodology differs between a and b, the number of poor drastically went down instead of moving up.
Sources: Erstwhile Planning Commission, World Bank

- **Poverty** can be defined as a condition in which an individual or household lacks the financial resources to afford a basic minimum standard of living.
- **Reliable estimation** of poverty is the **first step to-**

wards eradication of poverty as it provides input for the design, implementation and monitoring of anti-poverty programmes.

- Two critical components of the estimation of poverty in India:
  - **Information on the consumption expenditures**;
  - These expenditures are evaluated with reference to a given **poverty line.**
- In 2011, **21.9% of Indians** were considered to be living below the national poverty line.
- **Globally, 8%** lived on less than the international poverty line (WB) of **US$1.90 per person per day.**

Issues with estimates of poverty in India:

- **Vary in a wide range:** From as high as 35% of India's population in 2017-18 (by S. Subramanian) to a low of 1.4% (by Bhalla, Bhasin and Virmani) found for 2019-20.
- **No clear conclusion/consensus** on whether poverty rose after 2011-12 or fell.

Why do these differences arise?

- Due to varying consumption expenditure data used.
  - A modified version of data (by Bhalla) from the **Consumer Pyramid Household Survey** (CME) shows that poverty has declined in India.
  - While the **National Statistical Office** (NSO) data (by S. Subramanian) that poverty increased in India.
  - The only consumption expenditure survey **conducted by NSO in 2017-18 was abandoned**.
- Due to different poverty lines used:
  - **The consumption aggregates from the PLFS** estimate poverty at 17.9% in 2020-21, compared with 21.9% in 2011-12.
  - The latest (Panagariya and More) report a poverty ratio of **32% in 2019-20 and 26% in 2020-21** using the same PLFS consumption data.

Good news for India:

- A consumption expenditure survey is currently underway.
- This will update the national accounts and inflation indices.

Challenges:

- **The new methodology adopted:** The absence of a comparable survey means it won't help answer what happened to poverty after 2011-12.
- **No public discussion** on the new methodology.

Conclusion:

The discourse on poverty estimation has played an important role in highlighting the living conditions of the poor and the effectiveness of government policy. Thus, the adoption of a scientific methodology that will generate uniform-error-free data is the need of the hour.

Insta Links:
Ways to measure poverty in India — and why the numbers matter

Mains Links:
Q. Though there have been several different estimates of poverty in India, all indicate a reduction in poverty levels over time. Do you agree? Critically examine with reference to urban and rural poverty indicators. (UPSC 2015)

5.THE GOAL OF ZERO HUNGER

Context:

To achieve the goal of zero hunger, India should have a special and immediate focus on India's youngest children.

Why do India's youngest children need urgent attention?

- According to the WHO, a **minimum of 33% of the daily calorie intake** is expected to come from food (at six months of age). The child obtains the remaining calories through **"on-demand" breastfeeding.**
- According to the NFHS-5, **18%** of mothers reported that their child (**between ages 6-23 months**) did not eat any food/"zero-food" in the 24 hours preceding the survey.
- Close to **40%** did not eat any grains (roti, rice, etc) for an entire day, and **six out of 10 children** do not consume milk ("**zero-milk**").
- This raises **serious concerns related to severe food insecurity**.

Impact/extent of nutritional deprivation among young children:

- The percentage of children short for their age (**stunting**) or
- Weighing less given their height (**wasting**)

Steps taken:

- **Mission Poshan 2.0:** The flagship programme dedicated to maternal and child nutrition.
- **National Food Security Act 2013**
- **Zero Hunger Programme:** Began in 2017 to improve agriculture, health and nutrition.
- Eat Right India Campaign
- Food Fortification
- PM Garib Kalyan Anna Yojana

Challenges:

- **Zero-food** underscores that achieving **sufficiency in food production** (the world's leading country in milk

production) does not necessarily mean attaining **food security**.

- **Deficiency in data** (food-based metrics) related to food and dietary consumption to effectively monitor and assess the performance of government initiatives.
- **The rising burden of cardiovascular** and other non-communicable diseases in India.
- **Disruptions in global food production and distribution systems**, accentuated by the ongoing Ukrainian-Russian conflict.

What needs to be done?

- Given their **multifactorial nature** with regard to what causes stunting or wasting among children, the **specific nature of the deficiencies must be assessed**.
  - For this, **assessments using household-level food insecurity modules** developed by the FAO can be adapted.
  - This will constitute the foundation for any **evidence-based policy**.
- **Multiple** (not single) ministries/departments of the Government of India should take responsibility for designing, implementing and monitoring policies.

> **The success story of the Swachh Bharat Mission (SBM):** SBM offers valuable insights for schemes like Poshan 2.0, in its strategic use of directly **trackable metrics**, and **strong political commitment** at the highest levels.

Conclusion:

To achieve the **SDG 2 of zero hunger**, India should consider a strategic initiative aimed at eliminating food insecurity by ensuring adequate-affordable-accessible-nutritionally diverse food, with a special and immediate focus on mothers and children.

Insta Links: The road to zero hunger by 2030

Mains Links:
Q. There is a growing divergence in the relationship between poverty and hunger in India. The shrinking of social expenditure by the government is forcing the poor to spend more on non-food essential items squeezing their food-budget – Elucidate. (UPSC 2019)

INDIA AND ITS NEIGHBORHOOD-RELATIONS. BILATERAL, REGIONAL AND GLOBAL GROUPINGS AND AGREEMENTS INVOLVING INDIA AND/OR AFFECTING INDIA'S INTERESTS.

6. INDIA AND BRICS

Context: 19 nations including Saudi Arabia, UAE, Algeria, Egypt, Bahrain, and Iran have expressed interest in joining the emerging-markets bloc of BRICS (Brazil, Russia, India, China, and South Africa).

About BRICS

Topic	Information
	BRICS (founded: 2009; HQ: Shanghai) is an acronym for the grouping of the world's leading emerging economies, namely Brazil, Russia, India, China, and South Africa (included in 2010)
Origin	The term "BRIC" was coined by the British Economist Jim O'Neill in 2001 to describe the four emerging economies of Brazil, Russia, India, and China.
Share of BRICS	BRICS brings together five of the largest developing countries, representing 41% of the global population, 24% of the global GDP, and 16% of the global trade (By 2028, BRICS is expected to make up 35 per cent of the global economy)
Chairmanship	The chairmanship of the forum is rotated annually among the members, in accordance with the acronym B-R-I-C-S. South Africa is the chair for 2023.
Initiatives of BRICS	1. New Development Bank (NDB) 2. Contingent Reserve Arrangement (CRA) 3. BRICS Payment System 4. Customs Agreements 5. Remote Sensing Satellite
New Initiative	BRICS is planning to launch its own "new currency" system, a major step towards de-dollarization (reducing dependence on the US dollar for trade)

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Importance of BRICS for India:

Importance	Example
Geo-Politics	BRICS provides India with an opportunity to **balance its strategic interests between the US and the Russia-China axis.**
Global Economic Order	BRICS plays an important role in the G20, in **shaping global economic policies** and promoting financial stability.
Voice of Developing Nations	BRICS has emerged as the **voice of developing countries** and is playing a significant role in protecting the rights of developing countries.
Terrorism	BRICS provides a platform for India to **galvanize its efforts against terrorism** and has worked within the grouping to take a strong stand against terrorism.
Global Grouping	BRICS provides an opportunity for India to **actively engage with China and resolve mutual disputes**. It also helps in garnering support from other partner countries.

Challenges for BRICS:

Challenge	Example
Economic Divergence	**Brazil and Russia have been experiencing economic recessions** in recent years, while China and India have sustained high growth rates. **South Africa's economy** has been performing poorly, with high levels of unemployment and inequality.
Political Differences	**Russia's annexation of Crimea and involvement in conflicts in Ukraine and Syria** have strained its relations with other BRICS members. **China's territorial claims in the South China Sea** have been a source of tension with other BRICS countries that have competing claims in the region.

Institu-tional Constraints	The **New Development Bank (NDB)**, established by BRICS in 2014 to provide development financing, has **faced challenges in disbursing loans and identifying viable projects**. The **Contingent Reserve Arrangement (CRA)**, a pool of foreign exchange reserves, has not been tested yet.
Coordina-tion Difficulties	**Disagreements over the governance structure of the NDB and the CRA**, as well as differing priorities in areas such as trade, investment, and climate change, have made it difficult for BRICS to present a unified front on many issues.
External Pressures	The rise of **protectionism, nationalism, and populism in some advanced economies** has posed challenges for BRICS in terms of trade, investment, and access to capital.

Way forward for BRICS:

	Example
Reform of Multilateral Institutions	BRICS countries could jointly advocate for the reform of the **UN Security Council**, calling for the inclusion of more developing countries as permanent members.
Resolve to Combat Terrorism	BRICS countries could **share best practices and intelligence** to combat terrorism, as well as work together to cut off funding and resources for terrorist groups.
Promoting Technological and Digital Solutions for the SDGs	BRICS countries could **share their experiences in adopting and implementing digital solutions** in these sectors
Expanding People-to-People Cooperation	BRICS countries could **organize joint cultural events and exhibitions, establish more student exchange programs** and scholarships, and encourage more tourism and business visits to each other's countries.

Conclusion:

BRICS faces **several challenges such as internal differences, global economic slowdown, and geopolitical tensions**. However, the group can remain relevant by expanding its agenda to promote comprehensive development and enhanced cooperation among all states. BRICS should also focus on the democratization of international issues, respect for cultural diversity, and peaceful resolution of conflicts.

Mains Links
Q. Discuss the importance of BRICS for India. (250 Words)

7. INDIA-UAE CEPA

It is expected to **increase the total value of bilateral trade in goods** to over USD 100 billion and trade in services to over **USD 15 billion within five years**.

India-UAE Trade relations:

United Arab Emirates (UAE) is **India's 3rd largest trading partner**, after the United States and China, with a bilateral trade turnover of **USD 68 billion** in 2021. The UAE is also the **7th largest investor in India**.

Various dimensions of India-UAE CEPA:

Dimension	Example
Trade in Goods	The CEPA provides **preferential market access for over 80% of products** traded between India and the UAE. Bilateral trade between **India and the UAE** reached historic highs during FY 2022-23, increasing from USD **73 billion to USD 84 billion**, registering a **16% increase**

Trade in Services	The **CEPA covers 11 broad service sectors** and more than 100 sub-sectors, such as business services, communication services, financial services, tourism, and transport services.
Investment	The CEPA provides for a **liberal and non-discriminatory regime** for cross-border investment between India and the UAE.
Technical Barriers to Trade (TBT)	TBT aim to ensure that **technical regulations, standards, and conformity assessment procedures** do not create unnecessary obstacles to trade.
Sanitary and Phytosanitary (SPS) Measures	It aims to **protect human, animal, and plant health** by setting standards for food safety, animal and plant health, and other related issues.
Dispute Settlement	The CEPA includes **provisions on dispute settlement**, which provide for the resolution of disputes between India and the UAE through consultations and negotiations.
Movement of Natural Persons	The CEPA includes **provisions on the movement of natural persons**, which aim to facilitate **the temporary entry of businesspersons**, investors, and skilled professionals between India and the UAE.
Pharmaceutical Products	The CEPA includes provisions on **pharmaceutical products**, which aim to promote cooperation in the regulation and marketing of pharmaceuticals between India and the UAE.
Intellectual Property Rights (IPR)	The CEPA includes provisions on **IPR**, which aim to protect and enforce intellectual property rights between India and the UAE.
Digital Trade	The CEPA includes provisions on **digital trade**, which aim to promote the development of e-commerce and digital trade between India and the UAE.

Some of the challenges that the India-UAE CEPA may face are:
- Competition from other existing trade agreements in the region
- Diverse business and cultural practices between the two countries
- The disparity in the level of development and economic size of the two countries
- Possible resistance from domestic industries in both countries
- Differences in regulatory standards and intellectual property protection.

Conclusion:
The trade between India and UAE has strengthened over the years, with the UAE becoming India's closest geopolitical partner in the Arab world. Despite recent challenges, the bilateral ties between the two nations have proven resilient.

Insta Links:
- India-UAE

IMPORTANT INTERNATIONAL INSTITUTIONS, AGENCIES AND FORA, THEIR STRUCTURE, MANDATE

8. WTO: OUTLAWING INDIA'S TECH TARIFFS

Context:
3 WTO dispute settlement panels have found India's tariffs (between 7.5 - 20%) on certain ICT products such as mobile phones inconsistent with India's WTO obligations.

Background:
- One of the central objectives of the WTO is **to boost transparency and predictability** in the multilateral trading order.
- Hence, WTO member countries are under a **legal obligation not to impose tariff rates in excess of the maximum tariff rates** committed in their **Goods Schedule.**

What are the allegations against India?
In the complaints brought by the EU, Japan and Taiwan, the WTO panels concluded that India has **violated Article II of the GATT** because India's tariffs breach its Goods Schedule.

India's argument: The ITA (which it signed in 1997) contains India's legally binding tariff commitments on ICT products, hence, they are not legally binding.

The WTO panels rejecting India's argument:
- India's **Goods Schedule** (not the ITA) is the source of India's legal obligations on tariffs.
- The panels also rejected -
  - India's contention that its commitments under the ITA are **'static'** - not including products emerged due to technological innovations after the conclusion of the ITA.
  - India's argument is based on **the Vienna Convention on Law of Treaties** - an error in a treaty would invalidate a state's consent.
- Accordingly, the panels have recommended India **reduce its tariff rates and make them compatible with its Goods Schedule.**

Implications for India:
- Compliance would mean **dismantling the high protective tariff wall** that India has erected to **boost domestic manufacturing of ICT products.**
- In case of non-compliance, the EU can **unilaterally impose trade sanctions** against the losing country.
- Even if the EU does not impose trade sanctions, **it might use this ruling as a bargaining tool in the ongoing FTA negotiations with India.**

Options available to India:
- The **WTO's Dispute Settlement Understanding** (DSU) provides an opportunity to appeal against the panel ruling.
    - However, **the Appellate Body has ceased to exist since 2019** because the US has been blocking the appointment of the body's members.
- The EU has created an alternative appellate mechanism (under WTO) - **the Multi-Party Interim Appeal Arbitration Arrangement** (MPIA). **However, India is not a party to this.**
- Legally, India will **not be required to comply** with the panel rulings till its appeal is heard.
- Also, the EU can't impose trade sanctions on India, because the WTO law **does not allow trade sanctions** when an appeal is pending.

The Goods Schedules/Harmonized System of Nomenclature (HSN):
- These are based on the World Customs Organisation's classification system, which catalogues traded products with specific names and numbers.
- Due to the continuous emergence of new products owing to technological innovations, the HSN system is regularly updated to reflect new products, also known as 'transposition'.

WTO's IT Agreement (ITA):
- Adopted in 1996, it is an arrangement through which **select WTO member countries agree to eliminate duties on IT products.**
- However, the commitments under the ITA become binding on a country under **Articles II of GATT** only if they are incorporated in the Goods Schedule.

Insta Links: WTO panel rules against India

Mains:
Q. WTO is an important international institution where decisions are taken to affect countries in a profound manner. What is the mandate of WTO and how binding are their decisions? Critically analyse India's stand on the latest round of talks on Food security. (UPSC 2014)

INDIAN ECONOMY AND ISSUES RELATING TO PLANNING, MOBILIZATION, OF RESOURCES, GROWTH, DEVELOPMENT AND EMPLOYMENT.

1. GIG ECONOMY

Context:
The strike by Zomato-owned Blinkit delivery agents has once again brought to the forefront the issues plaguing the gig economy in the country.

Background:
The strikes began when Blinkit slashed the **minimum payout per delivery to Rs 15 per delivery** from Rs 25.

The gig economy in India:
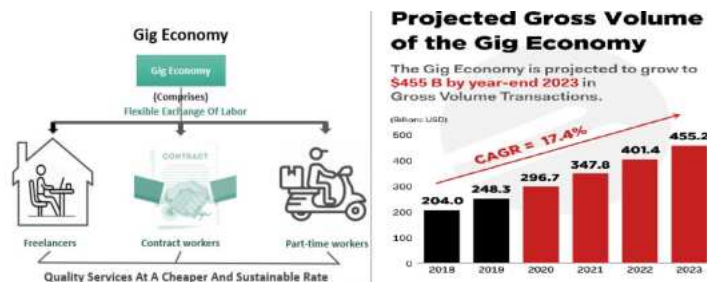
- According to the NITI Aayog estimates, **nearly 23.5 million workers** will be engaged in the gig economy by **2029**.

