

9 PM Current Affairs Weekly Compilation

For UPSC CSE mains examination



4th Week

Apr. 2024

Features :

Arranged as per syllabus Topics
Most complete coverage of major
News Papers editorials

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GS Paper 1

Subject: Indian Society

Topic- Poverty and Developmental issues

Income and Wealth Inequality in India

Context - The World Inequality Lab, a global research center studying inequality and public policies, has recently released a paper called "Income and Wealth Inequality in India, 1922-2023: The Rise of the Billionaire Raj."

What is the status of wealth and income inequality in India?

1) **Income inequality** - In 2022-23, the report reveals that 22.6% of India's national income went to the top 1% of the population, the highest share in the last century. Further, the top 0.1% earned almost 10% of the national income in India. India's top 1% share of national income is one of the highest globally.

2) **Wealth inequality** - In 2022-23, the wealthiest 1% owned 40.1% of the wealth, the highest since 1961. Meanwhile, the top 10% saw their share rise from 45% in 1961 to 65%. This implies that the rich got richer, and the poor got poorer in wealth.

3) **Comparison with other countries**-Brazil and South Africa have more wealth inequality than India. In Brazil and South Africa, top 10% hold 85.6% and 79.7% of national wealth respectively.

Whereas in China, in 2022, the share of the top 1% in income in India was nearly 50% higher than that of China

Moreover, as India's income inequality is among the highest globally, even surpassing South Africa, Brazil, and the U.S., it may enhance wealth inequality further.

Read more- [Status of Inequality in India](#)

What is the significance of prioritizing human development over economic growth for reducing income inequality and wealth inequality?

1) **Precedents from other countries** - China and Vietnam have given precedence to human development to sustain their economic growth for a longer run.

2) **Examples from other Indian states** - States that have been able to maintain high growth rates over 3 decades (over 7% GSDP per year) were more developed in terms of human development at the national level. For ex- Kerala, Tamil Nadu, Delhi, Punjab etc.

However, states that fared low in Human Development Index were only able to register a growth rate of less than 5% per annum post-liberalization. For ex-MP, Bihar etc.

3) **The Human Development Report**- In the Human Development Report (HDR) 2023-2024, India was ranked 134th out of 193 countries. Despite being the **fifth largest** economy, India ranks lower than Sri Lanka, Bhutan, and Bangladesh in human development. Thus, in case of India, economic growth hasn't led to similar growth in human development for India.

What should be the way forward?

1) **Inclusive Growth**-There should be more emphasis on human development and capacity building to promote inclusive growth.

2) **Policy Reforms**-Economic growth should not become the ultimate objective of policy makers. Without

progress in human development, capability enhancement, functioning, and poverty reduction, economic growth won't be inclusive and will only increase inequality.

Topic- population and associated issues; urbanisation, their problems and their remedies.

Promises made by political parties for migrant workers in India: Making space for migrants in manifestos

News: The article discusses the promises made by political parties in their election manifestos concerning migrant workers in India. It highlights their plans to address the needs and challenges faced by migrants, such as employment, social security, and legal rights, while noting some overlooked issues.

For details information on **India's migration issues** read [Article 1](#), [Article 2](#).

What are the challenges faced by migrants?

Migrants often lack proper documentation, making them invisible and unable to access government services. Migrants are misunderstood about the benefits of registration on platforms like e-Shram. Migrant workers, typically daily wagers, face exploitative work conditions. Critical needs such as healthcare, housing, and education for migrant children are often overlooked in policy planning. The specific challenges faced by women and young migrants, such as safety and sanitation, are not adequately addressed.

What promises have political parties made for migrants in India?

BJP's Promises:

Utilization of the e-Shram portal to better connect with and support migrant workers. This comes after the establishment of a national database of unorganized workers as directed by the Supreme Court.

Enhancement of Special Train Services for migrants, aiming to maintain these services throughout the year to facilitate easier movement across states.

Implementation of digital technologies in post office savings, and social security measures, although there are concerns about digital literacy and infrastructure.

Congress' Promises:

Introduction of a **law to regulate migrant employment** and ensure fundamental legal and social security rights.

Proposal to **increase the wage under MGNREGA to ₹400 per day**, with plans to maintain it as the national minimum wage.

Launch of an urban employment scheme that could benefit urban migrants and enforcement of '**Same Work, Same Wages**' to prevent gender-based wage discrimination.

What are the shared challenges noted in both manifestos?

Overlooked Critical Areas: Both manifestos fail to address essential services such as healthcare, housing, water, sanitation, and legal aid for migrants.

Education for Migrant Children: The need for educational support for children of migrants is not specifically tackled in either manifesto.

Public Health Inclusion: Neither party has detailed plans for integrating migrants into public health schemes, which is crucial for their well-being.

Inadequate Specificity for Women and Youth: There is a lack of focused initiatives addressing the unique challenges faced by women and young migrants in both manifestos.

Subject: Geography

Topic- -changes in critical geographical features (including water-bodies and ice-caps)

ISRO's findings on the growth of glacial lakes in the Indian Himalayas

News: The article discusses ISRO's findings on the growth of glacial lakes in the Indian Himalayas, which pose flood risks. It explains how these lakes form, the use of satellites in monitoring them, and strategies to mitigate flood risks, including lowering water levels.

What did ISRO discover about glacial lakes?

ISRO analyzed satellite data from 1984 to 2023, observing the Indian Himalayan river basins. They found that out of 2,431 glacial lakes larger than 10 hectares, 676 had significantly expanded. Specifically, 601 of these lakes more than doubled in size, showing substantial growth. 130 of the 676 lakes are situated in India, in the Indus (65), Ganga (7), and Brahmaputra (58) river basins, which have expanded as the glaciers retreated due to global warming. This data highlights the increased risk of glacial lake outburst floods (GLOFs), posing a threat to downstream communities.

How are glacial lakes formed?

Glacial lakes are formed by the movement and melting of glaciers, which create depressions in the landscape. These depressions fill with meltwater, forming lakes.

Types of glacial lakes:

Moraine-dammed lakes: formed by debris such as rocks and soil left by moving glaciers.

Ice-dammed lakes: formed when water is trapped by ice.

Erosion-based lakes: created by depressions from erosion.

Each type is categorized based on how the water is dammed or held in place.

What are the risks of glacial lakes?

Glacial lakes pose significant risks due to potential glacial lake outburst floods (GLOFs). GLOFs can occur when natural dams, such as moraine or ice, fail to hold back lake water. This failure can be triggered by factors like avalanches of ice or rock. Such floods can cause severe and sudden flooding downstream, endangering

communities.

ISRO highlighted the risk with data showing 676 glacial lakes have grown, increasing the potential for dam failure.

How can the risks be mitigated?

Lowering Lake Levels: A study on Ghepan Gath lake suggested reducing water levels by 10 to 30 meters can significantly lessen impact on downstream areas like Sissu town, though not completely eliminate risks.

Using HDPE Pipes: In 2016, the Sikkim State Disaster Management Authority and others successfully used High Density Polyethylene (HDPE) pipes to lower water levels in South Lhonak Lake, reducing flood risks.

Installing Early Warning Systems: Fieldwork at critical lake sites can include setting up instrumentation like motion detection cameras, water level sensors, and discharge meters to monitor for signs of potential GLOFs.

Satellite Monitoring: Utilizing advanced satellite remote-sensing tools helps in continuous monitoring and assessment of glacial lake dynamics, crucial for timely interventions and planning.

GS Paper 2

Subject: Indian Polity

Topic- Historical Underpinnings, Evolution, Features, Amendments, Significant Provisions and Basic Structure.

Excessive restrictions on meetings and processions during elections

Context- The article raises the issue of imposition of prohibitory order imposed during election time that restricts all public gatherings and meetings. This imposition has been challenged by certain activists before the Supreme Court.

In this case, petitioners have not been allowed to hold any public programmes aimed at creating awareness among voters about the election. SC has also raised the question against such blanket ban during hearing. It has directed executive magistrates to decide applications for public meetings and yatras within 3 days.

What is the rationale behind imposing such blanket prohibitory orders?

These orders are imposed by the police and revenue officers, who are vested with magisterial powers under Section 144 of the CrPC, to prevent any disturbance to public order during election campaigns.

Read more - [Model Code of Conduct](#)

What are the arguments against these blanket prohibitory orders?

1) **Infringes upon voters right to know-**These restrictions are also applied for civil society organization whose intention is to educate voters. This infringes upon the rights of voters to know about their contesting candidates.

