

9 PM Current Affairs Weekly Compilation

For UPSC CSE mains examination





Features :

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

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GS Paper 2

Subject: Indian Polity

Topic: Issues and challenges pertaining to the federal structure

Concerns in India's Fiscal Federalism - On irregularities in vertical devolution

News: The article discusses the issues in India's fiscal federalism, focusing on the unfair distribution of tax revenue between the central government and states.

What are the Concerns in India's Fiscal Federalism?

The central government's **increasing retention of tax proceeds**, evident in the rising share of cesses and surcharges, is a key concern in India's fiscal federalism.

This trend contributes to the **shrinking of the divisible pool**, with these collections growing from 11.3% of the gross tax revenue in 2009-10 to 16.3% in 2022-23. States face the challenge of more tied transfers, restricting their spending freedom.

Furthermore, the government's **non-compliance with Finance Commission recommendations** on revenue sharing exacerbates the situation, a point underscored by the Comptroller and Auditor General's (CAG) reports on mismanagement of funds.

For information on the Issues with Fiscal federalism read here

Why is there shrinking of divisible pool?

- 1. **Introduction of Cesses and Surcharges:** The central government has been introducing new cesses and surcharges, like the Agriculture Infrastructure and Development Cess in 2021-22, and retaining them exclusively.
- 2. **Exclusion from Divisible Pool**: These cesses and surcharges are excluded from the net divisible pool, which is the portion of tax revenue shared with states.
- 3. **Rising Share of Exclusions:** The proportion of tax revenue excluded has increased significantly, from 11.3% of the gross tax revenue in 2009-10 to 16.3% in 2022-23.

What indication has been given by CAG on sharing of resources between the Union and States?

- 1. **Non-Transfer or Short Transfer of Cesses:** The Comptroller and Auditor General (CAG) highlighted instances where cesses collected were either not transferred or inadequately transferred to designated funds.
- 2. **Specific Examples of Mismanagement**: For instance, only 60% of the Health and Education Cess collected in 2021-22 was transferred to its reserve fund. Similarly, a small fraction (9.6%) of the Research and Development Cess collected over two decades was transferred to its respective fund.
- 3. Large Scale of Discrepancy: The extent of short transfers is substantial, with billions not reaching the intended funds. This includes shortfalls in the Swachh Bharat Cess and under-transfers in the Road Cess and Clean Energy Cess.

How is the spirit of cooperative fiscal federalism diluting?



- 1. **Deviation from Finance Commission's Recommendations:** The Union government has not fully adhered to the Finance Commission's recommended sharing rates. For instance, during the 15th Finance Commission period, the share actually devolved was only 38.1%, below the recommended 41%.
- 2. **Rise in Tied Transfers:** States are receiving more funds tied to specific central schemes, restricting their ability to allocate resources based on local needs.
- 3. **Credit Usurpation by the Union Government:** There's a tendency of the Union government to take credit for projects, even when states contribute significantly, undermining the partnership principle in fiscal federalism.
- 4. **Conditionalities on Grants:** Several grants to states are contingent on fulfilling certain conditions, including the insistence on specific labelling, which imposes Union government preferences over state priorities.

What reforms are needed to address these issues?

The 16th Finance Commission should compensate states for historical wrongs in devolution.
 Accurate estimates of "net proceeds" should be published in budget documents.
 Union government should legislate strict limits on the collection of cesses and surcharges.

Allocation of funds between the Centre and states- On financial devolution among States

News: The article discusses the financial arrangement in India where taxes collected by the central government are shared with states.

What is the basis for the allocation of funds between the Centre and states?

Under Article 270 of the Indian Constitution, a scheme is established for distributing net tax proceeds, collected by the central government, between the Centre and the States.

The divisible pool, which includes taxes like corporation tax, income tax, GST, and the Centre's share of IGST, is shared with the states but excludes cess and surcharges.