Gig worker	
Gig workers refer to workers outside of the traditional employer-employee relationship. There are two groups of gig workers - platform workers and non-platform workers.	
Platform workers	**Non-platform workers**
When gig workers use online algorithmic matching platforms or apps to connect with customers, they are called platform workers.	Those who work outside of these platforms are non-platform workers, including construction workers and non-technology-based temporary workers.

Issues faced by gig workers:
- Since the gig economy **falls outside the scope of traditional, full-time employment**, gig workers usually **lack basic employment rights** such as
    - Minimum wages,

- Overtime pay,
- Medical leave, and
- A statutorily bound resolution of employer-employee disputes.
- Whether gig workers should be categorised as **'employees'** or as **'independent contractors'**?
- It depends on the **extent of control and supervision exercised by the employer** and the **integration of the worker with the organisation**.
   - **In India**, employees are entitled to a host of benefits under the Minimum Wages Act 1948, EPF Act 1952 and the Payment of Bonus Act 1965.
   - Similarly, **contract labourers** are governed under the Contract Labour (Regulation and Abolition) Act 1970 and are entitled to benefits under the EPF.
   - However, gig workers display **characteristics of both employees and independent contractors** → as a result fall outside the ambit of statutory benefits.

What is the proposed law for gig workers?

In keeping with the National Commission on Labour's recommendation to consolidate central labour laws, the Ministry of Labour and Employment introduced **the Code on Social Security 2020.**

Salient provisions in the Code on Social Security 2020:

- It brings gig workers within the ambit of labour laws for the first time.
- It **distinguishes between such workers and employees**.
- It stipulates that Central and State Governments **must frame suitable social security schemes for gig workers**.
- A **social security fund** for gig workers, to which Gig employers must contribute 1-2% of their annual turnover → **to be used for the aforementioned schemes.**
- It also mandates the **compulsory registration of all gig workers** to avail of benefits under these schemes.
- It also envisages the constitution of a **National Social Security Board** by the Central government to monitor the implementation of such schemes.

Concerns:

- Out of the four new labour codes proposed, **gig work finds reference only in the Code on Social Security**.
- Hence, they **cannot create legally recognised unions and access a national minimum wage** that applies to all forms of employment.
- Gig workers are excluded from the category of 'unorganised workers' or 'wage workers'.
- Gig workers also remain **excluded from accessing the specialised redressal mechanism** against their employers.
- They also do not have the **right to collective bargain**-

ing - a fundamental principle of modern labour law.
- All the above leads to the violation of their fundamental rights under **Articles 14 and 21** and comes within the meaning of **forced labour under Article 23.**

Can judicial intervention be expected? A petition demanding that **gig workers or platform workers be declared as 'unorganised workers'** so that they come under the purview of the Unorganised Workers' Social Security Act, 2008, is pending in the SC of India.

Best practices:

- In 2021, the **UK Supreme Court** classified Uber drivers as 'workers' under the UK Employment Rights Act 1996.
- **Germany's** Temporary Employment Act provides for equal pay and equal treatment of gig workers.
- **Singapore** has also proposed legislative changes to extend work injury insurance and pension coverage to such workers.

Way ahead for India:

- The Labour Codes need to be implemented as soon as possible.
- For this, State governments should frame rules as soon as possible.

Insta Links: Gig economy

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

2. RBIS REPORT ON CURRENCY AND FINANCE

Context:

The Reserve Bank of India (RBI) released a report on currency and finance for the financial year (FY) 2022-23. The theme of the report is **'Towards a Greener Cleaner India'.**

Major points in the Report are:

Topic	Summary
CBDC and Environment	CBDC can be **more environment-friendly compared** to alternative cashless methods. Payments effected through CBDC would be instantaneous and final, and reduced reliance on clearing corporations and other settlement infrastructure could cut down energy consumption.

Climate stress test	Public sector banks (PSBs) may be more vulnerable than private sector banks (PVBs) in India on the basis of Climate stress tests (loss to the financial system due to climate-related risks)
Financing requirements by India	An additional annual investment of about 2.5 per cent of GDP by 2030 would be required to fill the infrastructure gap due to Climate change.
Macroeconomic Impact of Climate Change in India	India could lose anywhere around 3 to 10% of its GDP annually by 2100 due to climate change. Job loss: 34 million job losses from heat stress associated with productivity decline by 2030.
RBI and Climate Change	RBI joined Network for Greening the Financial System (NGFS) which aims to strengthen the global response to meeting Paris Agreement goals. It issued sovereign green bonds (SGBs) for green infrastructural investments and released a framework for mobilizing green deposits by regulated entities.
Policy Options to Mitigate Climate Risks	Fiscal Policy Initiatives: Carbon pricing using carbon taxes, Emission Trading System; green taxonomy to identify sustainable green assets and activities, etc. Technology adoption: targeted R&D investments by Governments; addressing variability in wind and solar power supply, developing an indigenous renewables supply chain, etc. Monetary Policy: Higher use of Central Bank Digital Currency (CBDCs) can help lower carbon footprint, Lower margin requirements for SGBs when used as collateral, etc.

Related news:

RBI released a report on currency and Finance with the theme "Revive and Reconstruct" in the context of nurturing a durable recovery post-Covid-19.

Major concerns highlighted in the report are:

- The **Covid-19 pandemic** is one of the worst health crises in history, with India suffering significant losses in output, lives, and livelihoods.
- **The Russia-Ukraine conflict** has also negatively impacted the recovery momentum.
- India is expected to **recover from Covid-19 losses by 2034-35**, assuming a growth rate of **7.2%** for 2022-23 and **7.5%** beyond that.

Reforms suggested:

- **Achieve medium-term steady-state GDP** growth of **6.5-8.5%. (RBI has suggested seven wheels of economic progress)**
- Rebalancing of monetary and fiscal policies, achieving price stability
- **Promote IR 4.0**
- Transition to **new zero-emission**
- Reducing government debt
- **Implementing structural reforms** such as improving access to low-cost land, raising the quality of labour, promoting innovation and technology, and rationalizing subsidies

Insta Links:

Report on Trends and Progress of Banking in India 2021-22

Prelims Links:

Q. Consider the following statements:
1. The Governor of the Reserve Bank of India (RBI) is appointed by the Central Government.
2. Certain provisions in the Constitution of India give the Central Government the right to issue directions to the RBI in the public interest.
3. The Governor of the RBI draws his power from the RBI Act.
Which of the above statements are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3
Ans: C

3. SAI20: BLUEPRINT FOR A BLUE ECONOMY

Context:

The Comptroller & Auditor General of India (CAG) will chair **SAI20** - the Engagement Group for Supreme Audit Institutions (SAIs) of G20 countries in Goa.

What is SAI20?
- The SAI20 Engagement Group of G20 was **established in 2022 during Indonesia's Presidency of the G20.**
- The constitution of SAI20 stems from a recognition of the role of SAIs in -
  - Promoting the **efficiency, accountability, and transparency of public administration**, and supporting SDG implementation.
  - **Promoting intergenerational equity** and addressing climate change concerns.

Meaning of blue economy and its significance:

- The global annual value of the blue/ocean economy is **~$2.5 trillion**.
- **About 90% of global trade by volume** [75% by value] is carried out through sea routes.

Efforts to promote blue economy:

Global	India
Sustainable Blue Economy Finance Principles (2018): Laid out by the UNEP, the framework can be used by **Investors** to fund ocean-based industries and **Financiers** to see how marine investment can impact livelihood and poverty eradication.	The blue economy is **one of the 10 core sectors** for national growth in India.
COP15 (CBD): It laid out the global biodiversity framework to conserve and sustainably use the planet's biodiversity.	**A National Blue Economy Policy** that aims to harness maritime resources while preserving the country's rich marine biodiversity has been prepared by the Ministry of Earth Sciences.
	Compendium of Asset Accounts of Natural Resources: This first-ever country-wide handbook (by CAG) sets a national accounting framework for the blue economy.
	Conservation of Coastal Ecosystem report by CAG: The audit resulted in focused recommendations to help improve the Coastal Regulation Zone (CRZ) ecosystem.

Challenges:

- **The measurement of the blue economy** is challenging due to conflicting definitions and issues while classifying different sectors and sub-sectors.
- **Climate change:** Sea-level rise, water temperature, storm surges, cyclones and wave conditions are some of the signs.
- **Land use changes, sand mining and deforestation** impinge on the coastal ecosystem.

In the context of India,

- **~15% of India's coastal areas** have witnessed changes between 1992 and 2018 due to agriculture, depleting forest cover and urbanisation.
- **The population** living in the country's coastal areas is expected to rise from 64 million in 2000 to 216 million by 2060.

Two priorities for SAI20 deliberations: *Blue economy* and responsible Artificial Intelligence (AI).

What is expected in the blue economy deliberations?

- **Preparation of technology-driven tools** to assess authorised development in coastal stretches and track marine water quality.
- **Evolution of globally relevant audit toolkits** for coastal spaces, which include -
  - Legal and institutional frameworks,
  - Compliance with coastal regulations,
  - Biodiversity conservation,
  - Capacity building and compliance to SDGs.

Way ahead:

- Disaster-resilient infrastructure along coasts
- ICT hubs for early warning systems
- The SAI20 audit **toolkits** being prepared under the leadership of the CAG of India will provide a unique opportunity for constructive dialogue to improve the auditing of ocean-based activities.

Conclusion:

The audit toolkits will help in the **assessment of policy goals**, and resource efficiency while leveraging economic opportunities towards a truly sustainable blue economy-based global development model.

Insta Links: Building a blue economy: What India can learn from China

Mains Links:
Q. Defining the blue revolution, explain the problems and strategies for pisciculture development in India. (UPSC 2018)

4. NATIONAL MANUFACTURING INNOVATION SURVEY (NMIS) 2021-22
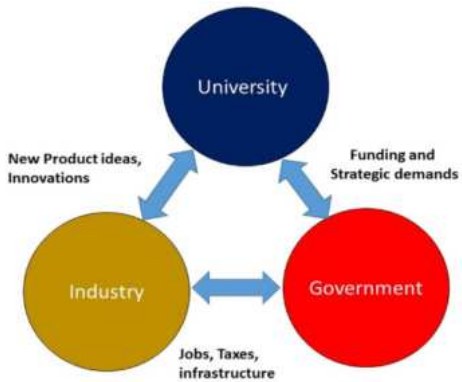
Context: The Department of Science and Technology in India has released the "National Manufacturing Innovation Survey (NMIS) 2021-22: Summary for Policymakers" to enhance the competitiveness of Indian manufacturing and increase its share in the GDP

National Manufacturing Innovation Survey (NMIS) 2021-22

Conducted By	**Department of Science and Technology (DST)** in collaboration with the **United Nations Industrial Development Organization (UNIDO)**
Objective	To evaluate the innovation performance of manufacturing firms in India
Components	**Firm-level survey** and **sectoral systems of innovation (SSI)** survey (in 5 selected sectors i.e., food & beverage, textiles, automotive, pharmaceutical, and Information and Communication Technology (ICT))
India Manufacturing Innovation Index (IMII)	The firm-level survey captured data related to the process of **innovation, access to finance, resources, and information for innovation** etc. for firms. These data were then used to compile **India Manufacturing Innovation Index (IMII)**, covering 28 states and 6 UTs
Follow-up	DST's **first National Innovation Survey** held in **2011**
About UNIDO	**UNIDO (est: 1966; HQ: Vienna, Austria)** is a specialized agency of the UN to promote and accelerate industrial development. **India** is one of UNIDO's **Founding Members.**
Status of India's Manufacturing Sector	The Indian manufacturing industry **generated 16-17% of India's GDP** (the target is **25%**) and is projected to be one of the fastest-growing sectors. *Visit Insights IAS Daily CA*

Major Findings of the NMIS Survey 2021-22:

Findings	Description:
Innovative firms	Nearly 25% of India is innovative
Top-ranked state in innovation (in IMII)	Karnataka> Dadra & Nagar Haveli and Daman & Diu> Telangana> Tamil Nadu
Lowest ranked state	North-eastern states> Bihar> Assam> Jharkhand
Lack of finance from external sources as a barrier	Nearly 40% of the firms faced this issue
Triple-Helix model focus	The survey focuses on this model. It refers to the relationships between **universities, knowledge-based institutions (KBIs), firms, governments, and hybrid organizations**

Recommendations of the Survey:

Recommendation	Example
Awareness campaign for innovation	E.g., Through events, webinars, and media campaigns.
Collaboration (Triple-Helix model focus)	Create a joint **R&D program between universities, research institutes**, and industries to foster collaboration and sharing of best practices.
Innovation centres	Establish innovation centres in every state that offer training and funding to MSMEs.
Investment	Encourage **venture capitalists and angel investors** to invest in innovative startups by providing tax incentives and reducing regulatory barriers.
Financing	Establish a **government-backed loan program** that offers low-interest loans to firms for innovation projects.
Workforce	**Promote STEM education** and provide **training programs** for workers to learn new skills in emerging technologies.
Industry 4.0 technologies	Provide **financial assistance to firms** to upgrade their manufacturing facilities with digital technologies such as IoT, AI, and big data analytics.
Intellectual property rights protection	Establish a **strong legal framework that protects patents**, trademarks, and copyrights, and provides swift enforcement against infringement.

Mains Links

Q.1 "Industrial growth rate has lagged behind in the overall growth of Gross-Domestic-Product(GDP) in the post-reform period" Give reasons. How far are the recent changes in Industrial Policy capable of increasing the industrial growth rate? (UPSC 2017)

Q.2 Normally countries shift from agriculture to industry and then later to services, but India shifted directly from agriculture to services. What are the reasons for the huge growth of services vis-a-vis the industry in the country? Can India become a developed country without a strong industrial base? (UPSC 2014)

Prelims Links:
Q. In the 'Index of Eight Core Industries', which one of the following is given the highest weight? (UPSC 2015)
(a) Coal production
(b) Electricity generation
(c) Fertilizer production
(d) Steel production
Ans: B

ECONOMIC LIBERALIZATION, TRADE AGREEMENT

5. TEPA BETWEEN INDIA AND EFTA STATES

Context:

The Secretary General of the European Free Trade Association (EFTA) states that a **Trade and Economic Partnership Agreement (TEPA)** between India and EFTA will enhance the economic partnership

What is TEPA?

A trade and Economic Partnership Agreement is a type of **economic partnership agreement** between countries. TEPA agreements offer **flexibility in terms of negotiating terms** and conditions, as the parties involved can tailor the agreement to their specific needs and interests.

About EFTA:

Topic	Description
	 European Free Trade Association (est. 1960; HQ: Geneva) is an intergovernmental organization founded by four European countries: Iceland, Liechtenstein, Norway and Switzerland as an alternative to the EU.
Purpose	To promote **free trade and economic cooperation** among its member states and with other countries
Relationship with EU	EFTA has a **close relationship with the EU** and has signed several agreements, which allow for the free movement of goods, services, capital, and people between the EFTA countries and the EU

Strength of EFTA countries	The economy of these countries is very strong. They rank among the **highest in the world** in innovation, competitiveness, wealth creation per inhabitant, life expectancy, and quality of life. EFTA companies are also world leaders in **pharmaceuticals, biotechnology, machinery manufacturing**, R&D-driven technology products, geothermal-related technologies and many more.

Potential Benefits of TEPA between India and EFTA States:

Area	Benefits
Trade	India's growth and leadership in **green technologies** can benefit from EFTA's support.
Market Access	**Improved market access for Indian goods to EFTA markets** where EFTA's export products frequently serve as inputs in Indian export industries.
Investment	Increase in investment from EFTA states (They have already invested over USD 35 billion in India)
Mutual Benefits	EFTA states can benefit from **India's highly skilled workforce** in the services sector, and India can benefit from the over **400 companies established** by EFTA states generating more than 1,50,000 jobs.
Renewable Technologies	EFTA states can contribute to **India's green growth aspirations** with their cutting-edge technologies in solar, wind, hydro, and geothermal power.

Challenges in Implementing TEPA between India and EFTA Countries:

Challenge	Description
Economic structure	While EFTA countries (developed economies) focus on high-tech industries and services, India (developing economy) generally serves lower and middle-tech industries and services.
Market access	E.g., issues regarding tariffs, quotas, and non-tariff barriers to ensure free and fair trade between the parties.
Regulatory	Differences in regulations, standards, and legal frameworks
Securing domestic manufacturers	Particularly in sectors such as pharmaceuticals, biotechnology, and machinery manufacturing, where EFTA countries have a competitive edge.

Environmental and social	Addressing environmental and social challenges, such as promoting sustainable development and gender equality, is crucial in establishing a long-term, successful partnership between the parties.
Negotiation	Negotiating a mutually beneficial agreement that meets the interests of all parties involved can be challenging.