2) **Discourage public participation:** Such restrictions are not justified against activities aimed at educating voters, which can limit public participation in the democratic process.

3) **Statutory concerns:** It also raises unclear questions:

- i) Whether election can be a sufficient ground to make such activities subject to statutory discretion.
- ii) Whether statutory powers may be transferred from the designated authority to the ECI during elections.

Curative Jurisdiction: Sounding the gavel on curative jurisdiction

News: The article discusses the Supreme Court of India's use of "Curative Jurisdiction" to overturn a previous decision it made regarding an arbitral award. This is controversial because it reflects a shift from the court's usual stance of minimal interference in arbitration cases.

What is Curative Jurisdiction?

Introduction in 2002: Curative Jurisdiction was introduced by the Supreme Court of India in 2002 to ensure that injustices in its final judgments can be corrected.

Different from Review: It goes beyond typical review mechanisms, which primarily address apparent errors on the record, by allowing for the reconsideration of final decisions if they result in gross miscarriage of justice.

Example: In the 2024 case of DMRC vs. DAMEPL, the Court used its Curative Jurisdiction to overturn an earlier decision which had upheld an arbitral award, thus demonstrating its commitment to justice over strict adherence to past judgments. For more details on DMRC vs. DAMEPL case read [here](#)

Enhances Judicial Integrity: By admitting and correcting its errors, the Court upholds judicial integrity and adapts to evolving legal standards and societal values.

What are the Problems with Curative Jurisdiction?

Undermines Finality: Curative Jurisdiction challenges the principle of finality in legal judgments. Frequent reversals could erode confidence in the Supreme Court's decisions.

Potential for Overuse: There's a risk of this power being overused, leading to instability in the legal system as decisions could be perpetually open to challenge.

Impact on Judicial Consistency: The case of DMRC vs. DAMEPL in 2024 illustrates how Curative Jurisdiction can lead to inconsistencies. Initially, the Supreme Court supported minimal interference with arbitration awards, but reversed this stance dramatically in the curative petition.

Questioning Precedents: By overturning its own decisions, the Court risks creating an uncertain legal environment, where past judgments are viewed as potentially reversible, not as stable precedents

Topic- Salient features of the Representation of People's Act.

Supreme Court Gives Verdict — EVMs are safe

News-The Supreme court in **Association of Democratic Reforms vs Election Commission of India and Anr case** has rejected all pleas that were seeking 100% EVM-VVPAT verification. The verdict emphasized the importance of balanced perspective when assessing systems or institutions, warning against blind distrust as it can hinder progress.

Context- Many oppositions political parties demanded 100% recount of all VVPATs, instead of the current method of sampling the number of recounts, to have full transparency.

Read more- [EVM-Demand for 100% recount of all VVPATs](#)

What are the directives issued by the Supreme Court in this case?

- 1) The Symbol Uploading Units (SULs) must be stored in a secure room for 45 days after the results are announced. Like EVMs, they can also be inspected and reviewed.
- 2) If any candidate comes second or third, they can request for EVMs in their area to be checked. In case of such a request, 5 % of machines per assembly segment will be examined.

What steps have the Election Commission of India taken to assuage the concerns about safety of EVMs?

- 1) The Election Commission of India has assuaged these concerns constantly, including by holding hackathons.
- 2) The ECI has introduced the VVPAT system to ensure a paper trail to test machines after the Supreme Court's verdict in 2012.

What is the significance of the Supreme court's recent judgement?

- 1) It has put in place interventions that would dispel doubts about the integrity of India's voting system.
 - A) The directive on mandatory storage of Symbol Uploading Units (SULs) will ensure that votes have not been miscounted.
 - B) Rechecking of EVMs allows a window to address the legitimate concerns of contesting candidates.
- 2) The judgement will affirm the credibility of India's voting process.

Read more- [Supreme Court VVPAT judgement](#)

What are the arguments against the judgement?

1) **Arbitrary sample size**-The author criticizes the Supreme Court's order mandating a uniform sample size of "5 EVMs per Assembly Constituency" for VVPAT-based audit of EVMs, stating that it does not conform to statistical sampling theory principles.

2) **Limitation of lot acceptance sampling** - VVPAT audit is a case of "lot acceptance sampling" where a random sample is drawn from a defined "population" of EVMs, and the entire population is accepted or rejected based on the number of "defective EVMs" (EVM count mismatching VVPAT count)

Note- Lot acceptance sampling-This is a quality control method where a sample is taken from a batch or "lot" of products, and based on the inspection of that sample, a decision is made about whether to accept or reject the entire batch.

3) **Lack of clarity**- It highlights that the Court did not compel the ECI to disclose the defined "population" and "next steps" in case of mismatch. Further, it did not ask the ECI to clarify these points itself after seeking expert opinion.

4) **Statistical Analysis of Court-Mandated Sample Size**- The Court-mandated sample size has a 95% probability of failing to detect a defective EVM if an Assembly Constituency is the "population", and 70% if a Parliamentary Constituency is the "population".

What are the recommendations to ensure robust VVPAT-based EVM audit system?

- 1) There is a need to implement a statistically sound, VVPAT-based EVM audit system that can detect mismatches with 99% or 99.9% accuracy.
- 2) There should be matching of the votes at the start of the counting day. If they match perfectly, the results should be declared based on the EVM count. In case of a mismatch, there should be manual counting of VVPAT slips for all remaining EVMs of the particular "population" and declaring results based on the VVPAT count.

Model Code of Conduct (MCC) need more power

News: The article discusses the need to strengthen the Model Code of Conduct (MCC), which guides election behavior in India. It suggests adding clearer consequences for violations to ensure fair elections and proposes holding political parties accountable for their members' breaches of this code.

What is the Model Code of Conduct (MCC)?

The Model Code of Conduct is a set of guidelines issued by the Election Commission of India for political parties and candidates to maintain decorum in their campaigning. It lays down a list of dos and don'ts for leaders and parties ahead of elections.

For more information [read here](#)

How has the MCC evolved?

Origin in 1960: The MCC was first introduced during the 1960 Assembly elections in Kerala, **initiated by K V K Sundaram**, the then Chief Election Commissioner (CEC). It initially covered basic guidelines like the conduct of election meetings, processions, and campaign materials.

Expansion and Consultation: In 1968 under CEC **S P Sen Verma**, the MCC was expanded after consultation with political parties, aiming to establish minimum standards of behavior for free and fair elections.

Regular Updates: Starting in 1979 with CEC **S L Shakhdar**, the MCC was regularly updated before each General Election, adapting to new challenges and circumstances in electioneering.

Major Overhaul in 1991: Under the leadership of **T N Seshan**, the MCC underwent significant consolidation and re-issuance, strengthening its role as a critical tool for ensuring electoral integrity and fairness.

Why does the MCC need more power?

Increasing Violations: The political environment in India has intensified, leading to more frequent and severe violations of the MCC.

Technological Advancements: Innovations such as digital campaigning have created new opportunities for misconduct that the current MCC does not fully address.

Lack of Deterrent: Currently, the MCC does not clearly spell out the consequences for violations, reducing its deterrent effect.

Evolving Political Tactics: Politicians are finding new ways to exploit gaps between the letter and spirit of the MCC.

What should be done?

Graded response: Clearly specify graded punitive measures for serious repeated violations, such as bans on campaigning, debarring candidates/functionaries, and disqualifying them as star campaigners.

Hold Parties Accountable: Implement penalties for political parties if their members violate the MCC, introducing fines or restrictions under the Election Symbols (Reservation and Allotment) Order.

Quick Enforcement: Streamline procedures to take punitive action within 72 hours and maintain a public database of violations and their disposal.

Update the Code: Continually revise the MCC to cover new campaigning methods and technologies, keeping it relevant and effective against modern political strategies.

Topic- Polity-Statutory, regulatory and various quasi-judicial bodies

Concerns about India's food safety Regulations

News: The article discusses problems with India's food safety system, highlighting issues with baby food, health drinks, and spices. It mentions that the FSSAI, India's food regulator, has struggled with staff shortages and infrastructure problems, which has affected its ability to properly regulate and ensure food safety.

For details information on the **Food Safety and Standards Authority of India (FSSAI)** [read here](#)

What are the main concerns about India's food safety?

High Sugar Content in Baby Food: The FSSAI is investigating Nestle's baby food products for unhealthy sugar levels, raising concerns about child health.

Carcinogenic Additives in Spices: Regulatory bodies in Singapore and Hong Kong have flagged powdered spices from top Indian brands like MDH and Everest for containing potential carcinogens.