The Finance Commission, formed every five years, recommends how these funds are allocated. The 15th Finance Commission has advised a 41% share from this pool for the states. For information on **Finance Commission read here**

Now, the basis for allocation includes:

- 1. **Income Distance:** States with lower per capita incomes receive more to promote equity. The benchmark is the state with the highest per capita income, which is Haryana.
- 2. **Population**: The 2011 Census data is used for population considerations, moving away from the 1971 Census data used earlier.
- 3. **Forest and Ecology**: States with larger forest cover get a bigger share, recognizing their ecological contribution.
- 4. **Demographic Performance:** States that have better controlled their population growth receive more funds.
- 5. **Tax Effort**: States with higher tax collection efficiency are rewarded with a greater share.

What are the issues with the allocation of funds between the Centre and states?



- 1. **Exclusion of Cess and Surcharge**: About 23% of the central government's gross tax receipts come from cess and surcharge, which are not part of the divisible pool. For instance, in the 2024-25 budget, the total tax revenue of the Union government is ₹38.8 lakh crore, but states only receive around 32%, less than the recommended 41%.
- 2. **Variation in Returns to States:** There is a noticeable disparity in what states get back for every rupee contributed. For example, industrially developed states receive less than a rupee for every rupee contributed, compared to states like Uttar Pradesh and Bihar.
- 3. **Decreasing Share for Southern States:** Over the last six Finance Commissions, the share in the divisible pool for southern states has been reducing due to the criteria focusing more on equity and needs than on efficiency.

What should be done?

- 1. **Include Cess and Surcharge in Divisible Pool:** Currently, cess and surcharge are not shared with states. Including them in the divisible pool would increase the funds available for states.
- 2. **Reconsider Efficiency Criteria in Fund Allocation:** Give more importance to the efficiency of tax collection by states in the allocation process, which would encourage states to improve their tax collection systems.
- 3. **Enhanced State Participation in Finance Commission:** Similar to the GST Council, states could have a more formal role in both forming and working with the Finance Commission, leading to a more collaborative and transparent fiscal federalism.

For more information <u>read here.</u>

Topic: Powers, functions and responsibilities of various Constitutional Bodies

Implication of recent Supreme Court decisions

News: The article discusses recent Supreme Court decisions in India that challenge government actions. These rulings are seen as rare steps towards justice, but the article warns they may not indicate a significant change in the Court's overall approach to supporting government policies.

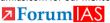
What are the recent Indian Supreme Court decisions that challenge government actions?

- 1. **Electoral Bonds Scheme Unconstitutional:** The Supreme Court declared the electoral bonds scheme unconstitutional. This decision challenges a significant government initiative involving political funding. For more information read <u>Article1</u>, <u>Article2</u>
- 2. **AAP Wins in Chandigarh Mayoral Race:** The Court pronounced the Aam Aadmi Party (AAP) as the winner in the Chandigarh mayoral race. This decision overturned a local electoral outcome, which is a direct challenge to the administrative actions in the election process.

What are the implications of the recent Supreme Court decision?

Positive Implications:

1. **Strengthening Electoral Democracy**: These decisions enhance the integrity of India's electoral democracy by challenging governmental actions, like the electoral bonds scheme, which was seen as opaque and controversial.



- 2. **Upholding Constitutional Principles**: The rulings reflect the judiciary's role in upholding constitutional principles, especially in high-stakes situations like the Chandigarh mayoral race.
- 3. **Restoring Public Faith:** Such decisions can help restore public faith in the judiciary as an independent institution capable of making unbiased decisions.

Negative Implications:

- 1. **Limited Political Consequences:** Despite the rulings, there's no substantial political or public backlash against the ruling party, suggesting a lack of significant impact on the political landscape.
- 2. **Normalization of Institutional Issues:** Such occasional rulings don't address the deeper issues of judicial delays and institutional bias, potentially leading to a normalization of these problems in the Indian political and judicial system.

Way forward

Moving forward, it's crucial for the Indian judiciary to consistently uphold constitutional principles and ensure impartiality in its decisions. This approach can help rebuild public trust and strengthen democracy, beyond just episodic judgments that seem to counter the government's actions.

Subject: Social Justice

Topic: Issues relating to Education, Human Resources

CBSE's Open-Book Examination Experiment

News: The article discusses CBSE's open-book examination experiment.