Conclusion:

To ensure the conclusion of a mutually beneficial TEPA between India and EFTA, outstanding issues should be addressed, areas of mutual benefit identified, and collaboration on skilled labour promoted. Strong political involvement and guidance are necessary for a swift negotiation process.

Mains Links:

Q. What is a free trade agreement (FTA)? How are FTAs important for India? What are the various issues that are involved in FTA negotiation? How can the issues be resolved? (250 Words)

Prelims Links:

Q. Consider the following countries: (2018)
1. Australia
2. Canada
3. China
4. India
5. Japan
6. USA

Which of the above are among the 'free-trade partners' of ASEAN?
(a) 1, 2, 4 and 5
(b) 3, 4, 5 and 6
(c) 1, 3, 4 and 5
(d) 2, 3, 4 and 6
Ans: C

SCIENCE AND TECHNOLOGY

6. "RISK-BASED" REGULATION FOR ARTIFICIAL INTELLIGENCE (AI)

Context:

The Group of Seven (G7) has proposed a **"risk-based" regulation** for artificial intelligence (AI) tools, which could be a **first step towards creating a template to regulate AI** such as OpenAI's ChatGPT and Google's Bard.

What is AI?

AI stands for **artificial intelligence**, which is the **ability of machines to learn and perform tasks** that normally require **human intelligence**, such as problem-solving, decision-making, and language understanding.

What is GPT?

Concerns related to rising AI software and chatbots:

Concerns	Explanation
Privacy	There is a risk that personal and sensitive information data could be used for unethical purposes, such as **for targeted advertising** or for **political manipulation.**
Responsibility	Since AI models can generate new content, such as images, audio, or text it may be used to **generate fake news or other malicious content**, without knowing who is responsible for the output. This could lead to ethical dilemmas over responsibility.
Automation and Lowering of Job	AI has the potential to automate many processes, which could lead to **job displacement for people who are skilled in those areas.**
Bias and Discrimination	AI can be trained on biased data, which can result in the algorithm making decisions that unfairly disadvantage certain groups. This can perpetuate **societal inequalities and lead to discrimination**.
Lack of Transparency and Accountability	There are concerns about **who should be held responsible for the actions of AI systems -** creators of the AI systems, the companies that deploy them, or the governments that regulate them.

Various steps taken by countries to regulate AI are:

Country	Initiative
G7	The EU's **"risk-based" regulation of AI refers** to the proposed AI Act that seeks to regulate artificial intelligence tools **based on their level of risk**. The act categorizes AI systems into four categories: • **Unacceptable risk** (e.g., in case of critical infrastructure) • **high risk** • **limited risk** • **minimal risk** (e.g., spam filters, word processing) The level of risk determines the **degree of regulatory scrutiny and compliance requirements** that the AI system would be subject to.
EU	The proposed AI Act **segregates artificial intelligence by use-case scenarios** based broadly on the degree of **invasiveness and risk**. The AI Act is due next year.
Italy	Became the first major Western country to **ban Open AI's ChatGPT out of concerns over privacy.**
UK	Adopts a **'light-touch' approach that aims** to foster innovation in the AI industry.
Japan	Takes an **accommodative approach** to AI developers.
China	**Drafted a 20-point draft to regulate generative AI** services that are likely to be enforced later this year.
India	**ICMR releases guidelines** for artificial intelligence use in the health sector; Niti Aayog's **National Strategy for Artificial Intelligence** and the **Responsible AI for All report**. India is **not considering any law** to regulate AI currently. **India's AI penetration factor at 3.09**, the highest among all G20, OECD countries
US	**Blueprint for an AI Bill of Rights** that proposed a **nonbinding roadmap** for the responsible use of AI. The Blueprint spelt out five core principles to govern the effective development of AI systems.

Conclusion:

Although the **risks of AI are widely known**, it remains unclear how the **proposed AI Bill of Rights would address these risks** and how grievances would be remedied. Elon Musk, Steve Wozniak, and over 15,000 others have **called for a six-month pause in AI development**, and for shared safety protocols to be implemented by labs and independent experts.

Insta Links:

What are hallucinating chatbots?

CONSERVATION, ENVIRONMENTAL POLLUTION AND DEGRADATION

7. WILDLIFE TRANSLOCATION PROGRAMMES

Context:

According to a new study, efforts to translocate wildlife must incorporate human-related factors, and biological and environmental considerations to realise the desired outcomes.

Wildlife translocation:

- It is the **intentional movement of animals** for conservation purposes - a technique to mitigate the loss and depletion of endangered species.
- It requires **planning, a detailed analysis of the habitat, and consideration of the long-term prospects** for the survival of the released animals.
- The **ecological, economic, and societal consequences** of the release are also taken into account.

Advantages:

- An important c**onservation tool for restoring threatened and endangered wildlife** populations.
- To meet the goal of **re-establishing populations in formerly occupied areas**.
- **Population balancing** - shifting from high/overpopulation to low population regions.

Risks associated:
- Legal and policy issues
- Disease concerns
- **Stress to the animal:** Translocation, unlike dispersal, is not due to natural or deliberate behaviour.
- **Homing:** It refers to an animal's capacity to travel back to its original catch site after translocation.

The success/failure of translocating wildlife depends on -
- Which species is being shifted;
- Whether it can survive in its new habitat and breed successfully;
- The amount of time and resources being allocated to the process.
- **Anthropogenic angle/coexistence with people.**

The failure of a translocation programme can lead to -
- Distrust between stakeholders;
- The loss of resources and
- Even the extinction or extirpation of entire populations or species.

Case of India –
- **The ongoing Project Cheetah of the GoI: It has suffered setbacks recently.** Two cheetahs (one from South Africa and the other from Namibian) brought to MP's **Kuno National Park from South Africa** died of **cardiac and renal failure.**
- **The Gaur Relocation in India (2011):** The project saw the first reversal of local extinction in the Bandhavgarh Tiger Reserve (MP), with 19 Gaurs coming here from Kanha Tiger Reserves (MP).

Need of the hour - Importance to be given to anthropogenic angle:
- **The IUCN Global Re-Introduction Perspective Series** identifies the relationship between the inclusion of human dimension objectives in wildlife translocation efforts and programme outcomes.
- Of the six key strategies identified for including human dimension objectives, **education** was the most common, followed by
  - Engaging locals,
  - Providing economic benefits,
  - Increasing social tolerance,
  - Enforcing regulations and
  - Supplying cultural benefits.

> **The success story of including an anthropogenic angle:** Four cheetahs were translocated from South Africa to Malawi in 2017 is a major conservation success for a species that is considered vulnerable on the IUCN Red List.

Global efforts - ICTC:
- International Conservation Translocation Conference (ICTC) is a **premier conservation translocation science event**, linked to the IUCN.
- This helps the government/policymakers **to learn from global experts** how to best plan and implement conservation translocations.

Conclusion:
The problem with India's Project Cheetahs is that the species is being translocated from entirely different countries and ecosystems. Therefore, proper scientific study must be conducted before executing the project.

Insta Links: Cheetah project to bring in 12 big cats from South Africa

8. ROADMAP TO ENERGY JUSTICE

Context:
India's energy strategy is presently recognised as being pragmatic and balanced since it is motivated by assuring energy access, availability, and affordability for its vast population.

What is energy justice?
Energy justice envisions elements of a global energy system that **fairly distributes both energy services' benefits and burdens** and can be used as a framework to identify energy injustices.

Short-term actions towards ensuring energy justice in India:
- **Massive cuts in excise duty and VAT rates of** petrol and diesel.
- **An export cess** on petrol, diesel and ATF.
- **Windfall tax** on domestically produced petroleum products to prevent refiners and producers from profiteering at the cost of domestic consumers.
- **Subsidised administered pricing mechanism** (APM) gas for the city gas distribution sector was drastically increased.
- **R**evising the New Domestic Gas Pricing Guidelines 2014 to rationalise and reform APM gas pricing.

Outcome:
- **Prices of diesel in India have gone down in the last year:** This is when petrol and diesel prices went up by 35-40% in global markets, India imports over 85% of its crude oil requirements and 55% of its natural gas requirements.
- **No shortage of fuel anywhere in India:** This is when several neighbourhood countries have had dry outs and power cuts to manage demand.

Long-term actions towards ensuring energy justice:

1. Expanding the network of crude oil suppliers: This strategic decision not only ensured affordable energy for Indian consumers but also had a calming effect on global petroleum markets.

2. Strengthening ties: With countries like the US (energy trade has gone up 13 times in the last four years) and Russia to ensure a reliable supply of crude oil.

Expanding petrochemical production:
- India is a global exporter of petroleum products and its r**efining capacity is the fourth largest** in the world after the US, China, and Russia.
- Efforts are underway to further enhance this capacity to 450 MMT by 2040.

3. Innovation and investments in exploration and production (E&P): India wants to boost its net geographic area under exploration from 8% to 15% (**0.5** million sq km) by 2025 and has reduced the prohibited/no-go areas in EEZ by 99%.

4. Energy transition: However, as demonstrated at Glasgow, India is committed to becoming **net-zero in emissions by 2070**.

5. Moving towards a gas-based economy:
- By increasing the share of gas from the current **6.3** to 15% by 2030.
- India has connected **more than 9.5 crore families** with clean cooking fuel in the past nine years.
- **PNG connections** have increased from **22.28** lakh in 2014 to over 1 crore in 2023.
- **The number of CNG stations** in India has gone up from 938 in 2014 to 4,900 in 2023.
- Since 2014, India has increased the **length of its gas pipeline network** from 14,700 km to 22,000 km in 2023.

6. Biofuel revolution:
- At the recent India Energy Week 2023, India launched **E20** - 20% ethanol blended gasoline - which will be expanded across the country in the next two years.
- **India's ethanol-blending gasoline** has grown from just **1.53% in 2013-14 to 10.17% in 2023.**
- India is also setting up **five 2nd generation ethanol plants**, which can convert agricultural waste into biofuel → **reducing pollution** due to stubble burning → **generating income** for farmers.

7. Developing the entire green hydrogen ecosystem:
- The Na**tional Green Hydrogen Mission** has been launched with an outlay of Rs 19,744 crore to accelerate India's efforts towards -
    - 4 MT of annual green hydrogen production and

- Rs 1 lakh crore of fossil fuel import savings by 2030.

8. An integrated path for transitioning India's future mobility pathways:
- Along with green hydrogen and biofuels, India is also supporting **electric vehicles through a production-linked incentive scheme**.
- **India is targeting the installation of alternative fuel stations** (EV charging/CNG/ LPG/LNG/CBG etc.) at 22,000 retail outlets by May 2024.

Conclusion:
- According to IEA estimates, India will account for **~25% of global energy demand growth** between 2020-2040.
- As India aspires to become a $26 trillion economy by 2047, implementing **a unique strategy for ensuring energy security and achieving energy independence** is the need of the hour.

Insta Links: The Road to Energy Atmanirbharta

Mains Links:
Q. "Access to affordable, reliable, sustainable and modern energy is the sine qua non to achieve Sustainable Development Goals (SDGs)".Comment on the progress made in India in this regard. (UPSC 2018)

9. DEBT-FOR-CLIMATE SWAPS

Context:
In the past decade, debt-for-climate swaps have grown relatively popular among **low- and middle-income countries.**

Debt-for-climate/debt-for-nature swaps	
Meaning	It is a **debt restructuring device** between the creditor and a debtor by which the **former forgoes a portion of the latter's foreign debt**/provides its debt relief, in return for a **commitment to invest in specific** environmental mitigation and adaptation projects.
Who will be benefitted?	• **Low and middle-income countries,** small island developing states (SIDS). • Example - **Caribbean SIDS:** The COVID-19 pandemic resulted in a 73% drop in international tourist arrivals in 2020, and has aggravated the region's debt crisis.

Need	• These countries are most vulnerable to climate change and are **least able to afford the investment to strengthen resilience** due to their debt burden. • The signatories to the **Paris Agreement and the Glasgow Financial Alliance for Net Zero** (GFANZ) have a commitment to provide financial assistance to developing countries to build clean, climate-resilient futures.
Advantages	• **Dual objectives:** to promote specific investment and policy action (that aims to combat climate change) on the one hand and some debt relief on the other. • **Seeks to free up fiscal resources** → Governments can improve resilience without triggering a fiscal crisis or sacrificing spending on other development priorities. • Developed countries can fulfil their commitments (to support developing countries) through this **attractive and transparent instrument.**
Swap vs conditional grants	**Swap:** Offer debt relief above what is needed to finance the climate investments (net debt relief), leading to a **higher fiscal transfer and the creation of fiscal space.**
	Conditional grants: Cover the cost of an investment and require **economic dislocation** → diversion of resources from planned development programmes.
Successful implementation (Seychelles)	• In 2017, this small African country announced the successful conclusion of negotiations for a debt-for-adaptation swap under a tripartite model. • The Nature Conservancy (TNC), a US-based environmental organisation, **bought $22 million of its debt in exchange for a promise to create 13 new marine protected areas.**
Way ahead	Countries like **Sri Lanka [**ranked as highly vulnerable to climate change catastrophes and also reeling under the sovereign debt crisis] can seek the help of these instruments.

10. GLOBAL LAND OUTLOOK REPORT

Context:

According to the 2nd edition of the Global Land Outlook (GLO) report, humans have **breached four out of nine planetary boundaries**.

GLO:

- It is a United Nations Convention to Combat Desertification's (UNCCD) flagship publication, whose 1st edition was launched in **2017** at the UNCCD COP13 (China).
- It underscores **land system challenges**, showcases transformative policies and practices, and points to **cost-effective pathways** to scale up sustainable land and water management.

Highlights of the report:

Importance of Land: It is the **operative link** between biodiversity loss and climate change, which means restoring land is crucial to solving interconnected crises.

What are planetary boundaries?

- The **environmental thresholds** that establish a **"safe operating space for humanity"** are known as planetary boundaries.
- **The nine planetary boundaries are:**
  - Biodiversity loss
  - Land-use change
  - Climate change
  - Nitrogen and phosphorus (geochemical) cycles
  - Freshwater use
  - Ocean acidification
  - Chemical pollution
  - Atmospheric loading
  - Ozone depletion

Threats:

- Humans have already **altered more than 70%** of the earth's land area from its natural state.
- Of the 9 planetary boundaries, climate change, biodiversity loss, land-use change, and geochemical cycles **have already been exceeded**.

Causes:

- Worldwide, **food systems** (including agriculture) are responsible for **80% of deforestation and 70% of freshwater use** and are the single greatest cause of terrestrial biodiversity loss.
- **Land degradation, desertification and drought** pose a great risk to global food security as well.
  - Land degradation is the **reduction or loss of biological and economic productivity of land** and its constituents: soil, water, and biodiversity.

Impact:

This has contributed significantly to **global warming and environmental degradation** → leading to a rise in **poverty, hunger, inequality, zoonotic disease transmission,** etc.

Recommendations:

Effective land restoration:

- **The report defines land restoration** as a continuum of activities that
  - **Avoid** (By eliminating practices that degrade the environment, ranging from land and ecosystem conversion to socio-economic inequalities)
  - **Reduce** (By adopting sustainable land and water management practices) and
  - **Reverse** (By revitalising soil, watersheds, and other elements of natural ecosystems) **land degradation** with the explicit objective of **meeting human needs and improving ecology.**
- **The global annual cost of land restoration** is expected at ~$300 billion by 2030.
- Each dollar invested is estimated to **return between $7 and $30** in economic benefits, moving towards an **equitable and sustainable future.**

Achieving land degradation neutrality (LDN): LDN is a state whereby the quantity and quality of land resources required to maintain ecosystem functions and services and improve food security are steady or growing.

Integrated land use planning:

- **Identifying the best combination of land uses** → sustainably meeting the **needs of the stakeholders as well as preserving the land resources.**
- A cost-effective approach is to **identify landscapes** while maximising benefits, such as in **global restoration hotspots.**

Regenerative agricultural practices: Like terrace farming and rainwater harvesting → help restore land, increase crop yields, reduce GHG emissions, sequester atmospheric carbon, and create meaningful livelihoods.

Inclusive and responsible governance: It is crucial to facilitate the shift to sustainable land use and management practices.

Initiatives of Land Restoration	
Global	**India**
The Bonn Challenge (2011) is a global effort to restore 350 million hectares of the world's degraded and deforested lands by 2030.	Currently, **97.85 million hectares** (mha) of land - an area 2.5 times the size of India's largest state Rajasthan, has already been degraded.
UN Decade on Ecosystem Restoration: The Decade (2021-2030) is being championed by the UNEP and FAO.	In 2019, India raised its land restoration target (under the Bonn Challenge) from **21 million hectares to 26 million hectares by 2030.**

The G20 Global Initiative on Reducing Land Degradation and Enhancing Conservation of Terrestrial Habitats: Launched in 2020, it aims to prevent, halt and reverse land degradation and reduce degraded land by 50% by 2040.	Now, **MGNREGS is** to fund work to reverse land degradation.