Salmonella Contamination: The US has rejected 31% of spice shipments from MDH over the past six months due to contamination with salmonella, indicating a significant hygiene issue.

Inconsistent Global Standards: Indian food products are under scrutiny in various international markets including the EU, highlighting global concerns about the safety and quality of food exported from India.

What are the issues with the Food Safety and Standards Authority of India (FSSAI)?

Staff and Infrastructure Shortages: The FSSAI has consistently struggled with insufficient staff and inadequate infrastructure, which has compromised its ability to effectively monitor and regulate food safety.

Perceived as Paperwork: Many businesses view the regulatory process as mere paperwork rather than seeing it as an opportunity for regular inspections and guidance from experts.

Procedural Shortcomings: In cases like the Vital Neutraceuticals incident in 2015, the FSSAI's actions were overturned by courts due to procedural errors, illustrating flaws in the authority's enforcement and regulatory processes.

Inadequate Consumer and Business Education: Despite its mandate, the FSSAI has been ineffective in educating businesses and consumers about food safety.

What are the consequences of these regulatory shortcomings?

International Rejection: The US rejected 31% of spice shipments from MDH due to salmonella contamination.

Damaged Reputation: Inconsistent safety standards have led to scrutiny by international markets like the EU, harming India's global food market reputation.

Legal Challenges: Procedural errors have resulted in legal setbacks, such as in the Vital Neutraceuticals case.

Health Concerns: High sugar content in baby food and carcinogenic additives in spices raise serious public health concerns.

Topic-Devolution of powers and finances up to local levels and challenges therein.

Viksit panchayats offer us a pathway to Viksit Bharat

News: The article highlights the crucial role of **Gram Panchayats (GP)** and Sarpanches in advancing India's development, emphasizing the decentralization of power and the use of digital tools for better governance. It also stresses the importance of empowering women leaders to enhance public services and meet development goals by 2047.

What is the Concept of Viksit Bharat?

Concept of Viksit Bharat: Inspired by Rabindranath Tagore's vision in "Gitanjali," Viksit Bharat aims for India to become a developed nation by 2047, **emphasizing a society where knowledge is free and everyone is dignified.**

Rural Focus: With 64.1% of the population in rural areas governed by Gram Panchayats, the development in these regions is vital.

Empowering Local Governance: States with greater power devolution like Kerala and Karnataka have shown better socio-economic outcomes through programs like **Kudumbashree and the GP Human Development Index**, exemplifying effective local governance.

How Important are Gram Panchayats in Achieving Viksit Bharat?

Central Role in Development: Gram Panchayats are crucial for grassroots empowerment, directly impacting India's journey towards becoming a developed nation by 2047.

Decentralization of Authority: Effective decentralization, where local bodies like Gram Panchayats have the autonomy to plan and implement projects, correlates with improved socio-economic development.

Policy Support: The GP Development Plan (GPDP) encourages local stakeholder involvement, enhancing the efficiency and relevance of development initiatives.

Digital innovations such as Aadhaar, UPI, Co-win, ABHA, and the Universal Citizen Interface are transforming citizen services. These tools help Sarpanches make informed decisions and align local development plans with state and national schemes.

How are women empowered through local governance?

Constitutional Mandate: The 73rd Constitutional Amendment Act mandates a 33.3% reservation for women in Panchayati Raj Institutions, ensuring women's participation in local governance.

Impactful Leadership: Empowered women leaders at the grassroots have driven significant societal changes. For example, **Jyoti Behar Devi**, a Sarpanch from Jharkhand, successfully banned alcohol in her panchayat and promoted livelihood opportunities. **Anita Devi** from Bihar transformed her vehicle into an ambulance, reducing home deliveries from 65% to 8% by improving healthcare access.

What should be done?

Empower Gram Panchayats: As seen in Kerala and Karnataka, where devolution of powers has boosted socio-economic development, similar strategies should be implemented nationwide.

Implement Local Sustainable Development Goals (LSDGs): Aligning projects with community needs through GP Development Plans.

Customize Good Governance Models: Scale models like Andhra Pradesh's 'village secretariat' for

streamlined governance and improved service delivery across different regions.

Build Competent Leadership Teams: Develop strong leadership and organizational structures within Gram Panchayats to ensure the timely delivery of quality services, mirroring successful team dynamics seen at higher levels of governance.

Topic- Welfare Schemes for Vulnerable Sections of the population by the Centre and States and the Performance of these Schemes.

Street vendors Act

Context-The Street Vendors Act, 2014, was a big step forward after almost 40 years of legal discussions and activism by street vendor groups throughout India. The article highlights the challenges in its implementation since its inception.

What are the provisions of the Street Vendors Act?

Objective- It aimed to safeguard and manage street vending in cities by setting up rules at the state level and implementing them through Urban Local Bodies (ULBs).

Key provisions-

- 1) Accommodating all 'existing' vendors in vending zones and issuing vending certificates.
- 2) Establishing a participatory governance structure through Town Vending Committees (TVCs), with 40% representation of street vendor representatives and 33% of women street vendors.
- 3) Mechanisms for addressing grievances and disputes through a Grievance Redressal Committee.
- 4) Setting a precedent for inclusive and participatory approaches to address street vending needs in cities.

What is the significance of Street Vendors for urban India?

- 1) Street vendors, comprising about 2.5% of a city's population, serve diverse functions in city life. Local vegetable sellers and food vendors are essential providers of daily services.
- 2) The vendors make city life affordable for others by providing vital links in the food, nutrition, and goods distribution chain at reasonable prices.
- 3) They are integral part of Indian culture. For ex- imagine Mumbai without its vada pav or Chennai without its roadside dosai.

What are the challenges in the implementation of Street vendors Act?

1) Administrative challenges-

- A) Increased harassment and evictions of street vendors, contrary to the Act's emphasis on protection and regulation.
- B) Outdated bureaucratic mindset viewing vendors as illegal entities.
- C) Lack of awareness and sensitization about the Act among authorities, the public, and vendors themselves.
- D) Limited influence of street vendor representatives in TVCs, and tokenistic representation of women vendors.

2) Governance challenges-

- A) Weak existing urban governance mechanisms.
- B) Lack of integration with the 74th Constitutional Amendment Act for urban governance.
- C) Insufficient powers and capacities of ULBs.
- D) Top-down urban policies like Smart Cities Mission ignoring the Act's provisions for vendor inclusion.

3) Societal challenges-

- A) The prevailing image of the 'world-class city' tends to be exclusionary, marginalizing and stigmatizing street vendors.
- B) City planning, policies and how people see them perceive vendors as obstacles to urban growth rather than valued participants in the urban economy.

What should be the way forward?

1) **Decentralized Approach**-Initially, guidance and control should come from the Ministry of Housing and Urban Affairs. However, over time, this needs to be decentralized over time to ensure effectiveness in addressing the diverse needs and contexts of street vendors nationwide. For ex- PM SVANidhi

Read more- [Rashtriya Udyamita Vikas Pariyojana](#)

2) **Role of ULBS**- ULBs need to improve their ability to plan for street vending in cities. Instead of top-down actions from departments, there should be more thoughtful discussions at the level of TVCs. Urban schemes, city planning guidelines, and policies need to be amended to include street vending.

3 **Addressing Emerging Challenges in Street Vending**- There is a need to address emerging challenges like climate change impact, surge in vendor numbers, e-commerce competition, and reduced incomes.

4) **Innovative measures**-The National Urban Livelihood Mission's Street vendor sub-component should facilitate innovative measures to address changing realities.

Subject: Social Justice

Need of gender-neutral Childcare leave

Context-The Supreme Court has recently held that denial of childcare leave to women is violation of Constitution. This was in context of a case of a state government women employee who was denied childcare leave to look after her ailing son who was suffering from rare genetic disorder. The court observed that participation of women in the workforce is a constitutional entitlement protected by Article 15. It is incumbent upon the state to pay attention to the special concerns of working women.

What is the present status regarding Women Participation in the Labour Force?

As per the PLFS report 2022-23, the female labor force participation rate jumped to 37% in 2022-23, which is 4.2% higher compared to the previous year. However, women are still facing several challenges.

What are the impediments in the path of women to join workforce?

1) **Care responsibilities**- There is a disproportionate burden of care work on women at home and even outside of it, irrespective of their employment status. This includes childcare, housekeeping, and elderly care. Women are also not recognized for their care work. As per some estimates, women in India perform over 8 times the amount of unpaid work, valued at 15 % to 17 % of GDP notionally. All these factors restrict their participation in labour force.