Background:

The Central Board of Secondary Education (CBSE) is experimenting with the possibility of "open-book" examinations (OBE).

Why is this being done?

This can tackle the following:

- a. Emphasis on rote learning.
- b. Issues with MCQ-centric standardised tests.
- c. Prevalence of "success manuals" sold by coaching factories.
- d. Psychology of fear associated with board examinations.

What should be done to revolutionize the education system?

Changes in Pedagogy: This is possible only when children are encouraged to realise and trust their hidden potential, and teachers engage in a meaningful dialogue with young students.
 Different kinds of questions: They should arouse and activate the critical faculty and creative imagination of young students. Those who design the question papers must work hard, learn and unlearn simultaneously.
 Encouraging Creativity: Students are hardly encouraged to see beyond textbooks, study the literature



outside the syllabus, relate the classroom to the larger world, and think differently and creatively. The spirit of dialogue and critical pedagogy in the classroom should encourage "higher order" or innovative thinking.

What will be the challenges?

Challenge for the teachers: They cannot ask the same questions year after year; they must constantly activate your mind and experiment with ideas.

Challenge for young students: As there is no ready-made answer in textbooks or other "success manuals", they need to sharpen their analytical thinking, creative imagination and style of writing.

On India's Public Education System

News: The article discusses the importance of investing in education. It also highlights the improvements being seen in India's public education system, and the challenges which still remain.

Why is investing in education important?

1. **Leveraging Demographic Dividend:** Investing in public education systems is crucial for countries seeking to leverage their demographic dividend.

For instance, **South Korea**'s emphasis on education significantly improved literacy rates and provided the necessary skills for industrial and technological sectors, which contributed to its economic development.

2. **Economic Growth:** Empirical research shows that educational investment is positively correlated with economic growth.

For instance, according to **World Bank** studies, each additional year of schooling is associated with up to a 10% increase in individual earnings, and countries prioritizing educational quality generally exhibit higher economic growth rates.

What are the improvements being seen in India's public education system?

The **Unified Digital Information on School Education (UDISE+) 2023** data shows that there were significant advancements seen in India's public education system. These include:

1. **Decrease in Pupil-Teacher ratio (PTR):** It has seen a remarkable decrease across all levels of education, signifying smaller class sizes and more individualized attention to students. It reflects an effort to improve the quality of education through increased teacher recruitment.

2. **Gender Parity in Teaching Staff:** The teaching staff has attained a gender balance, with female teachers now comprising 52.3% of the workforce in 2022-23, up from 46.9% in 2014-15.

3. **Rise in Learning Outcomes:** Between 2013 and 2022, the number of students within the public education system passing with 60% and above has surged, with 'pass' students in Class 10 rising from 5.8 million to nearly 9.8 million and in Class 12 from 3.6 million to over 4.3 million.

4. **Rise in Female Education:** The pass rates of female students rose by 72% in Class 10 sand 87% in Class 12, surpassing the improvement rates of male students.

What is the 'Pyramidal Structural' challenge in India's public education system?

The Right to Education (RTE) Act of 2009 mandated **distance norms for primary and upper-primary schools (1km and 3km respectively)**. This significantly increased accessibility to education. It expanded educational infrastructure, particularly at the primary and upper-primary levels.

However, the Act's focus on elementary education has led to:



a. **Scarcity of secondary and higher secondary schools:** There are 743,000 schools at the primary level, accounting for 50.7% of all schools. However, only 150,000 schools (10.3%) are present at the higher-secondary level.

b. **Disproportionate allocation of resources for elementary schooling:** As a result, according to UDISE+ data, there are 122.5 million enrolments in primary schools. However, it decreases to 38 million at the secondary level, and only 27.8 million at the higher-secondary level.

What should be done?

- 1. Increasing secondary and higher-secondary seats.
- 2. Enhancing educational access.
- 3. Ensuring a smooth educational progression with sufficient infrastructure and teachers at the state level.

According to the authors, it is the responsibility of state governments to implement these critical steps. Addressing this pyramidal shrinkage is crucial to tackle educational disparities and unlock India's human capital potential.