Some best practices in India:

- **Holiyas:** These are water management systems in Gujarat, which store rainwater below the land surface. The groundwater can be accessed and distributed using solar pumps when there is scarcity.
- **Plantopathy:** It is a unique nature-based solution that can limit the impact of plant diseases on yields without pesticides or chemicals.
- **Zero budget natural farming (ZBNF):** It combines traditional and emerging practices to reduce costs (i.e., zero budget) while boosting yields and overall farm health by using organic inputs sourced locally (i.e., natural farming).

Conclusion:

Land restoration is a **shared responsibility.** Hence, governments, scientists, civil society, and private sector players need to work together to set land and ecosystem restoration goals that transform land-use systems.

Place-based restoration approaches, actions, and benefits
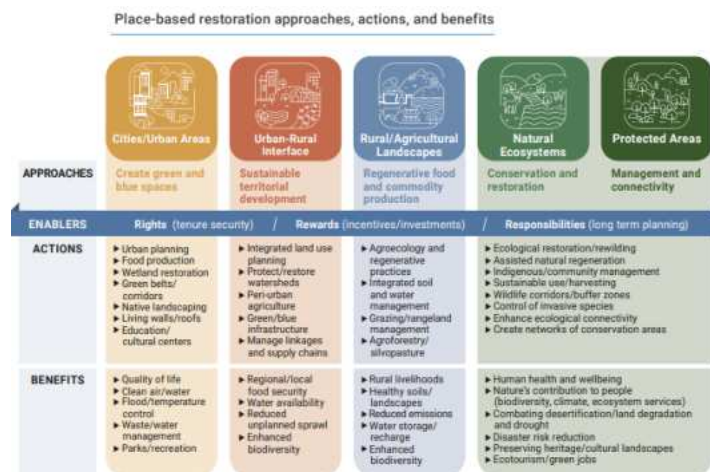
Insta Links: Forest landscape restoration

LINKAGES BETWEEN DEVELOPMENT AND SPREAD OF EXTREMISM.

11.MAOIST CHALLENGE: NEEDS POLITICAL UNDERSTANDING, NOT SECURITIZATION

Context:

The efficacy of the Maoist movement needs to be gauged in terms of their declining social base, not on the basis of how many violent incidents occur.

Maoist movement in India		
Current approach	Expected outcome	Issues
Use of Force	The use of force (including specially-trained forces such as the Greyhounds) has led to a **decline in Maoist presence and the use of more force will end its remaining influence**.	The use of more force **only helped the Maoists recruit** from the local tribal population. The Maoist movement moved from the leadership of outsiders (mostly from Telangana) to that of **local tribals.** **Such internal changes** led to **local support for the movement** from tribals in Chhattisgarh and Jharkhand.
Development	Welfare and development as part of the "strategy" to calm down and make the Maoists irrelevant.	**The D Bandyopadhyay Committee** (2006) stated that land alienation and poverty among STs and Dalits, and lack of access to basic forest resources contributed to the growth of Naxalism. The state's model of development has resulted in the **displacement of tribals** → leading to the peaceful Pathalgarhi movement in Jharkhand

What led to the failure of the above approaches:

- Declining Maoist presence/violence could well be **a political strategy of the Maoists to go silent/underground** and wait for lapses on the part of the security forces.

- **Eminent Domain doctrine,** argues that all resources belong to the nation and can be extracted in the "national interest".
- Development is seen as a **zero-sum game** by either side leads.
- **A single conception of development** to address the various, occasionally incompatible demands of oppressed groups.
- **The securitisation paradigm** is also insufficient to comprehend social exclusion.

Conclusion:

- Both Ambedkar and Gandhi were of the view that social exclusion and caste cannot be addressed through violence.
- To end the social exclusion of tribals there is the need to understand that development is a **multi-faceted process**.

Insta Links: LWE

Mains Links:
Q. The persisting drives of the government for the development of large industries in backward areas have resulted in isolating the tribal population and the farmers who face multiple displacements with Malkangiri and naxalbari foci, discuss the corrective strategies needed to win the left-wing extremism (LWE) doctrine affected citizens back into the mainstream of social and economic growth. (UPSC 2015)

CONTENT FOR MAINS ENRICHMENT (CME)

1.SHRAMAVAHINI	
About	In Odisha, a group of young bonded labourers have formed a network called **Shramavahini**, which uses **smartphones** and **social media** to alert authorities and rescue fellow workers in distress. The network has over **4,000 members** who report cases of distressed labourers requiring assistance from the district administration and concerned officials.
Aim	Shramavahini aims to **combat the issue of migrant labourers' voices** going unheard by local administration by facilitating the rescue of distressed labourers as quickly as possible.
Usage	The example highlights the ethical values of empathy towards fellow labourers in distress; Social responsibility; collaboration with civic authorities etc. It can be used in ethics/Governance paper

2.RAJASTHAN PLATFORM-BASED GIG WORKERS BILL

Context	The Rajasthan government's proposed **Rajasthan Platform-based Gig Workers (Registration and Welfare) Bill, 2023,** which will introduce a welfare board, is a step towards ensuring the **welfare of gig workers**.
Issue	**For Gig Workers**, working conditions have become **increasingly harsh**, with gig workers not recognized as "**workers**" and lacking any **social security** or related benefits.
Usage	The example can be used as a legislative measure for new digital workers (Platform workers) as well as Gig workers in the Economy/Governance Paper

3.BIHAN MELA (SEED FESTIVAL)

About	The Bihan Mela, or seed festival, has been initiated by the non-profit **Nirman in the Nayagarh district of Odisha** to help **tribal Kondh farmers** return to their traditional ways of farming, including mixed-cropping.
Working:	The festival involves the **exchange of indigenous seeds and serves as a platform for farmers to collect, store and share their native varieties of crops**. The non-profit also set up a **seed bank** in Raisar village to facilitate access to **indigenous seeds.**
Aim:	The Bihan Mela and seed bank aim to **address the issue of crop failures** caused by erratic rainfall and pest attacks, and to restore food and nutritional security to the region's farmers.
Usage:	The example can be used in Agriculture questions, questions related to **Farmers' Rights in the PPV&FR Act, 2001**

4. NITI AAYOG'S COMPENDIUM ON BEST PRACTICES IN SOCIAL SECTOR 2023

A. BEST PRACTICES IN 'AGRICULTURE'

Initiative	Description
Crop Cluster Development Programme - Innovation in Haryana	A program that provides **on-farm facilities** to farmers for proper aggregation, grading/sorting, and processing of products in Haryana.
Organic Large Cardamom Production- Nagaland	A program that aims to develop a **value chain for organic large cardamom in Nagaland** and facilitate partnerships between farmers and organic businesses.
The direct and full benefit of Minimum Support Price (MSP) to farmers	A program that transfers the Minimum Support Price **directly to farmers' accounts in Haryana and Punjab,** eliminating exploitation by middlemen.
Dr YSR Rythu Bharosa Kendralu - a one-stop solution for farmers	A program that provides **quality inputs, knowledge transfer, and capacity building** for agriculture and allied sectors in Andhra Pradesh.
Climate resilient rice-fish farming in Assam	A program that encourages **pisciculture in paddy fields**, taking advantage of the symbiotic relationship between rice plants and fish in Assam.
Odisha Millets Mission	A program that promotes **the production and consumption of millets** in Odisha to preserve indigenous culture.
Black Rice Initiative in Chandauli-Uttar Pradesh	The initiative involved promoting black rice farming among a small group of 300 farmers. The branding of black rice was done, and it was sold at a **much higher price than common rice, leading to a rise in the income of farmers.**
Usage: These examples can be used in Mains answer as innovative solutions/way forward	

B.BEST PRACTICES IN 'EDUCATION'

Initiative	Nodal Agency	Brief Description
Vidya Samiksha Kendra for monitoring of learning outcomes	Government of Gujarat	An **online, real-time mechanism** to monitor the learning progress of every student across every grade in every school in Gujarat using technology such as AI, ML, and Big Data Analytics to improve grade-appropriate learning outcomes of every student.
Home-based education for children with disabilities	Government of NCT of Delhi	A program to provide **home-based education to children with severe and profound disabilities** who are unable to attend regular schooling in Delhi, in line with the **Right to Education Amendment of 2012 and the Zero Rejection Policy**.
Phoenix mobile app – measuring students' progress	Chandigarh	A mobile application that serves as a **monthly report card for students and teachers in Chandigarh**, with prescribed learning outcomes, pre-fed into the application to track the performance of each class and subject in each government school.
Academic Bank of Credits (ABC)	Ministry of Electronics and Information Technology	A system that provides **academic credit deposit accounts** to all students studying in recognized Higher Educational Institutions (HEIs) in India, allowing them to **accrue and redeem credits** for any academic program at any convenient time.
Kalika Chetarike – Activity-based learning	Government of Karnataka	A program designed to **address learning gaps and attain subject-wise, grade-specific learning outcomes** for all students in Karnataka
'Kalika Habba' - A State-wide Festival on Learning	Karnataka	A **state-wide festival designed** around activities in sciences, mathematics, social sciences, and languages in Karnataka involving students from **grade 4 to grade 9**, to involve the **community with the education programme and academic practices of schools**.
School Adoption Initiative, Darrang (Assam)	Government of Assam	An initiative under which one **college teacher adopted one school in the district of Darrang**, Assam, with the aim of improving **teaching and learning practices.**
Abhyudaya Dhubri	Assam	The initiative uses **virtual reality (VR)** to make learning a more fun experience for the children, where the focus has shifted from memorizing to understanding.

C.BEST PRACTICES IN 'SOCIAL WELFARE'

Initiative	Region	Description
Prayatna	Delhi-NCR (by Ministry of Skill Development and Entrepreneurship (MSDE))	A livelihood and enterprise training program for transgenders in Delhi-NCR, aimed at helping beneficiaries attain a **basic quality of life and impart entrepreneurship skills** to some of them.
Nasha Mukt Bharat	All over India (by Ministry of Social Justice and Empowerment)	The **National Action Plan for Drug Demand Reduction (NAPDDR)** aims to prevent drug addiction by providing education, counselling, and treatment to individuals with substance dependence. It finances NGOs **for rehabilitation centres and addiction treatment facilities**. The plan also includes the **establishment of District De-Addiction Centers** in each district for comprehensive treatment.
Aangan	Punjab (by Department of Social Security and Women & Child Development)	A digital inspection of the childcare institutes (**using the SafCa App**) being run by the department and registered under the Juvenile Justice (Care and Protection of Children) Act, 2015.
Dhimsa Radio	Koraput, Odisha (implemented by South Odisha Voluntary Action (SOVA) with UNICEF support)	**A community radio station** that has become a tool for social change in disseminating information on government schemes.

D. BEST PRACTICES IN 'ENVIRONMENT'

Initiative	Region	Goal
Electric vehicle policy and Induction of Electric Buses	Government of NCT of Delhi	Reduce emissions from the transport sector to improve Delhi's air quality
A life, less ordinary: Ganga Prahari - Guardians of the Ganga	Ministry of Jal Shakti, Government of India	Establish a **trained cadre of local communities** to institutionalize conservation efforts for the river Ganga at the grassroots level
Bio Decomposer Solution and Spray Programme – Fighting stubble burning	Government of NCT of Delhi	Fight pollution caused by stubble burning by providing Bio-decompose spray to farmers
Solving dry waste handling - Materials Recovery Facility	Udupi District, Karnataka	Provide good waste management service and use non-recyclable waste as a raw material in cement factories
Palle Prakruthi Vanam / Village Nature Park	Government of Telangana	Create dense mini forests in rural areas using the Yadadri Miyawaki forestation technique to increase green cover and biodiversity

E. BEST PRACTICES IN 'SCIENCE & TECHNOLOGY'

Initiative	Nodal Agency	Objective
National AI Portal (INDIAai)	National e-Governance Division (NeGD), Ministry of Electronics and IT (MeitY), in partnership with NASSCOM	To create a **unified AI ecosystem in India** and promote **knowledge creation, fostering economic growth and social empowerment** through a one-stop digital platform for AI-related developments in the country.
Santhe Kaushalkar - Self-Help Group and Artisan Profiling Platform	UNDP Karnataka and Department of Planning, Programming, Monitoring and Statistics, Government of Karnataka	To create a **rural self-help group (SHG) and artisan profiling platform (with digital Identity)** that provides profiles of rural SHGs/artisans engaged in the manufacturing of various products and artefacts, and facilitates their **connection with potential buyers and customers**.
Innovations for Defence Excellence (iDEX)	Defence Innovation Organisation (DIO) under the aegis of the Department of Defence Production, Ministry of Defence	To foster **innovation and technology development in the defence and aerospace** sector by engaging industries including MSMEs, start-ups, individual innovators, R&D Institutes, and academia, and promote self-reliance. The MoD also procures the newly innovated products as per the **Defence Acquisition Procedure 2020** (DAP-2020) from iDEX winners.

5.RETURN TO ROOTS

The Australian High Commission in India announced its Government Grant for a project in **Kargil called "Return to Roots."** This project **aims to integrate traditional knowledge** with the **current school science curriculum** in alignment with the goals of the National Education Policy, which includes increasing scientific engagement among school children of the tribal background.

6.MY LIFE AS A COMRADE

Context	• **KK Shailaja,** the former **health minister of Kerala**, who gained worldwide recognition for her success in managing the Covid-19 pandemic, has released a memoir entitled "**My Life As A Comrade**". • Ms. Shailaja credits **scientific thinking** as an integral part of her decision-making process and reveals that her **Ammamma** (Grandmother), inspired her with her actions in tackling a smallpox outbreak in Kerala.
Usage:	Ethical values demonstrated by **KK Shailaja and the Kerala state government's** response to the pandemic: Scientific thinking, Compassion, Responsibility, Preparedness, and Equality.

7.REGULATION OF AI

The regulation of artificial intelligence (AI) is a challenging issue because it is rooted in two problems: the pacing problem and the Collingridge dilemma.

	Pacing Problem	Collingridge Dilemma
Definition	The difficulty of predicting the **long-term impacts of a technology** when it is introduced quickly and widely.	The difficulty of **controlling the development and use of a technology once** it has been widely adopted.
Example	The widespread **adoption of social media** without considering the long-term effects on mental health and society.	The development and **use of fossil fuels,** which have had a significant impact on the environment and climate change.

FACTS FOR PRELIMS(FFP)

GS PAPER 1

INDIAN HERITAGE AND CULTURE

1. THRISSUR POORAM

Thrissur Pooram

Context: Thrissur Pooram took place with great fanfare

About Thrissur Pooram

Thrissur Pooram is an annual Hindu temple festival held in Thrissur, Kerala. It is held at the Vadakkunnathan Temple on the Pooram day (the day when the moon rises with the Pooram star in the Malayalam Calendar month of Medam)

Date	Occurs on the day when the star sign "Pooram" occurs in the Malayalam month of "Medam" (April-May)
Origin	The festival was initiated by Raja Rama Varma, also known as Sakthan Thampuran, the Maharaja of Cochin (1790–1805)
Purpose	A ceremony where ten temples in and around Thrissur come together to pay obeisance to Lord Shiva at the Vadakkunnathan Temple
Key Features	Kodiyettam (flag hoisting ceremony), percussion ensemble, elaborate elephant processions, firework displays
Last Day	The seventh day of the Pooram, also known as "Pakal Pooram"
Significance	It is the largest and most famous of all poorams in India. It promotes 'inclusivity' as it has grown to encompass all religious and cultural strains of Kerala. Muslim and Christian communities also participate.

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2. MUZIRIS

Context:

The archaeological site of **Pattanam**, on the southwestern coast in Kerala's Ernakulam district, is believed to be part of the ancient port city of the Muziris.