2) **Embracing Motherhood**- Motherhood is challenging. This requires a woman to either leave their jobs during their career or experience a slowdown in their professional advancement.

Read more- [Female Labour Force Participation Rate](#)

What is the Government's Policy on Childcare Leave?

The Government of India offers a Childcare Leave (CCL) policy specifically for female government employees. Eligible women can avail themselves of 730 days of paid leave during their service period to care for up to two children under the age of 18.

This leave is additional to regular maternity leave provisions.

Men are eligible for CCL only if they are single fathers.

In a recent legal case, the Supreme Court deemed the denial of CCL to a female employee a violation of constitutional rights, emphasizing its importance.

What are the issues with the Government's Policy on Childcare Leave (CCL)?

Gender Specificity: The CCL policy primarily benefits female employees, with male employees eligible only if they are single fathers. This could reinforce traditional gender roles where women are seen as primary caregivers.

Limited Applicability: The policy applies only to central government employees, not mandatorily extending to state governments or the private sector.

Implementation Challenges: The policy's implementation in smaller firms is impractical, as 98% of firms are "micro" businesses with fewer than 10 employees, making it difficult to apply such benefits widely.

Potential Bias: There is a concern that such policies could lead to increased employer bias in larger establishments. Women might be perceived as potential liabilities due to additional leave benefits, affecting their hiring and career advancement opportunities.

What should be the way forward?

1) **Investing in Infrastructure for Child and Elder Care in India** -By 2050, the proportion of senior citizens in India is projected to reach 20.8% of the population. It's important to invest in infrastructure that provides easy access to affordable and specialized child and elder care so that disproportionate burden on women to discharge care functions can be minimized.

2) **Gender-neutral approach**- There is a need to foster a gender-neutral approach to care work to demolish stereotypes about gender-based work allocation by considering the changing nature of families.

Extending Childcare Leave (CCL) to all employees, regardless of gender, would be a positive step forward.

Topic- Issues Relating to Development and Management of Social Sector/Services relating to Health, Education

Health on a hot planet

Context- A large analysis of 266 studies from around the world, published in 2022, found that heat waves are linked to a 11.7% increase in deaths. The risk was highest for stroke and heart disease.

In 2023, the Earth experienced its hottest year on record, with scientists agreeing that it's likely to keep getting hotter throughout this century because of climate change.

How are heat waves measured and what does it represent?

Heat waves are measured by both the actual high temperatures and relative rise in comparison to seasonal, “normal” values recorded in earlier years. However, it is not only the temperature that matters. Apart from temperature, a heat wave represents a combination of heat and humidity. At any level of heat, its impact on the human body is amplified if humidity is high in the ambient air. The India Meteorological Department (IMD) says that such “moist heat” stress has increased by 30 % between 1980 and 2020.

What are the negative impacts of rising temperatures on humans?

1) Impact on health security-

A) Heat affects the body by causing dehydration, making it harder for the skin to cool through sweat, widening blood vessels, and thickening the blood, which raises the risk of blood clots.

B) Prolonged heat exposure can severely damage health through acute and chronic effects on non-communicable diseases. Right now, non-communicable diseases (NCDs) cause 65% of deaths in India, mostly affecting people in their productive mid-life years. Climate change's heat effects will only make this problem worse.

C) It increases the risk of brain strokes, heart attacks, pulmonary embolism, kidney damage, congenital cataracts. It also delays healing of surgical wounds.

D) Wildfires, triggered by extreme heat, release harmful particles and chemicals like PM 2.5, ozone, carbon monoxide, and others. These can cause widespread inflammation, raising the chances of heart disease, respiratory issues, diabetes, and even cancer due to substances like benzene and formaldehyde.

2) Threaten nutritional security-

A) Climate change, through heat stress, water stress, and increased carbon dioxide levels, threatens nutrition security by reducing crop yields, nutrient quality (zinc, protein, iron), and availability of protective foods like fruits, vegetables, and fish. This can lead to widespread deficiencies and increased risk of cardiovascular disease and diabetes.

For ex- by 2050 India could have 49 million more zinc-deficient people, 38.2 million more lacking protein, and 106.1 million children and 396 million women with iron deficiency.

3) **Impact on health infrastructure-** Healthcare systems will have to deal with rising number of vector-borne and water-borne infections; non-communicable diseases (strokes; heart attacks; diabetes; respiratory disease; cancers); mental health disorder .

Further, there will be a rise in the number of climate refugees which may put additional pressure on healthcare infrastructure, supply chains and personnel.

What should be the way forward?

There is a need for robust adaptation plans needed to address the health impacts of climate change and heat waves.

1) **Heat Action Plans-** There should be HAPs designed specifically for urban and rural areas. Read more- [Heat Action Plans](#)

2) **Smart Agriculture-** There should be promotion of climate smart and climate resilient agriculture.

3) **Sensitization of public-** There is a need to educate the public and healthcare workers and plan to handle the increased healthcare needs during heatwaves.

4) **Robust urban planning-** Cities should include heat shelters, water stations, reflective roofs and paints for houses, well-ventilated homes, and more green spaces in their plans.

5) **Personal Care-** People should wear light, loose clothes, use umbrellas or hats, and drink plenty of water.

Supreme Court's view on false advertisement

News: The article discusses a Supreme Court case in India where Patanjali Ayurved and other companies are being criticized for false advertising about their products' health benefits. The court is also questioning why government agencies haven't stopped these misleading ads.

What is the Supreme Court's view on false advertisement?

The Supreme Court is critical of false advertising, especially by companies like Patanjali Ayurved, which claimed their products could cure diseases like COVID-19 and diabetes without scientific backing. The court has expanded its scrutiny to include other companies, such as Nestlé, after finding disparities like higher sugar content in baby formulas sold in India compared to Europe. It has demanded apologies from companies for misleading advertisements and expressed frustration over the lack of government action in regulating such ads. The court emphasizes that enforcing advertisement regulations should not fall to the judiciary but to designated regulatory bodies and the government.

What are the broader issues related to false advertisements?

Government Inaction: Regulatory bodies like the Food Safety and Standards Authority of India and the Ministry of AYUSH have not effectively stopped misleading ads, even when flagged by entities like the Advertising Standards Council of India.

Public Health Concerns: Misleading ads contribute to non-communicable diseases by promoting products with unhealthy ingredients under the guise of health benefits.

Legal Challenges: Individuals and professionals who try to expose these false claims face legal threats, highlighting the lack of protection for whistleblowers against powerful corporate interests.

Economic Significance of Universities for local economies

News: The article discusses how universities significantly boost local economies by attracting students who spend money on tuition and living expenses.

What role do universities play in local economies?

Economic Contribution: Universities attract substantial fees from students. For example, Indian students at Boston University and Northeastern University contribute approximately ₹1,990 crore annually to Boston's economy through tuition and other university fees.

Support for Local Businesses: The influx of students fuels local businesses such as shops, eateries, and accommodation services. This is particularly evident when students are present during the academic year, and the contrast is stark during summer breaks when many businesses experience a downturn.

Attraction of International Students: International students contribute significantly. In the U.S., Indian students alone account for about \$19 billion annually. This kind of spending power benefits not just the universities but the local economies extensively.

How significant is the contribution of international students?

Financial Impact: International students contribute significantly to the economies of host countries. For instance, in the U.S., Indian students alone bring in approximately \$19 billion annually.

Per Capita Earnings: This contribution translates into substantial per capita earnings from international students. Every American earns an average of \$57 annually from Indian students, while every Canadian earns about ₹1,600 monthly.

What opportunities are missed in India?

International Student Deficit: India experiences a significant international student deficit, sending 1.33 million students abroad but receiving only around 47,000.

Economic Benefits Not Captured: This disparity means India misses out on economic benefits like those seen in the U.S., where Indian students contribute approximately \$19 billion annually.

Underutilized Local Economic Growth: With more international students, Indian towns could see increased spending on education, living expenses, and local services, similar to economic activities around universities in countries like the U.S. and Canada.

Essential Programme on Immunization

Context- The year 2024 marks the 50th anniversary of the launch of the Expanded Programme on Immunization (EPI) by the World Health Organization (WHO) in 1974. India launched its EPI (later renamed Universal Immunization Programme, UIP) in 1978 and conducted the last nationwide independent evaluation in 2004. This milestone presents an opportunity to assess progress and envision the future.

How much progress has India and the world made in immunization?