Topic: Mechanisms, laws, institutions and bodies constituted for the protection and betterment of vulnerable sections

Supreme Court's decision on women's employment- Ending discrimination

News: The article discusses a Supreme Court of India ruling that it's unconstitutional to fire women for getting married.

What challenges do women face in the civilian workforce?

- 1. **Personal Questions in Interviews:** Women often face uncomfortable personal questions about their marriage and motherhood plans during job interviews.
- 2. Low Workforce Participation: Data shows that only 19.9% of women in India participate in the workforce, highlighting a significant gender gap in employment.
- 3. **Education Barriers:** Many girls, especially among the poor, drop out of school due to various reasons, ranging from economic challenges to lack of proper facilities like toilets.
- 4. **Restrictive Social Norms**: Women are often bound by societal and cultural expectations, which limit their opportunities and advancement in the workforce.
- 5. **Unequal Domestic Responsibilities:** The **UN's Gender Snapshot 2023** indicates that women are expected to undertake a disproportionate amount of housework and caregiving duties compared to men.

What was the Supreme Court's decision on women's employment?

- 1. **Ruling on Marriage and Employment:** The Supreme Court of India ruled that terminating women's employment for getting married is unconstitutional.
- 2. **Case Example Selina John:** This decision came from the case of Selina John, a former lieutenant in the Military Nursing Service, who was discharged in 1988 for getting married.
- 3. **Compensation Ordered:** The Court directed the Indian Government to pay Ms. John ₹60 lakh in compensation.

How does this affect gender equality?



- 1. **Promotes Equal Treatment:** The Supreme Court's decision against penalizing women for marriage supports equal treatment in employment.
- 2. **Encourages Women's Participation:** It may encourage more women to join and stay in the workforce, knowing their marital status won't affect their employment.
- 3. **Supports Broader Gender Parity Efforts:** This decision aligns with efforts to achieve gender parity in areas like the military, where women recently gained the right to permanent commission.
- 4. **Challenges Patriarchal Norms**: It challenges patriarchal norms and societal expectations that restrict women's professional opportunities.

Way forward

To move forward, societal and cultural norms that restrict women's opportunities must change. Organizations should make workplaces supportive, not limiting women based on marriage or domestic roles. Increasing women's participation in the workforce, currently at 19.9% in India, is crucial for achieving gender parity.

Subject: International Relations

Topic: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests

On India-UK Defence Ties – In a tough world, the beacon of U.K.-India strategic ties

News: The article discusses the converging interests of India and UK in the maritime domain. It also highlights how and why India-UK defence ties are becoming stronger.

A detailed article on India-UK Relations can be read here.

What are the converging interests of India and UK in the maritime domain according to the author?

1. Both are outward facing, mercantile and modern societies.

2. Although separated by thousands of miles, both are inherently connected by the ocean.

3. Trade in food and goods is the reason for mutual prosperity, supporting the lives and livelihoods of many.

Considering this, both nations need to secure and free the seas from aggression and exploitation. It is important because of goods and resources that flow across the seas on which our economies rely. Even the data supporting online banking and capital flows also move via underwater cables.

Why are India-UK defence ties becoming stronger?

1) **Converging Interests:** The U.K. and India have a common interest in ensuring that violence and disregard for international law are not allowed to become normalised. For example: Houthi attacks in the Red Sea and the Ukraine conflict.

2) **Rise in Importance of Indo-Pacific:** The centre of gravity of the global economy by 2050 will be in the Indo-Asia-Pacific.

How are India-UK defence ties becoming stronger?



1. **Increasing Interaction between British and Indian forces:** There have been record numbers of U.K. ship visits to India. UK's Carrier Strike Group will be deployed again to the region in 2025 and will lead to increasing operational capabilities.

2. **Defence industrial partnership:** From electric warship propulsion to complex weaponry to jet engines, cooperation in sharing knowledge and expertise is increasing.

3. **Military education ties:** Officers from all three services of the Indian Armed Forces will be joining British service academies as instructors, sharing their experiences with future military leaders.