Muchiri/Muziris	
About	Ancient harbour and an urban centre

Location	
	Ancient Ports vii. Lothal ii. Bhrigukachha/ Barygaza i. Bhagatrav viii. Sopara vi Tamralipti ii. Masulipatnam/Machilipatnam/ Maisolia x. Mamallapuram/ Mahabalipuram v. Arikamedu/ Poduka iv. Puhar/ Kaveripattinam Muziris xi. Korkala

	Malabar Coast. The exact location of Muziris is disputed. Excavations suggest somewhere near **Pattanam, Kerala.**
Evidence	**Periplus of the Erythraean Sea, Sangam literature**, Pliny the Elder [in his Natural History, hailed Muziris as "**the first emporium of India**]
Importance	**Key to the interactions (trade and commerce) between South India and Persia**, the Middle East, North Africa, and the (Greek and Roman) Mediterranean region
Commodities exported	Spices, semi-precious stones, pearls, diamonds, sapphires, ivory, Chinese silk, etc
Commodities imported	Gold coins, multicoloured textiles, sulphide of antimony, copper, tin, lead, coral, raw glass, wine, etc.
Decline	**Roman trade declined from the 5th century AD**, the port attracted the Persian, Chinese and Arab traders until the devastating floods of Periyar in **1341.**
Recent findings	DNA analysis suggests that the site was first occupied by the **indigenous and 'Megalithic' (Iron Age) people**. A continuous inflow of traders exemplified multicultural mixing in ancient South India.

3. SHILABHATTARIKA

Context:

Researchers at the **Pune-based Bhandarkar Oriental Research Institute in India** have decoded copper plates revealing that the celebrated Sanskrit poetess **Shilabhattarika** was a daughter of the "Satyashraya" **Chalukyan ruler Pulakeshin II**.

- Previously, it was thought that she was the wife of the **8th-century Rashtrakuta ruler Dhruva**
- The title of **"Satyashraya" (patron of truth)** was associated with Chalukyan Emperor, Pulakeshin II of Badami

Works of Shilabhattarika:

It adheres to the **Panchali style** that calls for a balance of words with its meaning. She inspired the Sanskrit **poet-critic Rajashekhara** (who lived in the 9th-10th century CE) and was the court poet of the **Gurjara-Pratiharas** and noted **Marathi poetess, Shanta Shelke** drawn inspiration from **Shilabhattarika's verse** to compose one of her most iconic songs— toch chandrama nabhat (translated as 'it is the same moon in the sky').

What are Copper-plate charters?

They are ancient inscriptions on **copper plates that were used as legal documents** in India during the medieval period. These plates were used to **record land grants, donations, and other royal decrees. This** charter had five plates, held together by a copper ring bearing a beautiful Varaha (boar) seal (trademark of the Badami Chalukyas)

> **About Chalukya dynasty (6th to 12th Century; founder: Pulakeshin I):**
> It was a Classical Indian dynasty that ruled large parts of southern and central India as three related yet individual dynasties— "Badami Chalukyas", ruled from Vatapi (modern Badami), Eastern Chalukyas (from Vengi) and Western Chalukyas (from Kalyani)
>
> **About Pulakeshin II**
> He ruled from **610-642 CE.** He defeated Harshavardhan of Kanauj in a battle near the banks of the Narmada River in 618 CE.

4. RANG GHAR

Context:

The **Rang Ghar amphitheatre** (large open area surrounded by rows of seats sloping upwards) in Assam's Sivasagar district has drawn criticism after a laser show projecting **"religious symbols"** as part of PM's 100th Man Ki Baat episode celebration.

About Rang Ghar:

Rang Ghar is a **historical two-story amphitheatre,** built during the reign of **Swargadeo Pramatta Singha** in the mid-18th century and served as a **royal pavilion and amphitheatre** during the Ahom dynasty. It is considered **Asia's first amphitheatre** and is known for its unique **octagonal shape and architectural features**, including an **inverted boat-shaped roof topped with stone crocodiles**.

5. VAISAKH PURNIMA

Context:

The Ministry of Culture along with the International Buddhist Confederation (IBC) celebrated the auspicious day of **Vaisakh Purnima**.

Vaishakh Buddha Purnima (also known as Vesak or Buddha Jayanti):
- It is the most sacred day of the year for Buddhists all over the world as it marks the **three main events of Lord Buddha's life** -
  - **Birth** (564 BC, Lumbini Province, Nepal),
  - **Enlightenment** [Siddhartha became a Buddha ("enlightened one")], and
  - **Mahaparinirvana** [Kushinagar (India) is said to be the place of death of Gautama Buddha].
- **Since 1999** it has also been recognised by the United Nations as the '**UN Day of Vesak**'.
- This year the Vaishakh Buddha Purnima is being celebrated on **5th May.**
- The festival falls on the **full moon day (Purnima)** in the Hindu month of **Vaishakh** (April or May)

KARMA & REBIRTH

WHO IS BUDDHA?

Karma is the simple act of

cause effect

thought,

It is created by any word or deed conditioned by

DESIRE, HATE, PASSION + ILLUSION

and can reach across lifetimes to bring

REBIRTH (samsara)

Siddhartha Gautama

born in *nepal*

He wanted to understand the meaning of *life,* so he meditated under a tree for

40 days

until he reached

ENLIGHTENMENT

NIRVANA

The final state of *liberation* from the cycle of

LIFE + DEATH

BUDDHISM

4 **NOBLE TRUTHS**

LIFE IS *suffering,*

anything that is **TEMPORARY, CONDITIONAL, OR COMPOUNDED** *of other things*

THE CAUSE OF SUFFERING IS *desire,* attachment to external things to make us happy

TO REMOVE DESIRE

8 follow the **FOLD** *path*

THE END OF SUFFERING IS TO REMOVE DESIRE and achieve enlightenment

6. MRIDANGAM

Mridangam

Context: Karaikudi R Rani, also known as **Karaikudi Mani**, a legendary mridangam vidwan, who dominated the **Carnatic music scene** for half a century passed away recently.

About the Mridangam:

Aspect	Information
Origin	It **originated 2,000 years ago** in various parts of South India
Usage	It is a **popular bifacial drum** used as an accompaniment in South Indian Classical music, particularly **Carnatic music**
Playing Method	It is held across the **lap and played on both ends** with the hands and fingers
Similar Instrument	**Mrdanga, and Tannumai. The Pakhavaj** is a similar instrument played in the Hindustani tradition of northern India, Pakistan, and Bangladesh
Making Process	The body is scooped out of a **single block of wood**, preferably **Jack Wood or Redwood**. It is shaped like a barrel with the right head slightly smaller than the left.

Comparison of Carnatic music and Hindustani music (basis of instruments used):

Aspect	Carnatic Music	Hindustani Music
Melodic Instruments	Veena, Violin, Flute, Nadaswaram, Gottuvadyam, Mandolin, etc.	Sitar, Sarod, Santoor, Bansuri, Shehnai, Harmonium, etc.
Percussion	Mridangam, Ghatam, Kanjira, Thavil, Morsing, etc.	Tabla, Pakhawaj, Dholak, Khol, Naal, etc.
Drone Instrument	Tambura	Tanpura, Swarmandal
Vocalization Style	**Syllabic**, has a fixed tonic and scale, complex rhythmic structures	**Free-flowing, improvisational**, and emphasis on ragas
Music Structure	**Kriti** is the basic structure of Carnatic music	**Raga** is the basic structure of Hindustani music

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7. FRANCE'S BASTILLE DAY CELEBRATIONS

France's Bastille Day

Context: PM Modi thanked the French President for the invitation as Guest of Honour at France's Bastille Day celebrations (on July 14 every year)

About Bastille Day

The **National Day of France**, also known as Bastille Day, is celebrated on **July 14 every year.**

What was Bastille?	The **Bastille was a fortress prison located** in the heart of Paris, which had become a **symbol of royal tyranny and oppression.**
History	The fall of the Bastille is widely considered the **beginning of the French Revolution.** The event also marked the beginning of a **period of intense violence and social upheaval in France.**
French Revolution (1789 – 1799)	A significant period of **social and political upheaval** in France was characterized by the overthrow of the **French monarchy**, the establishment of a republic, and the execution of thousands of people, including **King Louis XVI** and **Queen Marie Antoinette.**
Significance	The fall of the Bastille symbolized **the people's victory over the monarchy and the end of the old regime.** The event led to the **abolition of feudalism**, the **Declaration of the Rights of Man and Citizen**, and the establishment of the **First French Republic.**
Global Importance	The principles of **liberty, equality, and fraternity** espoused during the French Revolution have had a profound impact on the world's political and social landscape. These values have **influenced many other revolutionary movements** throughout history.

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URBANIZATION, THEIR PROBLEMS AND THEIR REMEDIES

8. DIGITAL TWINS

Context: India may soon join the ranks of cities and countries such as Singapore, Yingtan in China, Dubai, Saudi Arabia, etc. that have built digital twins to **enhance their efficiency, coordination and governance.**

About digital twins:

It is a **three-dimensional (3D) virtual representation** of a city or system that provides real-time insights into the performance, operation, or profitability of a city. For example, let's say a city government wants to develop **a new transport system**. By creating a digital twin of the city, they can **simulate the transport system** and see how it will function in real-world conditions.

Purpose	To improve **efficiency, coordination, and governance** of cities. E.g., digital twins can be used to **optimize traffic flow and reduce congestion**, improve the efficiency of public transportation systems, manage energy consumption, monitor air and water quality, and identify areas that are vulnerable to natural disasters.

Benefits	Enables better planning of infrastructure at lower costs. Can support climate-smart cities or green infrastructure. Can improve healthcare, education, agriculture, and other areas
Challenges	Requires large amounts of data collection and processing. Can be costly and time-consuming to develop. Requires expertise in data analysis and 3D modelling
Future potential	Could revolutionize the way we plan and manage cities. Could improve the quality of life for urban residents. This could lead to more sustainable and efficient use of resources

Deepest Blue Hole	Dragon Hole (Longdong) in the South China Sea
Overall Largest Blue Hole	Great Blue Hole, located 100 kilometres from the coast of Belize, is 300 meters wide and 125 meters deep

IMPORTANT GEOPHYSICAL PHENOMENA/GEOGRAPHY

9. BLUE HOLE

Information
The blue hole is the second deepest **marine sinkhole or cavern** discovered in Chetumal Bay, off the coast of the Yucatan Peninsula in Mexico

| Colour	Dark blue, caused by the high transparency of water and bright white carbonate sand
Water Circulation	Poor, commonly anoxic below a certain depth
Sea Life	**An unfavourable environment for most sea life** can support large numbers of bacteria that live off sulfur compounds
What are Blue Holes	They are **large, undersea vertical caves or sinkholes** found in coastal regions.
Karst formation	Blue Holes are found on **coastal karst platforms** around the world. They are formed by the **dissolution of soluble rocks** such as limestone, dolomite, or gypsum

10. SEAMOUNTS

Context: Scientists have discovered 19,325 new seamounts through new high-resolution data, adding to the 24,000 seamounts already mapped in a 2011 census

	Information
Seamounts are underwater mountains formed through volcanic activity and are recognized as hotspots for marine life.	
Formation	Near mid-ocean ridges, intraplate hotspots, or oceanic island chains
Mapping	Echo sounders/multibeam sonar on ships for topographic mapping, or satellite altimetry for gravity-field mapping
Importance	Provide information about mantle composition and tectonic plate evolution, influence ocean circulation and absorption of heat/CO2, and support diverse biological communities
Example	Emperor Seamounts, a chain of seamounts in the Pacific Ocean
India's contribution	The SARAL satellite, developed in collaboration with France, helped expand the seamount catalogue through improved radar noise reduction
Seamounts Vs Guyots	Seamounts differ from Guyots, which are also formed from undersea volcanoes but were once above the surface of the ocean and have since submerged to form flat-topped undersea mountains.

Seamount | Volcanic Island | Marine Erosion | Guyot

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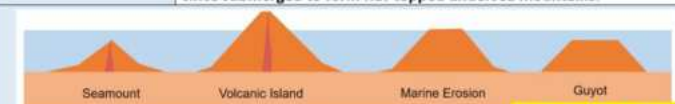
11. NORTHERN LIGHTS IN INDIA

Context: The Indian Institute of Astrophysics in Bengaluru recently captured a rare occurrence of aurora in Ladakh, India, on camera. This is the first time that such an occurrence has been witnessed in Ladakh

About Aurora		
Auroras, also known as polar lights, are a natural phenomenon that occurs in the high-latitude regions of the Earth's atmosphere, particularly in the Arctic and Antarctic regions.		
Cause	Auroras occur when charged particles from the Sun collide with gases in the Earth's atmosphere, producing a display of light in various colours, shapes, and patterns in the high-latitude regions of the Earth.	
Location	High-latitude regions (Arctic and Antarctic)	
Colour	Milky greenish (can also show red, blue, violet, pink, and white)	Visit Insights IAS Daily Current Affairs
North Pole	Aurora Borealis/Northern Lights are visible from the US (Alaska), Canada, Iceland, Greenland, Norway, Sweden & Finland.	
South Pole	Aurora Australis/Southern Lights visible from Antarctica, Chile, Argentina, New Zealand & Australia.	
Other planets	Auroras can occur on other planets if they have an atmosphere and magnetic field. Recently, discrete auroras were observed on Mars by the HOPE spacecraft.	
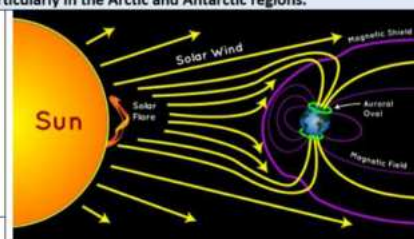
12. HEAT INDEX

Context: The **India Meteorological Department (IMD)** has announced plans to **launch a composite index** next year to **measure the impact of heat** on India's population.

About Heat Index:

Topic	Information
What is the heat index?	The heat index is the **combination of air temperature and relative humidity**, it is the measure of how hot it really feels when relative humidity is factored in with the actual air temperature.
Aim of the new index	To **quantify the impact of heat on its population** and generate impact-based heatwave alerts for specific locations.
Parameters to be used	Temperature, humidity, wind, and duration of exposure
Significance	The analysis will help **generate heat hazard scores**, which will be used as thresholds to issue **impact-based heatwave alerts** for specific locations.
Heat Waves in India	According to IMD data, there was a **24% increase** in the number of heat waves during 2010-2019 compared to 2000-2009. Between 2000 and 2019, the mortality rate for **tropical cyclones decreased by 94%** whereas it **increased by 62%** for heat waves. Heat waves is **not notified as a natural disaster** at the national level in the country.
Impact of heat waves	Heat waves cause **cramps, exhaustion, stress, heat stroke** and very severe heat waves even lead to death. The elderly, children, and people with heart and respiratory problems, kidney diseases and psychiatric disorders are particularly affected. Extreme periods of high temperatures can lead to a significant reduction in crop yields and cause reproductive failure in many crops.

About IMD: The **India Meteorological Department (founded: 1875; HQ: New Delhi; Ministry of Earth Science)** is the **principal agency responsible** for meteorological observations, weather forecasting and seismology in India

GS PAPER 2

INDIAN CONSTITUTION—HISTORICAL UNDERPINNINGS, EVOLUTION, FEATURES, AMENDMENTS, SIGNIFICANT PROVISIONS AND BASIC STRUCTURE.

1. ARTICLE 355

Article 355

Context: The Centre has taken control of security in Manipur (by allegedly invoking Article 355)

Aspect	About Article 355
Definition	Article 355 empowers the Union government to protect every state in India against external aggression and internal disturbances.
Article 356 Vs Article 355	Article 356 empowers the President to impose President's Rule in a state in case of a failure or breakdown of constitutional machinery, while Article 355 empowers the Union government: • To protect every state in India against external aggression and internal disturbances • To issue directions to any state to ensure compliance with the Union's laws and regulations
Part of Constitution	Part XVIII of the Indian Constitution, titled "Emergency Provisions"
Principle	Based on the principle of "duty to protect" enshrined in the Constitution
Restrictions	• Directions can only be given when there is a failure of the state machinery to comply with or give effect to any Union law or regulation • Should be of an urgent nature • May not extend beyond the necessary period for remedying the failure • State government should be given an opportunity to submit its views before issuance
Duration	Not specified in the Constitution.
Withdrawal	Can be withdrawn by the Union government when the situation is normalized or the state government requests it to do so.
Circumstances of imposition	Failure of the state to comply with the Union's directions; threat to the security of India; threat to unity and integrity of India due to violent activities by any group or organization; request for assistance from the Union to maintain public order when the situation in the state cannot be controlled by the state's own forces.
Scope of judicial review	The satisfaction of the President in invoking Article 355 is subject to judicial review and can be challenged in court if it violates any fundamental rights or constitutional provisions.