- 1) Globally, vaccines have expanded from 6 diseases in 1974 to 13 universally recommended and 17 context-specific diseases today, with research ongoing for 125 more pathogens.
- 2) The percentage of children receiving three doses of DPT (a coverage tracer) rose from 5% in low- and middle-income countries in the 1970s to 84% globally in 2022.
- 3) Smallpox has been eradicated, polio eliminated from all but two countries, and many vaccine-preventable diseases have nearly disappeared.
- 4) In India, coverage increased yearly, with 76% of children receiving recommended vaccines in 2019-21.
- 5) Studies show vaccines have saved millions of lives, prevented billions of hospitalizations, and are highly cost-effective, with 7-11 times return on investment.

What are some challenges in immunization?

- 1) In 2023, UNICEF said childhood immunization coverage dropped for the first time in over ten years. There were 14.3 million children with no doses and 6.2 million partially immunized children worldwide in 2022.
- 2) Despite increasing coverage in India, persistent inequities exist based on geography, socioeconomic status, and other parameters exist.

Read more- [Intensified Mission Indradhanush](#)

Why is there a need to focus on adult vaccination?

- 1) Vaccines have always been intended for individuals of all age groups. However, due to limited supply and resources in the past, children were prioritized.
- 2) Because more children are getting vaccinated, diseases that vaccines can prevent are now affecting more adults and older people. It necessitates a focus on immunization throughout a person's life.

What are the steps for expanding adult and elderly immunization in India?

- 1) NTAGI (National Technical Advisory Group on Immunization) should provide recommendations on adult and elderly vaccine use. After NTAGI recommendation, vaccines for all age groups should be made available as free at the government facilities.
- 2) Proactively address myths and misconceptions about vaccines through professional communication agencies and public education.
- 3) Medical colleges and research institutions should generate evidence on the burden of diseases in the adult population.
- 4) India should conduct another independent national-level review of the UIP, engaging key partners and international experts.

What are some recent initiatives undertaken by the government to enhance adult immunization?

- 1) India has launched a pilot initiative for adult BCG vaccination as part of efforts to 'end TB.'
- 2) The COVID-19 vaccination drive has sensitized the public to the need for and benefits of adult vaccination.

Way forward- India should expand the program to focus on zero-dose children, address coverage inequities, and offer vaccines to adults and the elderly. It is time to transform the EPI into an 'Essential Program on Immunization' for all age groups.

GS Paper 3

Subject: Indian Economy

Topic- Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment.

On Inheritance Tax

Context- The article warns against popular demands for advancing wealth redistribution in India, that is taking wealth from the rich and giving it to the poor. According to the author, it could lead to sustained poverty and economic failure.

The mechanism to ensure this redistribution is levying Wealth tax and inheritance tax. However, these have not been very helpful in reducing poverty. They've already been tested in India before and hence shouldn't be brought back.

What are the arguments against imposition of wealth and inheritance tax in India?

- 1) **Complexity in tax collection-**In India, there was an estate duty from 1953 to 1985, with rates as high as 85%, but it wasn't collected much. Taxes on estates or inheritances are common in many advanced economies, but they contribute only 0.5% of tax revenues on average in OECD countries. However, collecting this small amount requires complex procedures, thus it is not economical.
- 2) **Negligible tax revenue-** Wealth tax was introduced in India in 1957. However, it has only brought in Rs 800 crore by 2012-13. Thus, it was scrapped in 2015. Wealth tax exists in four OECD countries but doesn't bring in much tax revenue there either.
- 3) **Diversion of focus-** Imposing these taxes lead to a loss of focus on the core business of establishing a sensible tax system in India. Furthermore, tax administration in India lacks fairness, adherence to the rule of

law, and suffers from the arbitrary power of tax officials.

4) **Disincentive to work hard**-The first response to more taxation is to work less. If wealth and inheritance are penalized, people will work less hard to create wealth. This is harmful for the country.

5) **Incentivize tax avoidance strategies**- People may rearrange their affairs to pay fewer taxes. Instead of leaving assets in a will, they may give them to chosen heirs while alive. This changes behavior and makes it harder for the government to collect taxes. Some parents may prefer to keep updating their wills instead of giving assets to their children early to avoid taxes.

6) **Relocation of business activities**-It leads to relocation of business activity to friendly jurisdictions such as Dubai, Sri Lanka, Cayman Islands, Singapore, or Ireland. This hampers tax revenues.

A detailed article on Inheritance Tax in India can be [read here](#).

What should be the way forward?

There should be more emphasis on growth rather than wealth redistribution because sustained economic growth is crucial for poverty reduction. The author suggests focusing on raising the median income instead of redistributing wealth, as wealth redistribution might slow down economic growth.

Issues with credit system in India: Credit penetration must not become a nightmare

Conext: The article discusses the importance of credit in India's economy. It highlights issues like low credit uptake, and harmful loan recovery practices, including a recent scandal involving abusive recovery methods by a loan company. It calls for stricter regulations to protect borrowers.

For details information on **Microfinance** [read here](#)

What is the role of credit in the economy?

Economic Expansion: Credit is essential for economic growth, allowing for the utilization of bank deposits in commerce and business expansion.

Supports the Underprivileged: Credit helps improve the lives of those at the bottom of the economic ladder in India, emphasizing financial inclusion through initiatives like rural microfinance.

Expansion of Banking Services: Increasing the reach of banking services into underserved areas is crucial for improving credit availability, which echoes the objectives of bank nationalization in 1969.

What are the issues with credit system in India?

Uneven Credit Distribution: Credit availability varies significantly across regions; for example, in 56 eastern districts, the credit-to-deposit ratios range from under 11% in West Singhbhum to over 96% in Chandel.

Predatory Lending Practices: Some digital lending apps engage in harsh recovery methods. A notable incident involved the Finsara app, where employees used sexual shaming as a tactic against a borrower who failed to repay a small loan.

How are regulations being enforced?

Interest Charge Regulations: The central bank has warned lenders against calculating interest charges from the day a loan is sanctioned rather than from the day it is disbursed. This measure is designed to protect retail borrowers from unfair financial burdens.

Strengthening Capital Requirements: Last year, the regulator tightened capital backup norms for

collateral-free lending. This aims to keep the burgeoning fintech boom of app-given personal loans within safe prudential limits and reduce the risk of banks' financial buffers being depleted by defaults.

Topic- Changes in Industrial Policy and their Effects on Industrial Growth.

New EV policy of government

News: The article discusses a new Indian government policy aimed at boosting electric vehicle (EV) production by reducing import duties and setting investment targets for manufacturers.

For details information on **Adoption of EVs** read [Article 1](#), [Article 2](#), [Article 3](#)

What is the new government policy for EVs?

The Indian government's new policy **aims to establish India as a hub for electric vehicle (EV) manufacturing**, targeting global companies like Tesla and BYD.

Key provisions include reducing import duties for EVs imported as Completely Built Units (CBUs) to 15% from the previous range of 70%-100%, provided these EVs have a minimum CIF value of \$35,000. This reduced rate lasts for five years.

To qualify, manufacturers must invest at least \$800 million and set up a local production facility within three years, allowing them to import up to 40,000 EVs over five years, capped at 8,000 annually.

The policy **mandates localization targets**, requiring 25% localization within three years and 50% by the fifth year to integrate production with domestic market needs.

How does this affect Indian manufacturers?

Indian manufacturers like Tata Motors have expressed concerns that reducing import duties for foreign EVs **could negatively impact the local industry**.

The policy is seen as particularly **advantageous for global Original Equipment Manufacturers (OEMs)**, focused on the luxury segment of the market, a segment where Indian companies currently have limited presence.

Most Indian players are strong in the market segments below ₹29 lakh, which may not directly benefit from the reduced import duties aimed at higher-end models.

This differentiation in market focus might lead to **increased competition for Indian manufacturers in the premium vehicle segment**.

What challenges do global players face in the Indian market?

Adaptation to Local Conditions: Global players need to adapt their vehicles to India's specific environmental conditions, road infrastructure, and usage patterns, as mentioned by I.V. Rao from The Energy and Resources Institute.

Lack of Charging Infrastructure: The Indian market has a significant challenge due to inadequate charging stations. The Confederation of Indian Industry noted that India might need at least 13 lakh charging points by 2030 to support a substantial uptake of EVs.

Consumer Preferences and Product Availability: There is limited penetration (only 2.2%) in the affordable range for passenger vehicles due to a lack of locally adapted and priced products.

Significance of labour statistics

Context-The article highlights the significance of having robust labour statistics to refute the arguments of employers about labour strikes, retrenchment and closures.