Topic: Important International institutions, agencies and fora- their structure, mandate

Raisina Dialogue: Significance and issues

News- Recently, the 9th edition of the Raisina Dialogue 2024 was inaugurated by Prime Minister Narendra Modi in New Delhi.

What is Raisina Dialogue?

The Raisina Dialogue is an annual conference on geopolitics and geoeconomics, which aims to address the most challenging issues faced by the world. The conference takes place in New Delhi and is attended by people from political, business, media, and civil society backgrounds.

Delhi-based think tank Observer Research Foundation, in partnership with the Ministry of External Affairs, hosts the conference.

What is the significance of Raisina Dialogue for India?

1) **A Platform for dialogue**-It provides opportunities for India to have dialogue and discussion on key regional and global issues.

2) **"Vishwamitra" or friend of the world** –It reflect Indias commitment and aspiration to be a leading voice and contributor in the international arena by mutual cooperation.

3) **Uphold rule-based order-** It demonstrates India's commitment to a rules-based and inclusive world order.

4) **Advancing national interest**-The platform provides opportunities to showcase India's achievements and potential in various fields and advancing its strategic and economic interest.

What are the issues with the recently held Raisina dialogue?

1) Agenda dominated by European Interests-There was a great focus on Russia-Ukraine war during Raisina dialogue. Other important issues like Israel war on Gaza and agenda of Global South, were not adequately discussed.

2) Lack of balance-The European dignitaries have raised issue of Chinese and Russian aggressive posturing. However, neither Russia nor China was invited.

3) Lack of diversity- There was minimal presence from Southeast Asia, Latin America, and even South Asia (excepting Nepal and Bhutan).

4) **Under representation of civil societies-** There was lack of adequate representation of non-governmental civil society organizations in the discourse.



Inefficiency of United Nations

News-The article highlights the challenges to post-World War order and limitation of the United Nation in addressing this challenge.

What are the challenges to post world war order?

1) **Major global institutions dominated by the west-** The old-world powers like U.S.A and European colonial countries controls power structures of the new institutions.

For ex- a) The World Bank is always headed by an American citizen. b) Western Europe gets to nominate the head of the IMF.

2) **Veto power of permanent members**- Developing world has tried to group under G-77 and NAM to advance their legitimate demands. However, they could not overcome the veto at the Security Council.

3) **Rise of ad-hoc groups**- There are many multilaterals and plurilateral groupings. For ex-OECD, QUAD etc. However, they have a narrow focus and do not address issues of global concern. It attaches more importance to regional interest than global interest.

4) Covid Pandemic-It has aggravated the problems of de-globalization by restriction on movement of people.
5) Regional wars- Russia's invasion of Ukraine, war in Gaza has exposed the failure of U.N. to protect the violation of human rights.

A detailed article on the **Shortcomings of UN** can be <u>read here</u>.

Can any regional organization replace the UN system?

1) The organizations and groupings outside the UN are all ad hoc and serve limited interests rather than universal values.

2) Organization like North Atlantic Treaty Organization are limited alliances created to ensure regional security.

3) Most of the organizations do not have global treaties and binding legal obligations thus they are not effective.

The United nation may have its own challenges but there is no regional institution which can replace it. Hence, there is a need for changes in the functioning of the United Nations so that it can ensure global peace and prosperity.



GS Paper 3

Subject: Indian Economy

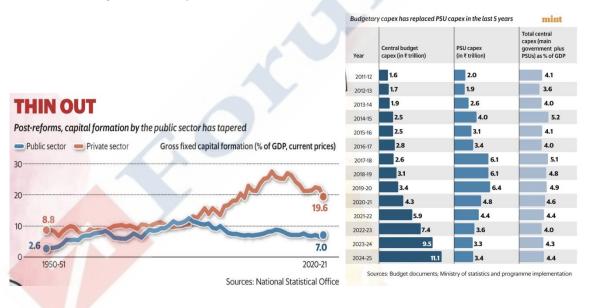
Topic: Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment

Capital expenditure in India- THE PUBLIC SECTOR GAP In Centre's CAPEX Spree

News: The article discusses the Indian government's increased spending on capital expenditure (building assets like roads and bridges) over recent years. It explores where the money is spent, how it's changing, and its impact on economic growth and private sector investment.