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Clashes in Manipur

Issue	Explanation
Hill-Valley Tensions	The central valley of Manipur (10% of the geographical area of Manipur) is home to the Meitei and Meitei Pangals who constitute roughly 64% of the state's population. The remaining 90% of the state's geographical area comprises hills surrounding the valley, which are home to the recognized tribes (e.g., Kuki and Nagas), making up about 35% of the state's population.
Meitei Demand for ST Status	The Meitei community (living in the valley) wants to be included in the state's Scheduled Tribes list. The demand has been led by the Scheduled Tribes Demand Committee of Manipur (STDCM) since 2012. They argue that being left out of the ST list has caused the community to be victimized without any constitutional safeguards.
Manipur High Court Order	A single judge of the Manipur High Court passed an order asking the government to consider the demand of the Meitei community for ST status. The order has been opposed by tribal groups in the state.
The opposition	Both the demand and the order, passed by a single judge of the High Court, have been strongly opposed by groups representing the state's tribal communities (living in Hills)
Reason behind opposition	Opposition to the inclusion of the Meitei in the Scheduled Tribe (ST) category by hill tribe in Manipur is due to: • Meitei's dominant population and political representation (40 out of 60 Assembly constituencies of the state are in the valley) • Fear of job loss for hill tribes • Meitei language is already included in the 8th Schedule and sections of the Meitei community are already classified as Scheduled Castes or Other Backward Classes with access to opportunities associated with that status.

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DOCTRINES/JUDICIARY

2.HATE SPEECH

Context:
The Supreme Court of India has directed **all states to register FIRs** (First Information Reports) against hate speech incidents and proceed against the offenders without waiting for someone to lodge a complaint.

About Hate Speech:

Topic	Information
Definition	An **incitement to hatred primarily against a group of persons** defined in terms of race, ethnicity, gender, sexual orientation, religious belief, etc.
Forms	Any form of expression including **words, images, cartoons, objects, gestures, and symbols,** can be disseminated offline or online.
Current Status in India	Hate speech **has not been defined** in any law in India. However, IPC, 1860 sections like 153A, 153B, 298, etc. deal with speech or words that could create **mischief or cause imputations** to national integration.
Proposed Legislation	The Law Commission of India has proposed two new sections, **Section 153C, and Section 505A in IPC to criminalize hate speech specifically**.
Rise in Cases	According to the National Crime Records Bureau (NCRB), there has been a **huge increase in cases registered to promote hate speech** and foster animosity in society. As there were only 323 cases registered in 2014, it had increased to 1,804 cases in 2020.
Punishment	The punishment for hate speech **is not defined in Indian law.** However, the Supreme Court has stated that hate speech statutes aim to **prevent prejudice and ensure equality.**
Hate Speech Vs Blasphemy	Hate speech laws aim to **prevent prejudice and ensure equality**, while **blasphemy** laws prohibit **criticism of religion**, which is incompatible with the principles of democratic societies. **Section 295(A) of the IPC** punishes any speech, writings, or signs that insult citizens' religion or religious beliefs with a fine and **imprisonment for up to three years**.

3. USE OF REGIONAL LANGUAGE IN COURTS

Context:
Union Law Minister has stated that regional languages should be used in courts in every state.

About the Languages to be Used in Courts in India:

	Courts
Article 348(1)(a)	Unless Parliament by law provides otherwise, all proceedings before the **Supreme Court and in every High Court** shall be conducted in **English**.
Article 348(2)	The Governor of a state may, with the previous consent of the President, authorise the use of **Hindi or any other language** used for any official purpose, in proceedings in the High Court except for any final judgement, decree or order (which has to be in English) E.g., the States of **Uttar Pradesh, Bihar, Rajasthan and Madhya Pradesh** have already authorised the use of Hindi
Official Languages Act 1963	It empowers the **Governor of a state to, with the previous consent of the President, authorise the use of Hindi/the official language of the state**, in addition to English, for the purpose of any judgement, decree or order passed by the High Court of that state. However, the judgement should follow an English translation.
Subordinate Courts (District Courts, etc.)	Regional language determined by the state government

STATUTORY, REGULATORY AND VARIOUS QUASI-JUDICIAL BODIES.

4. CANTONMENTS

Context:
The Indian Army is planning to **merge civilian areas at cantonments with municipal corporations and municipalities a**nd designate them as **military stations.**

What is the plan?
Plan is to carve out the military areas in cantonments and convert them into **"exclusive military stations"** with the Army exercising **"absolute control"** over them. The civilian

areas, in turn, will be merged with the **local municipalities so as to provide** them with the benefits of various government schemes.

- The first cantonment to be renamed a military station is **Yol in Himachal Pradesh**
- **Not all cantonments** will become military stations as some army and civilian pockets are intertwined.

What are the issues with Cantonments?

Cantonments have **strict restrictions on construction, road use, and common area occupation, causing tension between civilians and the military**. Civilians face challenges in obtaining home loans and accessing government schemes. Even basic renovations require multiple permissions.

About Cantonment:

	Information
Definition	A proclaimed area under the **Cantonments Act, 2006,** governed and controlled by the central government of India to provide municipal services for civilians living in the area.
Categories	Cantonment Boards are categorized into four categories based on population: Category I (>50,000), Category II (10,000-50,000), Category III (2,500-10,000), and Category IV (<2,500).
Authority	Cantonment Board is an authority under the Ministry of Defence.
Composition	**Consists of eight members**: three ex-officio members, three nominated military members (garrison engineer, station commander, and senior executive medical officer), and one representative of the district magistrate.
Services Provided	Sanitation, primary education, street lighting, water supply, maintenance of roads, bridges, and public hospitals.
Cantonments vs Military station	Cantonments are **civilian areas** that are under the **control of the military**, and they usually have a **civilian population living in them** as well. **Military stations**, on the other hand, are **purely military areas** where only military personnel and their families reside.

5.PREVENTION OF MONEY LAUNDERING ACT (PMLA)

Context:

To further tighten its control of practising accountants, the Centre has brought within the ambit of the **PMLA** their "financial transactions".

What are the new rules?

- Chartered accountants, company secretaries, etc., will now be required to **go through the Know Your Company (KYC) process before commencing work.**
- This implies accountants are now **reporting entities** if they are managing their clients' money.

Significance:

The move aims at curbing fraudulent practices by which accountants allegedly help their clients to launder money.

Need:

The efforts are being taken ahead of the assessment of India under the **Financial Action Task Force (FATF)** - a global regulator that assesses country compliance in tackling global money laundering and terror financing.

What does the PMLA say about reporting entities?

They are required to maintain a record of all transactions and furnish them to **financial intelligence units** (FIUs).

Prevention of Money Laundering Act (PMLA)

The Act was enacted in 2002 in response to India's global commitment (including Vienna Convention) to combat money laundering.

Ministry of Finance, Government of India
Department of Revenue

Financial Intelligence Unit — Special Court — Punishment for Money-Laundering — Adjudicating Authority — Burden of Proof — PMLA Salient Features

The PMLA enables authorities to:
- **Confiscate the property** earned from illegally gained proceeds.
- **Appoint the Adjudicating Authority and Appellate Tribunal** to deal with the matter connected with money laundering
- **The act adds the concept of 'reporting entity'** which would include a banking company, financial institution, intermediary etc.

Appellate Tribunal
- **Composition:** Chairperson+ Two other Members
- **Qualifications:** For Chairperson (Should have been a Judge of the Supreme Court or qualified to be judge of a High Court); For Member (A member of the Indian legal service/revenue service/ economic service/ etc.)
- **Tenure:** Term of five years or till the age of 65 years, whichever is earlier.
- **Functions:** It hears appeals against the orders of the Adjudicating Authority and the authorities under the PMLA.

Enforcement Directorate (ED) (est. 1956, HQ: New Delhi) is a multi-disciplinary organization mandated to enforce PMLA.

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WELFARE SCHEMES FOR VULNERABLE SECTIONS OF THE POPULATION BY THE CENTRE AND STATES AND THE PERFORMANCE OF THESE SCHEMES; MECHANISMS, LAWS, INSTITUTIONS AND BODIES CONSTITUTED FOR THE PROTECTION AND BETTERMENT OF THESE VULNERABLE SECTIONS.

6. TWENTY POINT PROGRAMME

Context:

The Indian government has **achieved more than 90% target completion** in six out of 14 parameters under the **Twenty Point Programme**, according to data from the Ministry of Statistics and Programme Implementation.

What is Twenty Point Programme?

The Twenty Point Programme (TPP) (initially launched in 1975, and restructured in 1982, 1986, and 2006) is a package of government programs, with the aim of improving the quality of life in rural areas. The program includes a **range of schemes related to poverty alleviation**, employment generation, education, health, housing, and environmental protection.

Monitoring: The Ministry of Statistics and Programme Implementation (MOSPI) monitors the performance of the TPP based on reports received from state governments and central nodal ministries.

ISSUES RELATING TO DEVELOPMENT AND MANAGEMENT OF SOCIAL SECTOR/SERVICES RELATING TO HEALTH, EDUCATION, HUMAN RESOURCES.

7. 'POSHAN BHI, PADHAI BHI' CAMPAIGN

Context: The government plans to focus on **early childhood care and education in 14 lakh Anganwadi centres**, reimagining them as **pre-schools** providing early learning opportunities, according to the **'Poshan Bhi, Padhai Bhi' campaign** launched by the Women and Child Development Minister Smriti Irani in September 2022.

About the "Poshan Bhi, Padhai Bhi" campaign for Early Childhood Care and Education (ECCE):

Aspect	Details
Target Age Group	Children under **6 years**, especially under 3 years
National Education Policy	**Prioritizes foundational literacy** and numeracy with emphasis on Child's Mother tongue
Recommendations of High-Level Task Force on ECCE (2022)	**"Rebranding of anganwadis"** with upgraded infrastructure; Re-designation of **Anganwadis workers as Anganwadi teachers**, and **helpers as childcare workers; Creche facilities** for children under 3 years; Develop **common curriculum across different models** and emphasis on education in child's mother tongue.
What is Early Childhood?	It refers to the **formative stage of the first six years of life,** with well-marked sub-stages and age-specific needs.
What is Anganwadi?	Anganwadi is a **type of rural child care centre** that serves as a **crucial link between the government and the rural population**, particularly pregnant women, new mothers, and **children under the age of six**. Anganwadi centres provide **basic health care, nutrition, and early childhood education services** to women and children in their respective villages.

INTERNATIONAL RELATIONS, NEWS & ORGANIZATIONS

8. KALADAN MULTIMODAL TRANSIT TRANSPORT PROJECT (KMTTP)

Context:

India has officially begun the **operation of the Sittwe Port in Myanmar** by flagging off a vessel containing **1,000 metric tonnes of cement** from the Syama Prasad Mookerjee Port in Kolkata.

About Kaladan Multimodal Transit Transport Project (KMTTP):

Kaladan Multimodal Transit Transport Project (KMTTP) connects the eastern Indian seaport of **Kolkata with the Sittwe seaport in Rakhine State**, Myanmar by sea. In Myanmar, it will then link the **Sittwe seaport to Paletwa in Chin State via the Kaladan river** boat route, and then from Paletwa by road to Mizoram state in Northeast India.

Route	Kolkata (India) - Sittwe (Myanmar) - Paletwa (Myanmar) - India-Myanmar border	
Significance	Reduce distance from **Kolkata to Sittwe** by approximately 1328 km; reduce the need to transport goods through the narrow Siliguri corridor; create an alternative route to connect northeast and mainland India	
Status	Under construction; Sittwe port expected to be operational by early next year	

9. WASHINGTON DECLARATION

Context:

South Korean President Yoon Suk Yeol **visited the U.S. on April 25** to celebrate the **70th anniversary of U.S.-South Korea bilateral relations**. During the visit, the two countries signed the "**Washington Declaration**," which focuses on nuclear deterrence strategy.

About Washington Declaration:

Dimension	Description
Purpose	The Washington Declaration is an **agreement signed between the United States and South Korea,** outlining a joint nuclear deterrence strategy.
Measures	The declaration specifies several measures that the two countries will take in cooperation towards deterrence, including: • Deployment of an **American nuclear ballistic submarine** in the Korean peninsula • Formation of a **nuclear consultative group** to formulate principles of joint response tactics • Strengthening of **South Korea's nuclear deterrence capabilities**
Non-proliferation	The declaration reaffirms that **South Korea would not make its own nuclear capabilities** and would instead focus on deterrence measures through an alliance-based approach.
Nuclear Consultative Group	The declaration makes it possible for the US and South Korea to establish a **Nuclear Consultative Group (NCG)** similar to the one that exists between the US and NATO. Through this group, South Korea can have **more control over nuclear response planning** and coordination, although the nuclear weapons will be under the exclusive control of the US.
Authority	The declaration mandates the **U.S. President as the only 'sole authority'** to use the nuclear arsenal of the U.S. in the event of a nuclear confrontation.
Criticisms of the Declaration	The Washington Declaration (WD) has been criticized for **not achieving anything substantial and only reiterating** what was already inherent in the US-South Korea alliance. China and North Korea have criticized the agreement.
Significance for India	While India is not a direct participant in this agreement, the Washington Declaration reinforces the **US commitment to its allies and partners** in the Indo-Pacific, including India, and could **strengthen the Quad alliance.**

GS PAPER 3

ECONOMY, BANKING/ FINANCIAL INCLUSION, ENERGY, INFRASTRUCTURE

1. CLEARING CORPORATIONS

Context:
The European Securities and Markets Authority (ESMA), the European Union's financial markets regulator and supervisor, has **derecognised six Indian central counterparties** (CCPs) from April 30, 2023.

What are Clearing corporations (CC)?
CC is an organization associated with an exchange to handle the confirmation, settlement, and delivery of transactions in a prompt and efficient manner.

Examples of CCs:
The CCPs are The Clearing Corporation of India (CCIL), Indian Clearing Corporation Ltd (ICCL), NSE Clearing Ltd (NSCCL), Multi Commodity Exchange Clearing (MCXCCL), India International Clearing Corporation (IFSC) Ltd (IICC), and NSE IFSC Clearing Corporation Ltd (NICCL).

Why has ESMA derecognized Indian CCs?
The decision to derecognise Indian CCPs came due to **'no cooperation arrangements'** between ESMA and Indian regulators – the Reserve Bank of India (RBI), the Securities and Exchange Board of India (SEBI) and the International Financial Services Centres Authority (IFSCA).

Impact:
As per the European Market Infrastructure Regulations (EMIR), a CCP in a third country can provide clearing services to European banks only **if it is recognised by ESMA**. With the withdrawal of recognition, these CCPs will **no longer be able to provide services to clearing members** and trading venues established in the EU.

Government's stand – ESMA's threat is unreasonable since all clearing corporations are well-regulated in India.

2. STARTUP INDIA SEED FUND SCHEME

Context:
The Department for Promotion of Industry and Internal Trade (DPIIT) is conducting a **third-party impact assessment** of the Startup India Seed Fund Scheme to evaluate its performance in benefiting the startup community.

About Startup India Seed Fund Scheme (SISFS):

Aspect	Details
SISFS was created by DPIIT, Ministry of Commerce and Industry in **2021**. It aims to provide financial assistance to start-ups for proof of concept, prototype development, product trials, market-entry, and commercialization.	
Eligibility	Startups recognized by DPIIT incorporated **not more than 2 years ago** at the time of application, have not received **more than Rs. 10 lakhs** of monetary support under any other Central or State Government scheme.
Preference	Startups create innovative solutions in sectors such as social impact, waste management, water management, etc.
Grants and Support	Grants of up to **Rs. 5 crores are provided to eligible incubators**, which in turn provide grants of up to **Rs. 20 lakhs to startups** for validation of proof of concept, prototype development, or product trials.
Estimated Beneficiaries	3,600 entrepreneurs through 300 incubators in the next 4 years
What is Seed funding?	Seed Funding is an **early stage of investment in a start-up** or a new business idea to help the company reach a point where it can **secure additional rounds of funding** or generate revenue to become self-sustaining.

3. BUSINESS READY PROJECT

Context: The World Bank Group has launched its Business Ready project. It replaces the World Bank Group's earlier Doing Business project.

	Business Ready Project	Doing Business Project
Objective	To assess the business and investment climate in up to 180 economies in a transparent and fair way	To evaluate the standpoint of private sector development as a whole
Criteria	• Business Entry • Business Location • Utility Services • Labour • Financial Services • International Trade • Taxation • Dispute Resolution • Market Competition • Business Insolvency	• Starting a business • Dealing with construction permits • Getting electricity • Registering property • Getting credit • Protecting minority investors • Paying taxes • Trading across borders • Enforcing contracts • Resolving insolvency
Scope	Covers 54 economies in the first year, expected to scale up to 180 economies by 2025-26	--
Approach	Reflects a more balanced and transparent approach towards evaluating a country's business and investment climate.	Overall approach and methodology were not as transparent or well-documented
Publication	The first report is to be published in Spring 2024, with subsequent reports expected annually	Reports were published annually, with the last report released in 2020. It was scrapped in 2021 after a probe revealed that rankings for China, Saudi Arabia, UAE, and Azerbaijan had been altered

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## 4. COAL PRODUCTION IN INDIA

Context:
The Ministry of Coal in India has formulated an ambitious Action Plan for FY 2023-24, aimed at enhancing the production, efficiency, sustainability, and new technologies in the coal sector.