What are the challenges in obtaining labor statistics?

- 1) Labor statistics are not as rigorous as economic and industrial data. While surveys like the Annual Survey of Industries (ASI) and the National Sample Survey Office give detailed information, they often miss important details about the labor market. The data from the Labour Bureau mainly covers administrative matters and doesn't go into detail.
- 2) The data on work stoppages is collected voluntarily. There is also a lack of comprehensive data on labor inspections and retrenchment/closure applications at the national level.

Impact- This lack of quality data undermines the ability to have informed discussions and develop evidence-based arguments for reform.

What are the challenges to labour reforms in the absence of robust labour statistics?

- 1) **Social dialogue-** Due to lack of credible data, evidence-based reform arguments that enrich social dialogue are not able to take place. As a result, social dialogue agency like the Indian Labour Conference (ILC) fail to push reform agenda.
 - 2) **Arguments by employer-** Absence of credible data gives credence to the demands of employers who criticize the labour inspection system as a case of "Inspector-Raj" and push for employer friendly reforms. This demand is also endorsed by organizations like IMF and World Bank.
- For ex-** a study by Besley and Burgess (B&B) in 2004 has been frequently cited by employers and others to advocate for changes like easier hiring and firing
- 3) **Closure reform-** There is a lack of credible data on request for business closure and approvals or rejections of these requests by the labor department. This data is mostly not publicly available, except for a brief period in Maharashtra.
 - 4) **Strikes-** The Industrial Relations Code, 2020, makes legal strikes almost impossible and imposes heavy penalties for illegal strikes. Trade unions could have used data from the Labour Bureau on strikes and lockouts to argue against stricter strike rules in the Code.

What measures can trade unions take to contribute to evidence-based reform discussions?

- 1) They can gather statistics about various aspects of the labor market and industrial relations at the level of individual workplaces.
- 2) Trade unions can play a crucial role in reform discussions by producing labor statistics, conducting research on labor market dynamics, and engaging with academics to build evidence-based arguments.
- 3) Trade unions can influence policy decisions and promote worker interests by actively participating in social dialogue forums like the Indian Labour Conference and use empirical studies to support their positions.

Read more- [Labour laws' fairness challenge](#)

What is the significance of improved labor statistics and evidence-based arguments on the reform process?

- 1) Improved labor statistics and evidence-based arguments can make reform efforts more credible and successful.
- 2) By sharing convincing data and empirical studies, trade unions can garner public support for their cause and push policymakers to prioritize labor reform efforts.

Trade unions should understand that reforms are debated not just through protests but also through evidence-based arguments using objective data and thorough studies.

Subject: Agriculture

Topic- Issues related to Direct and Indirect Farm Subsidies and Minimum Support Prices Public Distribution System - Objectives, Functioning, Limitations, Revamping; Issues of Buffer Stocks and Food Security; Technology Missions; Economics of Animal-Rearing.

Need of Climate Friendly Agriculture

Context- Earth Day was first observed on 22 April 1970 to demonstrate support for environmental protection. Since then, many conferences of Parties (COPs) meetings have been held, with the latest being COP 28 in Dubai, UAE, in November-December 2023. This is significant because agriculture was included in the agreement for the first time.

However, India, unlike many G20 countries such as the US and China, did not sign the agreement. The government believed that signing it would require substantial changes in agricultural policies and farming practices.

What are the reasons for the biodiversity loss in India?

- 1) The increasing human population is a major cause of biodiversity loss on Earth. Humans took over 200,000 years to reach one billion by 1804. The next billion was added in only 123 years by 1927. And now, in less than 100 years, the population has surged from two billion to over eight billion. This rapid growth has led to the clearing of forests for farming to prevent mass famines and starvation deaths. However, this has resulted in the loss of several species and genetic diversity.

What are the inappropriate policies adopted in agriculture that have harmed the planet?

- 1) **Depleting organic carbon content of the soil-**The heavy subsidization of chemical fertilizers, especially urea, has caused imbalanced use of nitrogen (N), phosphate (P), and potash (K) leading to depletion of soil's organic carbon.

As per the expert, the ideal level of soil organic carbon (SOC) should be between 1.5 to 2 percent. However, more than 60 percent of Indian soils have SOC levels of less than 0.5 percent.

- 2) **Groundwater depletion & emission of carbon-** The ground water level in Punjab, Haryana, and Rajasthan is depleting rapidly. This is due to free power for irrigation, fixed prices for crops, and unrestricted purchase of rice, which have encouraged excessive use of groundwater.

This has caused an environmental crisis in these areas, with the water level dropping each year and rice fields

releasing carbon at a high rate of nearly 5 tons per hectare.

3) **Loss of crop diversity**-Faulty agricultural policies are leading to the loss of crop diversity. For ex- in 1960, only 4.8 % of Punjab's farmland was used for growing rice. Today, it's over 40 % displacing crops like maize, millets, pulses, and various oilseeds.

Read more- [Technologies for sustainable agriculture development](#)

What should be the way forward?

1) **Direct Income Transfer**-There should be a shift from heavily subsidizing the prices of nitrogen, phosphorus, and potassium to directly giving income to farmers and allowing the market to determine the prices of these nutrients.

However, this requires early preparations such as updating farmers' land records, knowing the crops they grow, their irrigation methods, and so on.

2) **Planet positive policies**- There is a need to make food systems resilient to climate change, improve soil health, stop groundwater depletion, significantly lower greenhouse gas emissions, and reward biodiversity with green credits.

Issues in poultry industry

Context- The recent H5N1 outbreak was long overdue due to outstanding warnings about unsafe conditions in industrial livestock production. The current public health crisis highlights the connection between animal welfare, public health, ecosystem health, and biodiversity conservation, emphasizing the importance of the One Health principle.

What are some problems with industrial poultry production in India?

1) **Environmental Pollution**-Industrial poultry production in India leads to contaminated environments due to overcrowded wire cages, resulting in poor air quality, odour, particulate matter, and greenhouse gas emissions.

2) Issues with farmers-

A) Poultry farmers struggle to leave the industry because of contract farming, hefty debts, and the need for specialized skills, even when they're facing financial losses.

B) Farmers collect the waste or faecal matter to use as fertilizer, but sometimes there's too much waste for the land to handle, causing pollution. This excess waste damages crops and attracts disease-carrying flies, creating problems for farmers and the neighboring population.

3) **Anti-biotic usage**- Farmers use antibiotics to prevent illness and help birds grow faster. However, this may lead to a rise in cases of antibiotic resistance. The antibiotics that are used for birds are considered important by the WHO.

4) **Health Impacts** - Keeping animals in cramped conditions not only harms their well-being but also endangers the health of people who work in or live near these places. The World Health Organization (WHO) says that among humans, the H5N1 flu has a fatality rate of 52%, with 463 deaths out of 888 cases since 2003. Most human infections with this bird flu come from being close to infected birds or contaminated places.

5) **Violation of The Prevention of Cruelty to Animals (PCA) Act**-This act makes it illegal to keep animals in confined spaces. Activities in industrial places that cause animals pain or suffering are a violation of the PCA Act.

Read more- [Economics of Animal Rearing](#)

What recommendations have been made for legal reform in the poultry industry?

- 1) The 269th Law Commission of India Report in 2017 highlighted that with more open, cleaner, and ventilated living spaces, animals are less likely to need constant antibiotics.
- 2) The law commission recommended a set of two draft rules for the welfare of chickens in the meat and egg industries. It included subjects like animal care, waste management, and antibiotic use, etc. However, the Draft Rules for the egg industry released by the Ministry of Agriculture and Farmers' Welfare in 2019 are weak and tokenistic. They should follow the recommendations of the Law Commission.

Thus, there is a need for stricter oversight and enforcement of environmental regulations because the poultry industry is now considered highly polluting by the Central Pollution Control Board.

Topic- Infrastructure: Energy, Ports, Roads, Airports, Railways etc

Claims that solar and wind energy are the cheapest forms of electricity are misleading

News: The article discusses why claims that solar and wind energy are the cheapest forms of electricity are misleading. It highlights the hidden costs associated with their intermittent and the need for expensive backups like batteries, which significantly increase their overall costs.

For details information on **the difficulty with renewables** read [Article 1](#), [Article 2](#), [Article 3](#)

Why claims that solar and wind energy are the cheapest forms of electricity are misleading?

Subsidies and Financial Support: Developed countries spend large amounts on subsidies to support the transition to renewable energy. For instance, governments around the world needed to spend \$1.8 trillion on green transitions last year. These subsidies artificially lower the cost of solar and wind energy, masking their true economic impact.