What is the trend of capital expenditure in India?

Significant increase in central government Capex, from ₹11 trillion in 2024-25, nearly 4.5 times higher than in 2014-15. It represents 3.4% of GDP in 2024-25, up from 2% nine years earlier. PSU capex has decreased from well above 10-11% of GDP in the 1980s to around 6-8% in recent years. Significant rise in state government Capex, from 3.2% of GDP in 2011-12 to around 4.4% in 2022-23. Private Sector Capex hasn't fully recovered since the 2008 financial crisis.



For information on Capital Expenditure read here

How is capital expenditure centralized?

1. NHAI Funding Shift: The National Highway Authority of India, previously self-funded, now relies entirely on central government budget allocations. In 2024-25, ₹1.68 trillion of the central government's capex is allocated to NHAI.



- 2. **Railways Funding Change:** Almost all railway capex for 2024-25, amounting to ₹2.52 trillion, is financed directly through the central government budget, a shift from previous years where railways partly funded their capex.
- 3. **Overall Trend:** This centralization reflects a structural shift in how capex is financed, increasingly moving away from PSUs and being incorporated into the central government's budget.

Why is there an increase in state government capex?

- 1. **Rising Tax Revenues:** State governments have experienced strong growth in tax and non-tax revenues, boosting their fiscal capacity for capital expenditure.
- 2. **GST Compensation:** States received compensation from the central government for revenue losses due to the shift to the Goods and Services Tax (GST) regime.
- 3. **Special Assistance Scheme:** The central government's scheme offering 50-year interest-free loans for capital investment has significantly contributed to state capex. For 2024-25, this is budgeted at ₹1.3 trillion.

How does government spending stimulate private sector investment?

- 1. **Government Capex as a Catalyst:** The government's increased spending in capital projects is expected to trigger private sector investment. The hope is that government-led infrastructure development will create opportunities for private companies.
- 2. **Creating Demand:** By building assets like roads and bridges, the government's capex can generate demand in related industries, encouraging private sector participation.
- 3. **Healthy Corporate Balance Sheets:** With high profits and stable or improving leverage, corporates are in a better position to invest. The Reserve Bank of India notes that the corporate sector's financial health could lead to increased private investment.
- 4. **Economic Environment:** The government's substantial capex is intended to create a more favorable economic environment, encouraging the private sector to take over the investment baton in the long run.

Way forward

To sustain economic growth, it's crucial for India to maintain its increased government capex while simultaneously stimulating private sector investment. This requires balancing central and PSU expenditures and enhancing state government capex, supported by strong tax revenues and central government funding schemes.

India's import tariffs- Express View on India's tariff regime: Costs of a barrier

News: This article discusses India's increasing import tariffs since 2014, which are now among the highest globally. High tariffs harm manufacturing and exports, and there's concern about the impact on sectors like electronics and pharmaceuticals.

What is the trend in India's import tariffs?

Since 2014, India has increased tariffs about 3,200 times. The average tariff rose from 13% in 2014-15 to around 18%. India's tariffs are higher than those of China (7.5%), Vietnam (9.6%), and Bangladesh (14.1%). These high tariffs are in contrast to earlier trends of reducing tariffs from 125% in 1990-91 to 13% in 2014-15.

What are the impacts of high import tariffs?



1. High tariffs disadvantage manufacturers by increasing production costs. It negatively affects India's export competitiveness compared to countries with lower tariffs.

2. Consumers are hurt due to higher prices and limited product choices.

3. Sectors like electronics and pharmaceuticals face challenges due to dependency on imported components, particularly from China. For instance, the electronics sector struggles with higher costs for parts like circuit boards and chargers.

4. High tariffs also affect sectors attempting to diversify away from Chinese supply chains. For example, countries like Vietnam, Thailand, and Mexico, which have lower tariffs than India, become more attractive to manufacturers.

What is the government's recent approach?