Major points of the Coal Ministry Action Plan 2023-24:

Area of Focus	Key Objectives
Coal Analytics	Achieve the coal production target of **1012 MT** for FY 2023-24. Increase coal production and efficiency. Formulate a **coking coal strategy** to enhance coking coal availability in the country. Improve the quality of coal
Private Investment	Achieve CAPEX target of **Rs 21030 Crores** for FY 2023-24. Monetize assets. **Allocate 25 new coal mines** for commercial mining in FY 2023-24
Infrastructure Projects	Monitor **new railway line projects** critical for **coal evacuation**. Adopt a **Coal Logistics Policy/Plan** for effective and environmentally friendly transport of coal
Safety in Mines	Ensure the **best safety standards** in coal mines. Conduct safety management & response drills. Scientifically close mines to restore ecological balance
Technology Push to Coal	Implement technology roadmap in the coal sector. Promote clean coal technology such as **Coal to Hydrogen, Coal & Lignite gasification, and CBM/CMM.**
Sustainability in Coal Sector	Develop **eco-parks/mine tourism**. Utilize mine water/overburden and implement energy-efficient measures

About Coal Sector in India:
India has the **fifth largest coal reserves, is** second in coal production (after China) and is among the largest importer of coal (mainly from Indonesia, South Africa and Australia). Coal accounts for almost **50% share in the total installed electricity generation** capacity in India.

INDIA
Coal Reserves
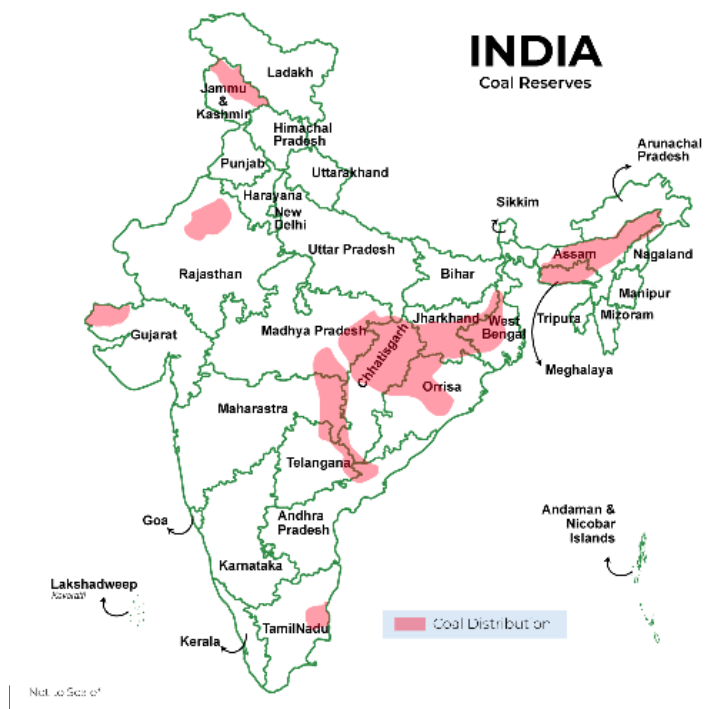
SCIENCE AND TECHNOLOGY

5. LISTERIA MONOCYTOGENES BACTERIA

Context:
The United Kingdom Food Standards Agency (FSA) has issued a recall for several Cadbury-branded dessert products due to potential contamination by Listeria monocytogenes bacteria.

What are Listeria monocytogenes bacteria?
Listeria monocytogenes is a type of bacteria that can cause infection in humans and animals. It is commonly found in soil, water, and some animals' intestines. Listeria is typically spread through contaminated food, particularly ready-to-eat foods such as cooked meats, dairy products, and fresh produce.

Symptoms: Symptoms of a Listeria infection can include high temperature, muscle ache or pain, chills, feeling or being sick, and diarrhoea.

Impact: Listeriosis, the illness caused by Listeria infection, can lead to serious complications, such as meningitis, sepsis, and miscarriage.

6.BIOSYNTHETIC CLOCK

Context:

Scientists have discovered that the **ageing process of cells** is controlled by a genetic regulatory circuit that can be manipulated to extend their lifespan.

This circuit functions **like a clock, guiding the cell through two distinct pathways of ageing**. By manipulating this circuit, scientists have been able to generate a **negative feedback loop that slows** down the cell's degeneration, leading to a significant extension of cellular lifespan.
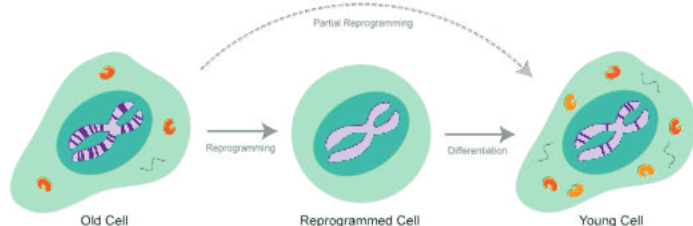
Significance:

This research may have important implications for improving human health and treating age-related diseases in the future.
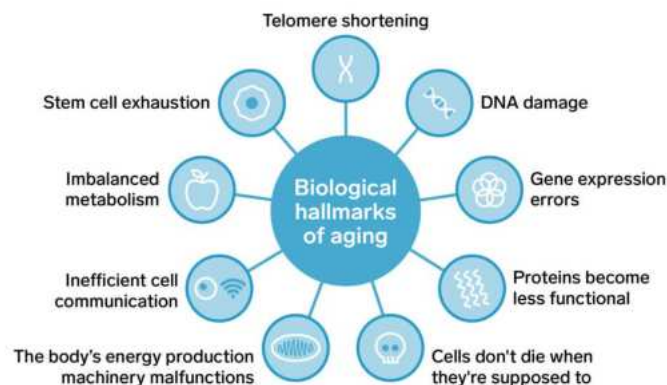
Source: Cell Journal

Insider Inc.

SPACE TECHNOLOGY

7. STARBERRYSENSE

Context:

The Indian Space Research Organization (ISRO) recently launched a new low-cost star sensor called **StarBerrySense** on board **PSLV C-55**.

About StarBerrySense:

Purpose	Low-cost star sensor for astronomy and **small CubeSat class satellite missions**
Developed by	Indian Institute of Astrophysics (IIA)
Technology	**An electro-optical system** that takes an image from a set of stars and determines the angle deviation of the satellite by comparing it with the star catalogue

Components	Baffle, optical system, detector, electronic and image processing system
Platform	Raspberry Pi Zero
Cost	**Less expensive than other star sensors** on the market by less than **10%** based on readily available commercial/off-the-shelf components
Benefits	Cost-effective, simple to build, can be deployed on a wide variety of satellites
About POEM	The PSLV Orbital Experimental Module (POEM) is a platform developed by the **Indian Space Research Organisation (ISRO)** to carry small payloads for in-orbit testing and validation of technologies.
About the Indian Institute of Astrophysics	The IIA (under Dept. of S&T; est.1971) is a **premier research institute** in India dedicated to the study of astronomy, astrophysics, and related fields. It has several observational facilities including the **Hanle Observatory** in Ladakh, Jammu, and Kashmir.

AGRICULTURE

8. PESTICIDES IN TEA

Context:

The Food Safety and Standards Authority of India (FSSAI) has put in place **a maximum residue limit (MRL) for five pesticides** used in tea plantations.

- These pesticides are **emamectin, benzoate, fenpyroximate, hexaconazole, propiconazole and quinalphos**.

Topic	Information
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.
Int'l Tea Day	May 21st every year (designated by the UN 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.
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 Nigiri tea being among the finest in the world.
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. 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.

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9.KRISHI MAPPER

Context:

At the **National Conference on Agriculture for Kharif Campaign 2023-24**, the Union Agriculture Minister of India launched Krishi MApper.

What is Krishi Mapper?

It is an **integrated mobile application** developed by the Indian government for the agriculture sector. It provides geospatial data and other relevant information to farmers, policymakers, researchers, and other stakeholders in the agriculture sector.

Features: The app allows users to **access information on soil health, weather, crop health, crop suitability, land use,** and other relevant data for informed decision-making.

Aim: It is aimed at **enhancing the productivity and profitability of Indian agriculture**, promoting sustainable agricultural practices, and ensuring food security for the nation.

Other Related Information:

- The ministry has set national targets for the production of food grains, pulses, and oilseeds at **3320, 292.5, and 440 lakh tonnes**, respectively, for the year 2023-24.
- India had a **record production of food grains, pulses, oilseeds, and sugarcane in 2022-23**, estimated at 3235, 278, 400, and 4688 lakh tonnes, respectively.
- **Mustard Mission** for the last three years, has enhanced rapeseed and mustard production by 40% from **91.2 to 128.2 lakh tonnes**.

HEALTH

10.RESPIRATORY SYNCYTIAL VI-RUS (RSV) VACCINE

Context:

The US Food and Drug Administration (FDA) has approved the **first-ever respiratory syncytial virus (RSV) vaccine,** developed by UK-based pharmaceutical company GSK, for use in people aged 60 years and older.

About respiratory syncytial virus (RSV):

Topic	Description
What is RSV?	Respiratory syncytial virus (RSV) is a **common virus that can cause mild to severe respiratory illness,** especially in young children and older adults.
Transmission	RSV spreads through **respiratory secretions**, such as from **coughing or sneezing,** or by touching contaminated surfaces or objects.
Symptoms	RSV can cause symptoms such as **coughing, wheezing, fever, runny nose**, and difficulty breathing.
Venerable	Infants, older adults, and people with weakened immune systems are most at risk for severe RSV infection.
How is RSV diagnosed?	RSV can be diagnosed through a respiratory sample, such as from a nasal or throat swab, that is tested in a laboratory.
How is RSV treated?	Treatment for RSV is mainly **supportive, such as with fluids, oxygen therapy, and fever reducers**. Severe cases may require hospitalization.

ENVIRONMENT, CLIMATE & CON-SERVATION

11. STAR RATING SYSTEM FOR WATER TAPS, AND SANITARY FIX-TURES: BHARAT TAP

Context:

The Indian government is planning to introduce a star rating system for water fixtures called Bharat Tap, which will include **ratings of 3, 4, and 5 stars** based on water efficiency.

About the Bharat Tap initiative:

Details	
Bharat Tap is a **collaborative effort** for water fixtures (similar to the ratings of electrical appliances) to drive water efficiency	
Objective	To provide **low-flow, sanitary ware at scale and reduce water consumption** at the source
Estimated water saving	Approximately 40%
Benefits	Water and energy saving due to less water and energy required for pumping, transporting, and purification
Formulated under	**AMRUT 2.0** (Atal Mission for Rejuvenation and Urban Transformation)
Collaborators	Indian Plumbing Association (IPA) and manufacturers
About AMRUT 2.0	It is a **five-year program** launched **in October 2021** and will continue until 2025-26. It is an extension of the AMRUT mission (launched in 2015) with the goal of **providing every household with access to a tap** with a guaranteed supply of water and a sewer connection.

12. GREAT NICOBAR ISLAND (GNI) PROJECT

Context:

Citing alleged violations under the FRA 2006, the NCST has flagged alleged discrepancies with respect to the forest clearance granted for the GNI Project.
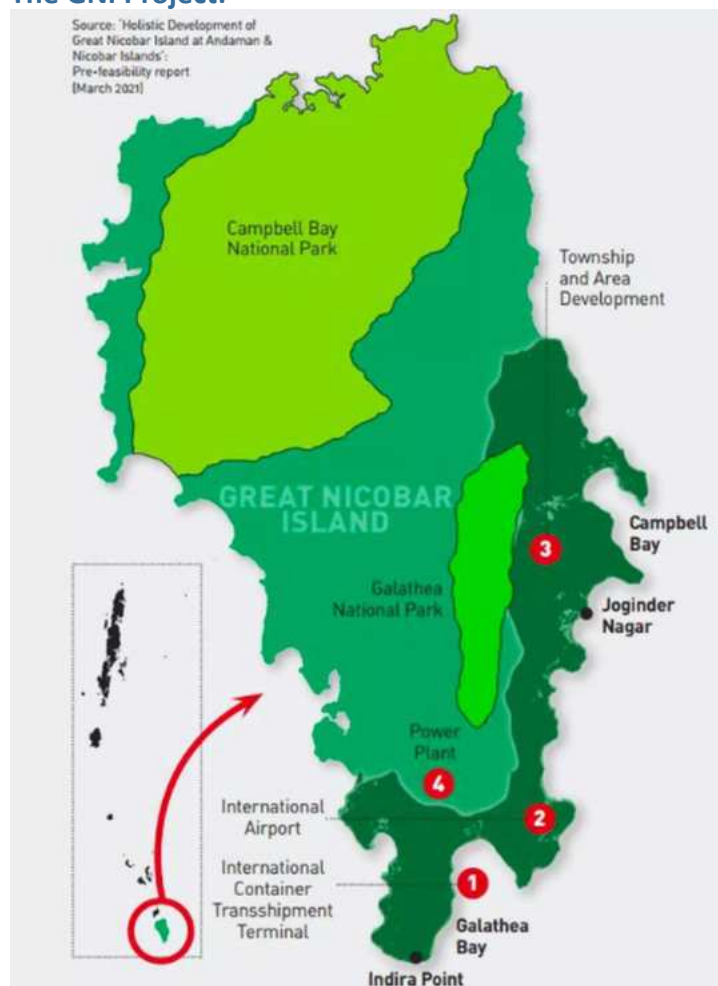
Background:

- **The Stage-1 clearance** for the project was granted in October 2022, two years after the application was received.
- The Ministry of Tribal Affairs shows that the island administration **neither recognised nor granted ownership of any forest land to local tribes** as per FRA before Stage-I clearance was granted.
- According to the **Forest Conservation Rules 2017**, any diversion of forest land would first require the District Collector to recognise and vest rights to locals under the FRA.

The justification of the A&N administration:

- The power of notification and de-notification of the land as a Tribal Reserve is solely administered under the **A&N Islands (Protection of Aboriginal Tribes) Act, 1956.**
- So there is no claim as such for settlement under the FRA 2006.

The GNI Project:

Source: 'Holistic Development of Great Nicobar Island at Andaman & Nicobar Islands': Pre-feasibility report [March 2021]

- It is **a ₹72,000-crore mega project piloted by NITI**

Aayog for the "holistic development" of the Great Nicobar Island (GNI), **situated at the southern end** of the A&N group of Islands in the Bay of Bengal.
- It is being implemented by the Andaman and Nicobar Islands Integrated Development Corporation (**ANIIDCO**).
- **The plan has four components** -
  - A ₹35,000 crore transhipment port at Galathea Bay,
  - A dual-use military-civil international airport,
  - A power plant, and
  - A township

Concerns:

- The project intends to use about **7.114 sq. km of tribal reserve forest land**, where the **Shompen** (a PVTG) and the **Nicobarese reside**.
- The northern end of the project falls in the **biosphere reserve.**

National Commission for Scheduled Tribes

NCST is a **constitutional body** set up by amending **Article 338** and by inserting a new article **338A** in the Constitution (89th C.A Act) in 2004.

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Legal Provisions	Composition	Powers
Erstwhile National Commission for Scheduled Castes and Scheduled Tribes was replaced by two separate Commissions (in 2004) namely: • The National Commission for Scheduled Castes (NCSC) • The National Commission for Scheduled Tribes (NCST)	A **Chairperson** (rank of Union Cabinet Ministers) + a **Vice-Chairperson** (rank of a Minister of State) + 3 other Members (rank of a secretary) • At least one member should be a **woman** • **Terms**: 3 years. • The members are **not eligible for appointment** for more than **two terms**. • Appointment: By the President by warrant under his hand and seal.	• **Article 338A**: It gives powers to the NCST to oversee the implementation of various **safeguards** provided to STs. • NCST **participates and advises** in the planning process of socio-economic development of the STs • NCST **presents to the President reports** upon the working of the safeguards.

13. ADB'S IF-CAP

Context:

The Asian Development Bank (ADB) has announced the **Innovative Finance Facility for Climate in Asia and the Pacific (IF-CAP) program** to accelerate climate change financing in the region.

Parameter	Details
IF-CAP is the **first-of-its-kind multi-donor financing partnership facility** with the goal of scaling-up finance for accelerated action against climate change in Asia and the Pacific.	