Intermittency Costs: Solar and wind energy depend on weather conditions; thus, they are not always available. This necessitates expensive backup systems, such as batteries or fossil fuel plants, to provide power during downtimes. The real cost of solar, when factoring in reliability, could increase by 11 to 42 times, making it much more expensive than traditional power sources.

Storage Challenges: Adequate battery storage is essential for dealing with periods when solar and wind cannot generate power. For example, a study indicated that the U.S. would need enough storage to cover almost three months' worth of electricity to fully rely on renewable sources, currently, it only has seven minutes of battery storage.

Environmental and Recycling Costs: The disposal of wind turbine blades and solar panels poses environmental risks and adds to the total cost. A town in Texas struggles with non-recyclable turbine blades, and in Africa, discarded solar panels leak harmful chemicals.

What should be done?

1. Focus on research and development to improve battery storage capabilities and efficiency of renewable energy technologies.
2. Need for advancing technologies that can complement or enhance renewable energy solutions.
3. Enhance recycling technologies for wind turbine blades and solar panels to mitigate environmental impacts and reduce waste.

Boosting India's Logistics: Railway's Gati Shakti Cargo Terminal Initiative

News- The Ministry of Railways is planning to offer 200 Gati Shakti Cargo Terminals to private firms and freight operators. According to government estimates, the 200 new terminals would require an investments worth ~12,000-14,000 crore.

What are some of the issues faced by the railway sector?

- 1) Indian Railways has plenty of surplus land. However, it is not being utilized efficiently.
- 2) Indian Railways lost a lot of cargo business to road sector largely due to its own inefficiencies and partly because of significant improvements in road infrastructure.
- 3) Financial Struggles: Despite efforts to improve services, the railways' social obligation to provide affordable transport is often unprofitable. For instance, in 2023-24, operating expenses nearly exceed passenger and goods revenue.
- 4) Revenue Disparity: AC-class passengers, though only 11% of the total, generated over 50% of the revenue in 2023-24, highlighting a reliance on a small, more affluent customer base.
- 5) Capacity Constraints: There is a chronic shortage of berths, with 52.6 million waitlisted tickets canceled in 2023, earning substantial cancellation fees

Read more- [National Monetisation Pipeline Project](#)

What is the government's policy on long-term leasing of railway land?

Aim- The policy includes building 300 Gati Shakti Cargo Terminals over the next five years.

Provision-

- A) The policy allows leasing railway land for cargo facilities for up to 35 years, charging 1.5% of the land's value annually.
- B) The allocation is made through competitive bidding.

What is the significance of this move by the government?

- 1) **Enhance capacity of logistics sector**- It will ensure better utilization of railway's land and further boost the capability in the logistics sector.
- 2) **Ownership rights**- The railways will not incur additional expenditure in this area. The successful bidders for these terminals will bear the cost of building the facility and take the business risk, while the railways will have the ownership.
- 3) **Boost the revenue**- Improved logistics will help generate additional cargo traffic for the railways and boost its revenue. As per estimates, each new terminal could add 1 million tonnes of cargo yearly, giving about 100 crore extra revenue.
- 4) **Boost internal trade**- Improved cargo facilities, along with added services, would boost internal trade and further enhance the ease of doing business.
- 5) **Employment potential**- The development of cargo terminals is estimated to generate 120,000 employment opportunities.
- 6) **Minimize carbon emission**- Transportation of freight by railways as opposed to the roadways is more cost efficient and helps contain carbon emission.

Subject: Science & Technology

Topic- Achievements of Indians in Science & Technology; Indigenization of Technology and Developing New Technology.

Significance of aircraft carrier

News: The article discusses the Indian Navy's aircraft carrier INS Vikrant, detailing its design, capabilities, and the significance of its indigenous construction. It also mentions India's plans for another carrier, the challenges and global trends in carrier and submarine development.

For details information on **Indian aircraft carriers (IAC)** read [Article 1](#), [Article 2](#)

What is the significance of INS Vikrant?

Indigenous Design and Construction: INS Vikrant, commissioned in 2022, is India's first aircraft carrier built domestically, marking a significant achievement in indigenous shipbuilding capabilities.

Innovative Material Use: The decision to develop and use **DMR-249 steel**, a warship-grade steel produced in India, for INS Vikrant set a precedent. This material is now utilized for the construction of all warships in India, enhancing the nation's self-reliance in naval defense manufacturing.

Enhanced Naval Capabilities: Equipped to operate 30 aircraft, including MiG-29K jets and various helicopters, INS Vikrant enhances India's naval power and operational flexibility.

Economic Impact: The carrier's construction involved approximately 500 MSMEs and 12,000 employees from ancillary industries, boosting local employment and technological development.

Strategic Significance: INS Vikrant's commissioning allows India to project power and maintain a credible naval presence, supporting maritime security across the Indian Ocean Region.

What is the future of Indian aircraft carriers?

Expansion Plans: India is planning a second Indigenous Aircraft Carrier (IAC-II), similar to INS Vikrant but with updated technologies, ensuring continuity in naval capabilities.

Technological Advancements: The new carrier will incorporate lessons learned from INS Vikrant, featuring modifications for improved performance.

Strategic Continuity: The IAC-II aims to replace INS Vikramaditya, maintaining India's vision of operating two active carriers simultaneously, which is crucial for regional security and naval dominance.

Long-Term Vision: Despite the high costs and long construction times, India remains committed to its aircraft carrier program to uphold its status as a major maritime power.

What are the global trends in carrier and submarine development?

Global Expansion: Many nations are expanding or upgrading their carrier fleets. The U.S. is launching super carriers, the U.K. has introduced new carriers, and France and Russia are planning new builds.

Technological Shifts: Countries are integrating advanced technologies into carriers and submarines, emphasizing enhanced capabilities and stealth.

Carrier Conversion: Japan is converting helicopter carriers to operate F-35 jets, showing a trend toward versatile, multi-role platforms.

China's Accelerated Growth: China is rapidly expanding its carrier fleet, having commissioned its first

carrier, Liaoning, in 2012. It has since launched two more, with the third, Fujian, introduced in 2022, and a fourth, potentially nuclear-powered, soon to be unveiled.

Significance of Technology Policy reforms for India

Context: The article discusses how important it is for India's next government to update and enhance its technology policies and capabilities. It highlights how major countries like China and the US are focusing on technology to boost their economies and geopolitical influence.

For details information on **What Indian scientists want from the upcoming government** [read here](#)

What is the current focus of global technology policy?

China's Technological Ambitions: China is intensifying efforts to master advanced technologies such as electric vehicles, commercial spaceflight, and quantum technology. President Xi Jinping emphasizes technological progress to surpass the US and boost China's global standing.

US Strategic Initiatives: The US, under President Biden, has enacted major legislation like the Infrastructure Investment Act and the CHIPS Act to regain leadership in high-tech sectors. These acts are part of a broader strategy to limit Chinese access to American technology and strengthen US technological supremacy globally. Additionally, the US is forming strategic alliances, such as the Quadrilateral forum with Australia, India, and Japan, and the Chip-4 alliance with Japan, South Korea, and Taiwan, to consolidate its tech leadership.

Europe's Response: French President Macron advocates for increased investments in AI, quantum computing, and green technologies to close the gap with the US and China.

What has been India's approach?

Digital Technology for Services: India has leveraged digital technologies extensively to enhance the efficiency of government service delivery to the public.

Renewable Energy Focus: The Indian government has emphasized investments in renewable energy sources as a key part of its development strategy.

Semiconductor Production: There has been a concerted effort to place India back on the map in the semiconductor industry, recognizing its strategic and economic importance.

AI Development Strategy: India is accelerating its capabilities in artificial intelligence, aiming to keep pace with global advancements and applications in various sectors.

Strategic International Partnerships: Technology plays a pivotal role in India's foreign policy, especially in strengthening strategic partnerships with the U.S. and Europe.

What does India need to do Next?

1. India needs a comprehensive reform of its technology departments to align with current technological imperatives.
2. There's a critical need to significantly boost national expenditure on research and development to foster innovation and stay competitive globally.
3. Greater participation from the private sector in research, development, and production of modern technologies is essential.
4. The government must modernize science and technology monopolies that were established post-Independence to meet the demands of a technology-driven economy and national security

Topic- Awareness in the fields of IT, Space, Computers, Robotics, Nano-technology, Bio-technology and issues relating to Intellectual Property Rights

The Finternet or Asset tokenization for global financial systems

News: The article discusses a new idea called 'the Finternet' that could change how money and assets are managed globally. It suggests using digital technology to connect different financial systems and make transactions faster, cheaper, and safer.