Launch	Announced on 2 May 2023
Owner	Asian Development Bank (ADB)
Initial Partners	Denmark, Japan, the Republic of Korea, Sweden, the United Kingdom, and the United States
Benefits	1. The multiplier effect of **up to $5 in much-needed climate finance for every $**1 of guarantees **(model of '$1 in, $5 out')** 2. Financing will help **vulnerable countries in Asia and the Pacific region** meet their mitigation and adaptation goals. 3. Support ADB's **raised ambition for $100 billion** in climate finance from 2019-2030.
Financing Mechanisms	Global Environment Facility (GEF), Green Climate Fund (GCF), Adaptation Fund, and Loss and Damage Fund
Funding Sources	Bilateral and multilateral sources, the private sector, and philanthropies including the Global Energy Alliance for People and Planet
Amount	The initial ambition of **$3 billion in guarantees could create up to $15 billion (**model of '$1 in, $5 out'**)** in new loans for much-needed climate projects across Asia and the Pacific.
About ADB	The Asian Development Bank (est. 1966; HQ: Manila, Phillippines) is a **regional development bank** committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific while sustaining its efforts to eradicate extreme poverty.

14. FIT FOR 55

Context: The Fit for 55 packages is a set of proposals **aimed at revising and updating EU legislation and implementing new initiatives to align EU policies** with the climate goals agreed by the Council and the European Parliament.

- The package is named after the EU's target of **reducing net greenhouse gas emissions by at least 55% by 2030.**
- **Some of the initiatives include--** Extension to emissions from maritime transport. Reduction of emissions allowances. Implementation of the global carbon offsetting and reduction scheme for international aviation. Increase funding for an innovation fund. Revision of the market stability reserve.

15.INTERNATIONAL CLIMATE AC-

TION IN CIVIL AVIATION

International Climate Action in Civil Aviation

Context: India will start participating in International **Civil Aviation Organisation's (ICAO)** Carbon Offsetting and Reduction Scheme for International Aviation **(CORSIA)** and the Long-Term Aspirational Goals **(LTAG)** in 2027

ICAO (est. 1944; HQ: Montreal, Canada) is a specialized agency of the UN that coordinates development of international air transport to ensure safe and orderly growth. It has adopted ambitious goals of:
- **2% annual fuel efficiency** improvement through 2050
- **Carbon neutral growth**
- **Net zero by 2050**
The ICAO has clubbed these targets under **CORSIA and LTAG**

CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation) is a global scheme established by the ICAO to address the growth in CO2 emissions from international aviation.	
Purpose	To mitigate the growth of carbon emissions from international aviation by offsetting and reducing emissions
Scope	Applies to international flights only
Timeline	Phase 1 (2021-2023) - voluntary participation by states; Phase 2 (2024-2026) - mandatory participation for certain states based on size of their aviation industry; Phase 3 (2027-2035) - mandatory participation for all states
Offsetting	Airlines will offset their emissions by purchasing credits from approved carbon offset projects
Review process	The scheme will be reviewed every three years to ensure effectiveness and make necessary adjustments
Goals	CORSIA aims to achieve carbon-neutral growth for international aviation from 2020 onward and reduce CO2 emissions from international aviation by 50% by 2050 compared to 2005 levels.
What are LTAG?	It is an initiative of the ICAO to achieve net-zero carbon emissions from international aviation by 2050. It is non-binding. Visit Insights IAS Daily CA

16. PERIYAR TIGER RESERVE (PTR)

Context:

A wild tusker **named Arikompan** was successfully translocated to an area near Seeniyaroda under the Mullakkudy forest section under the **Periyar Tiger Reserve (PTR)** in Thekkady.

About Periyar Tiger Reserve (PTR):

Category	Information	
Location	Falls in the districts of **Idukki and Pathanamthitta in Kerala** (Western Ghats)	
Formation	Declared a Sanctuary in 1950 and declared a Tiger Reserve in 1978.	
Name	It gets its name from the **River Periyar** which has its origin inside the reserve	
Drainage	The major rivers through the reserve are **Mullayar and Periyar**	
Flora	The sanctuary comprises tropical **evergreen, semi-evergreen, moist deciduous forests and grasslands**.	

Fauna	**Mammals**: Tiger, Elephant, Lion-tailed macaque, Nilgiri Tahr etc. Birds: Darters, Cormorants, King-fishers, the great Malabar Hornbill and rack-et-tailed Drongos. Reptiles: Monitor Lizards, Python, King Cobra etc.
Tribals	There are **six tribal communities** nestled inside the reserve such as Mannans, Paliyans, Mala-yarayans, Mala Pandarams, Uralis and Ulladans

DISASTER AND DISASTER MANAGE-MENT

17. NEUROTOXINS

Context:
11 people died due to a gas leak in the Giaspura area of Ludhiana, Punjab.

The reason behind the deaths: According to the air quality sensors used by NDRF, high levels of **Hydrogen Sulphide gas, a kind of neurotoxin**, have been detected.

What are neurotoxins?
Neurotoxins are **poisonous** substances which can directly affect the **nervous** system. They directly attack the **respiratory tract** of the body, thereby overpowering the oxygen concentration of the body and then the nervous system as well.

What are neurotoxic gases?
- **Methane, hydrogen sulphide, carbon monoxide and carbon dioxide** are common neurotoxic gases.
- While methane and carbon monoxide are **odourless** gases, hydrogen sulphide has a **pungent** odour and in higher concentrations, it can be fatal for humans.

How to remove these gases? To remove gases such as hydrogen sulphide from wastewater, **chemical oxidation is done**, where oxidants such as hydrogen peroxide are added to the wastewater.

SPECIES IN NEWS

18.LESSER FLAMINGOS

Lesser flamingos

Context: After a six-year absence, a group of lesser flamingos has returned to Pulicat Lake in Chennai

About the lesser flamingo

The lesser flamingo is the smallest species of flamingo, though it is a tall and large bird by most standards, with pale pink colour and deep red legs and bills. Their colour comes from the carotenoid pigments they consume as part of their diet.

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Size	Approximately 80 to 90 cm long; females are smaller
Diet	Microscopic blue-green algae and benthic diatoms; Small aquatic invertebrates such as rotifers (less often)
Habitat	Large undisturbed alkaline and saline lakes, salt pans, coastal lagoons, and estuaries
Range	Primarily eastern and southern Africa; Madagascar, Yemen, Pakistan and Western India
Conservation Status	IUCN: Near Threatened; CITES: Appendix II
Facts	Its name has been derived from Portuguese, meaning "red goose". It is most numerous and lives in the largest flocks; Both males and females provide young with crop milk
About Pulicat Lake	It is the second-largest brackish water lagoon in India, (after Chilika Lake). Its major part comes in the Andhra Pradesh. It encompasses the Pulicat Lake Bird Sanctuary. The barrier island of Sriharikota separates the lagoon from the Bay of Bengal and is home to the Satish Dhawan Space Centre.

19. INTERNATIONAL LEOPARD DAY 2023

International Leopard Day 2023

Context: International Leopard Day is a new annual event that was officialized on May 3, 2023, with the launch of a dedicated portal, "internationalleopardday.org" by the Cape Leopard Trust (CLT)

About Leopard

Scientific Name	Panthera pardus
About	The leopard is the smallest of the Big Cats (Of genus Panthera namely the Tiger, Lion, Jaguar, Leopard, and Snow Leopard), and known for its ability to adapt in a variety of habitats.
Features	It is a nocturnal animal (hunts by night). Melanism is a common occurrence in leopards, wherein the entire skin of the animal is black in colour, including its spots. A melanistic leopard is often called black panther or jaguar, and mistakenly thought to be a different species.
Habitat	It occurs in a wide range in sub-Saharan Africa, in small parts of Western and Central Asia, on the Indian subcontinent to Southeast and East Asia.
Population in India	As per a recent report 'Status of leopards in India, 2018' (by MoEFCC), there has been a "60% increase in the population count of leopards in India from 2014 estimates''. It numbers nearly 13000 currently with the highest population in Madhya Pradesh> Karnataka> Maharashtra
Threats	Poaching for the illegal trade of skins and body parts. Road Kill, Habitat Loss and Fragmentation. Human-Leopard conflict.
Conservation Status	IUCN Red List: Vulnerable. CITES: Appendix-I. Indian Wildlife (Protection) Act, 1972: Schedule-I.

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CYBERSECURITY

20. BLUEBUGGING

Context:
The Andhra Pradesh police have warned smartphone users about the dangers of **'bluebugging**,'.

What is Bluebugging?

Bluebugging is a type of **hacking technique in which an attacker gains unauthorized access to a device, such as a smartphone,** by exploiting its Bluetooth connection. Once the device is "blue bugged," the attacker can potentially listen to calls, read and send messages, steal and modify contacts, and even install malware on the compromised device.

Comparing Bluesnarfing, Bluejacking, and Bluebugging:

Attack Type	Method	Access	Risk
Bluesnarfing	The attacker gains unauthorized access to a Bluetooth-enabled device and downloads its contacts, emails, and other data without the owner's knowledge or consent.	Full access to the device's data	High risk of data theft and privacy violation
Bluejacking	The attacker sends unsolicited messages or advertisements to Bluetooth-enabled devices within range, often with the aim of social engineering or marketing.	Limited access to send messages or ads	Low risk of data theft or privacy violation, but annoyance and disruption to the device owner
Bluebugging	The attacker gains unauthorized access to a Bluetooth-enabled device and takes control of its functions, including making phone calls, sending messages, and stealing data.	Full access and control of the device	High risk of data theft, privacy violation, and financial harm

Status of Cybercrime attacks in India: The government's cybercrime portal receives over **3,500 complaints a day.** In India, **phishing and dubious online platforms** offering financial products are the most potent threats.

SECURITY CHALLENGES

21. DIMASA NATIONAL LIBERATION ARMY (DNLA)

Context:

An Assam-based insurgent group - **Dimasa National Liberation Army (DNLA)** - signed a peace agreement with the State Government and the Centre.

About Dimasa National Liberation Army (DNLA)

Details
DNLA is an **Assam-based insurgent group** formed in 2019, that seeks sovereign territory for Dimasa tribals in the area around Dima Hasao district.

Peace Agreement	• Completely **end the insurgency** in the region • The government of Assam will establish the **Dimasa Welfare Council** to protect the social, cultural, and linguistic identity of the Dimasa people. • A **commission** will be appointed under the **Sixth Schedule of the Indian Constitution** to examine the demand for the inclusion of additional villages contiguous to the **North Cachar Hills Autonomous Council** with the council. • A **Special Development package of ₹500 crore each** will be provided by the Government of India and the Government of Assam over five years, to **rehabilitate the surrendered armed cadres of DNLA**
The recent success of Insurgency in N-E	**70% reduction in insurgency incidents** and an **80% drop in civilian deaths** between 2013-19

Major Agreements Signed	Bodo Accord (2020), Bru-Reang Agreement (2020), National Liberation Front of Tripura (NLFT) Agreement (2019), Karbi Anglong Agreement (2021)
Challenges	Differences in demands of various insurgent groups, resentment against non-locals, ethnic and tribal rivalries, economic stagnation, and broken peace accords

DEFENSE

22. ASEAN-INDIA MARITIME EXERCISE (AIME) 2023

Context:

India is set to participate in the **inaugural ASEAN-India Maritime Exercise (AIME),** which will take place in the South China Sea from May 2-8.

Aim: The exercise aims to strengthen India's military cooperation with the Association of Southeast Asian Nations (ASEAN).

Location: Singapore and the South China Sea

Vessel: INS Delhi, India's first indigenously-built guided missile destroyer and INS Satpura, an indigenously-built guided missile stealth frigate will take part in the exercise.

Navy Chief will also participate in the **International Maritime Defence Exhibition (IMDEX-23)** and **International Maritime Security Conference (IMSC)** being hosted by Singapore.

REPORTS & INDICES

23.WEF: "FUTURE OF JOBS" REPORT

Context:

The report, titled "Future of Jobs," reveals that the Indian labour market will see a 22% job churn (movement of jobs in an economy), compared to 23% globally.

About the report	The **World Economic Forum (WEF)** has released its **fourth edition (bi-annual)** report on jobs and skills, which explores how jobs and skills will evolve between **2023-2027**.

Focus of Report	The report **tracks the labour-market impact** of the Fourth Industrial Revolution, green energy transitions, supply-chain shifts, and more.
Key Findings	**New Job-creation** will be driven by green transition, and localization of supply chains, whereas **job destruction** in the coming years will be due to **slower economic growth,** supply shortages and the rising cost of inputs, and the rising cost of living for consumers; **44% of workers' skills** will be disrupted in the next five years; **23% of jobs** in the next five years are expected to change.
Threats to labour-market:	**Clerical or secretarial roles** including bank tellers, cashiers and data entry clerks expected to decline the fastest
Workforce Strategies 2023-27)	The report recommends investment in **learning and training on the job,** accelerating automation of processes, expanding the use of **contract work**, hiring significantly more permanent staff, etc.
Way forward	Governments and businesses must **invest in supporting the shift to the jobs** of the future through education, reskilling and social support structures. Training workers to utilise AI and big data need to be prioritised.
About World Economic Forum (WEF)	The World Economic Forum **(est. 1971; HQ: Cologny, Switzerland)** is an international **non-governmental and lobbying organisation** for multinational companies. It was founded on 24 January 1971 by German engineer Klaus Schwab

24. WORLD PRESS FREEDOM INDEX 2023

World Press Freedom Index 2023

Context: India has slipped in the World Press Freedom Index 2023 rankings

About the World Press Freedom	
World Press Freedom Day	Celebrated every year on May 3rd, to raise awareness about the state of press freedom globally
Origin	It was proclaimed by the UN General Assembly in 1993. 2023 marks the 30th anniversary of World Press Freedom Day (and the 1991 Windhoek Declaration adopted by UNESCO)
Windhoek Declaration	It is a statement of principles related to independent, pluralistic, and free press. It was adopted on May 3, 1991, in Windhoek, Namibia.
The theme for this year	"Shaping a Future of Rights: freedom of expression as a driver for all other human rights"
World Press Freedom Index	It is published every year since 2002 by Reporters Without Borders (an independent NGO based in Paris).
Scoring Criteria	Each country or territory's score is evaluated using five contextual indicators: Political context; Legal framework; Economic context; Sociocultural context; Safety 100 is the highest possible level of press freedom, and 0 is the worst
Freedom of Press in India	Freedom of the press is protected under Article 19(1)(a) of the Constitution. However, restrictions apply under Article 19(2) related to the interests of sovereignty and integrity of India, the security of the State, friendly relations with foreign States, public order, decency or morality or in relation to contempt of court, defamation or incitement to an offence.
Observations of the report this year	India's press freedom has gone from "problematic" to "very bad," with the country slipping 11 ranks to 161 out of 180 countries.
Reasons cited for the decline	Media takeovers by "oligarchs" close to Politicians (e.g., NDTV) takeover may jeopardize pluralism
Indian Govt. reaction	The government does not agree with the country rankings of the World Press Freedom Index due to its low sample size, little or no weightage to fundamentals of democracy, and a questionable methodology
Top Ranked	Norway ranks first on the Index for the seventh year in a row, with Ireland ranking second, and Denmark third. **Visit Insights IAS Daily Current Affairs**

What is FSIN?	A global initiative co-sponsored by **Food and Agriculture Organization (FAO), World Food Programme (WFP), and International Food Policy Research Institute (IFPRI) to** strengthen **food and nutrition security information systems** for producing reliable and accurate data to guide analysis and decision-making.
What is GNAFC?	An alliance of **humanitarian and development actors founded** by the European Union, FAO, and WFP in 2016 to prevent, prepare for and respond to food crises and support the Sustainable Development Goal to End Hunger (SDG 2)

25. GLOBAL REPORT ON FOOD CRISES 2023

Context:

The **Global Report on Food Crises (GRFC) for 2023** reveals that the number of people suffering from **acute food insecurity** has increased, with over **258 million** people across 58 countries and territories facing acute hunger.

About the Report:

Global Report on Food Crisis is **an annual report** to achieve a **consensus-based assessment** of acute food insecurity in the world	
Released by	Food Security Information Network (FSIN) and Global Network against Food Crises (GNAFC)
Key Highlights	The number of people experiencing acute food insecurity increased for the **fourth consecutive year in 2022**
	Key drivers: Economic shocks (including due to COVID-19 and Ukraine War), Conflict/insecurity, Weather/Climate extremes, etc.
What is Acute Food Insecurity?	It refers to a situation where a **person's or household's access to adequate food and nutrition is severely limited**, resulting in a high risk of starvation or death.