For details information on Tokenisation read [Article 1](#), [Article 2](#)

What is the Finternet?

The current financial system, with separate regulatory environments for different transactions, has become inefficient as transactions grow more complex. It is slowing operations, increasing costs, and restricting competition and innovation.

Finternet aims to connect different financial systems globally using modern technology. The Finternet is a proposed digital framework by the [Bank for International Settlements](#). Tokenization is at the core of the Finternet, where assets are represented as digital tokens with standardized rules.

These tokenized assets can be transacted on a unified ledger, a shared digital system for managing various financial assets.

What are the benefits of the Finternet?

Cheaper transactions: The Finternet reduces costs associated with financial transactions.

Faster transactions: Transactions become quicker due to streamlined processes.

Safer transactions: Reduced reliance on intermediaries decreases the risk of fraud.

Reduced counter-party risk: Tokenized assets enable direct trading among holders, minimizing counter-party risk.

Automation of complex agreements: Complex financial agreements can be automated and executed directly without intermediaries.

Development of new financial instruments: The Finternet allows for the creation of new financial products and investment opportunities.

What are the challenges of the Finternet?

Tokenizing real-world assets: Challenges arise in tokenizing tangible assets like art pieces, which lack public registries.

Double-spending problem: Ensuring that tokenized assets cannot be sold simultaneously offline and online is a significant challenge.

Legal requirements: Adapting legal frameworks to accommodate tokenized assets, especially for movable assets, presents hurdles. It is because, tokenizing real estate requires statutory amendments to convert government registers into tokenized ledgers.

Public registries: For assets like land titles, converting existing public registries into tokenized ledgers may require substantial effort.

Comprehensive tokenization: Ensuring all assets are tokenized and recorded on the unified ledger is a complex task that requires careful planning and execution.

Subject: Environment

Topic- Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment.

Green credits-Significance & Challenges

Context-The article presents a critical analysis of Green Credit Programme. This is a market-based initiative started by Environment Ministry, where individuals and companies can earn incentives, termed as 'green credits,' for their contributions to environmental and ecological restoration efforts.

What is the significance of the Green Credit Programme?

- 1) **Environmental Conservation-** Green Credit Programme aims to incentivize sustainable actions and engage various stakeholders, including individuals and corporations, in environmental conservation efforts.
- 2) **Incentivizes various sectors-** This program offers incentives through markets and covers six or seven sectors, like forests and waste management. In policymaking, incentives play a crucial role. Green credits serve as incentives to encourage individuals and companies to participate in these activities.

What are the concerns regarding the Green Credit Programme?

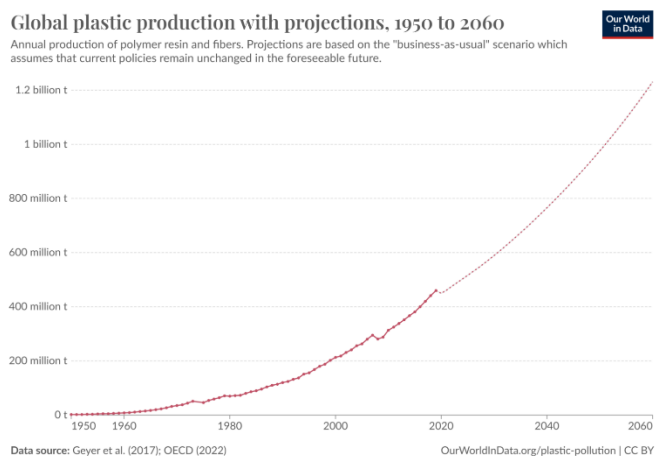
- 1) **Bypassing laws-** It may be utilized to bypass existing environmental laws, particularly those related to forest conservation.
- 2) **Ground level challenges-** There is a lack of proper understanding of ground level challenges and expertise to address those challenges.
- 3) **Threat to biodiversity-** It may promote monocultures and planting vegetation unsuitable for certain ecosystems. This could adversely impact biodiversity and soil health.
- 4) **Measurement Problems-** There are challenges of measuring biodiversity impact accurately. For ex- How does one measure the impact on biodiversity when they are 200 meters apart?
- 5) **Lack of Fungibility-** Fungibility is the ability to exchange one unit of a commodity for another. However, this is lacking in green credits due to the diverse nature of environmental credits like biodiversity and water conservation. This poses a challenge in equating different types of credits on the same platform. For ex- How does one equate a credit of one unit of water conservation with one unit of ecosystem restoration on the same platform?
- 6) **Clashes with Forest Conservation Act** -The program's rules imply that earning green credits can negatively influence mandatory compliances, such as forest clearances. For ex-it may bypass the whole forest clearance process just to help the industries get green credits.

A Global Plastics Treaty

News- Recently negotiators and observers from 175 countries gathered in Ottawa, Canada, to discuss the world's first global treaty aimed at reducing plastic pollution. This is the fourth set of talks since 2022 when the UN Environmental Assembly decided to create a binding treaty on plastic pollution by 2024's end.

Why is a legally binding global plastic treaty required?

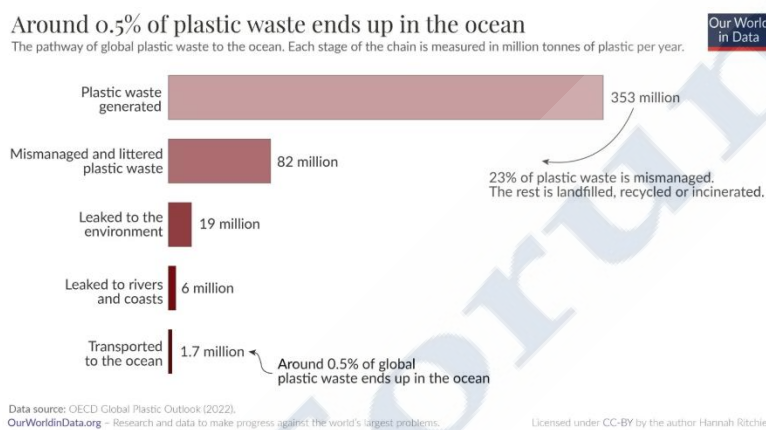
1) Increase in plastic production- Since the 1950s, global plastic production has increased a lot. It rose from 2 million tonnes in 1950 to over 450 million tonnes in 2019. If left unchecked, it's set to double by 2050 and triple by 2060.



2) Slow decomposition rate- In a study published by The Lancet in 2023, it was found that nearly 6 billion tonnes of plastic currently pollute the planet. Only a small fraction of plastic has been recycled so far, and because it takes anywhere from 20 to 500 years to decompose, it poses a significant environmental challenge.

3) Impact of Plastic Pollution on Ecosystems and Health- A lot of plastic waste ends up in rivers and oceans, breaking down into tiny particles called microplastics or nano plastics. These particles carry over 16,000 chemicals that can harm ecosystems and living things, including humans. These chemicals disrupt the body's

hormones, leading to issues like cancer, diabetes, and reproductive disorders.



4) A Major Contributor to Climate Change- Plastic production and disposal are adding to climate change. As per OECD report, in 2019, plastics produced 1.8 billion tonnes of greenhouse gas emissions, which is about 3.4% of global emissions. Around 90% of these emissions come from making plastic, which relies on fossil fuels.

Read more- [The UN Treaty on Plastic Pollution](#)

What are the challenges before the adoption of a legally binding treaty?

1) Resistance from oil producing countries- Since the first talks in Uruguay in November 2022, oil-producing countries such as Saudi Arabia, Russia, and Iran have resisted putting caps on plastic production. They're using various delay tactics, like arguing over procedures, to disrupt productive discussions. They have also asked for narrowing the scope of the treaty.

2) Polarizing negotiations- There's a coalition of about 65 nations, called the "High-Ambition Coalition," aiming to address plastic production. This coalition, comprising African nations and most of the European Union, aims to eliminate plastic pollution by 2040 whereas certain oil producing countries do not endorse restrictions on plastic production. This leads to a lack of consensus on legally binding treaties.

3) Opposition by Fossil fuel and chemical corporations- The fossil fuel industry, which provides 99% of the materials for plastics, considers plastics crucial. They, along with the chemical industry, resist cutting plastic production, claiming that the problem lies in waste, not plastic itself. These corporations are trying to weaken the treaty and have sent many lobbyists to the Ottawa negotiations.