1. The government has started rethinking its high tariff policy. It recently reduced the import duty on mobile phone components from 15% to 10%.

2. India is pursuing trade agreements to enhance economic ties and trade. Agreements have been signed with the UAE and Australia, and negotiations are ongoing with the UK.

3. These efforts reflect a more nuanced approach to balancing protectionism with global trade demands.

Way forward

Moving forward, India should continue reducing high tariffs to enhance competitiveness and attract foreign investment. Pursuing more trade agreements, like those with the UAE and Australia, will further open markets. Balancing protectionism with global trade demands is key for India's economic growth and manufacturing sector development.

Changing the Growth Paradigm in India

News: The article discusses the dominant paradigm for growth in India and the issues with it.

Background:

The Governor of the Reserve Bank of India recently said in an open letter to the Union Finance Minister that India's economy is not healthy. To improve the well-being of citizens, they need decent jobs, which the Indian economy has not provided despite impressive growth of GDP.

What is the dominant paradigm for growth in India?

All Indian governments, since the liberalisation of the economy in 1991, have focused on GDP. This paradigm focuses on **increasing the size of the pie before its redistribution**.

It has replaced "socialist" models which were concerned with conditions at the bottom. In this model of progress, villages are bad, cities are good; farms are bad, and factories are good.

What is the issue with the current growth model?

1) **Inequality:** India is becoming one of the most unequal countries in the world with this flawed model of economic progress. Structural conditions that cause **inequitable growth** have worsened.

2) Environmental Concerns: With the present model of progress, India must use more fossil fuels to propel economic growth. This has become a bone of contention in global climate negotiations, where all countries are expected to make equal sacrifices to save the global climate.

3) Dependence on Fossil Fuels: They are required for steel, concrete, plastics, and mobile machinery used



for transportation and farming runs on fossil fuels.

a. **Usage of Fossils in the Food Industry:** Fertilizers are produced from fossil-fuel feedstock. Farm machinery is made of steel and runs on fossil fuels. Plastics are used for hygienic transportation of food in global supply chains.

Therefore, India must find a new paradigm of progress, for itself and for the world, for more inclusive and environmentally sustainable growth.

What should be the way forward for a new paradigm of growth?

According to the author, the following needs to be done:

1. Retreat of agricultural mechanization.

2. Reduction in the use of synthetic agrochemicals and services.

3. Need for the labor force to leave cities to produce food in the old ways. Purely organic farming would require people to abandon cities and resettle villages.

4. Local systems solutions, cooperatively developed by communities in their own villages and towns, are the way to solve global systemic problems of climate change and inequitable economic growth.

Rather than trying to catch up with rich countries on their historical development paths, India should take advantage of its present realities. India's policymakers must free themselves from western-dominated theories of economics.

On Reforming India's Government Procurement System

News: The article discusses the issues with government procurement process in India and suggests reforms to tackle them.

The government and its agencies are large buyers of a wide range of goods and services. Public sector undertakings procure inputs for their production processes and are required to comply with a procurement system.

What are the issues with government procurement process in India?

The procurement system in India has become increasingly rigid. For instance:

a. Supply bids must be invited with **precise specifications**.

b. Prequalification criteria for bidders are prescribed.

c. The lowest bidder, or L1, must be awarded the contract.

d. Retendering takes place if only one bid is received.

e. **Negotiations** in procurement are not allowed.

f. It is subject to strict process oversight, including auditing and vigilance.

What are the implications of this on innovation and startups?

The government cannot purchase new innovative technologies and products from a single monopoly supplier (since retendering takes place if only one bid is received). The consequence is that nothing is bought in the field of innovative frontier technologies (since innovative technologies usually have a monopoly in the initial few years).



This harms innovation as Indian companies and startups may be having the potential for innovation, but they do not have any market openings.

What should be done?

1. **Opportunity for Innovators:** There should be an open window for receiving offers from those who have developed a new product or process.

2. Forming an Empowered Committee: This may include experts from outside the organization, which examines all such offers. In case the benefits are significantly higher than the cost, the Committee may then take up the offer, satisfy itself about the claims being made, negotiate to settle the price, and place a trial order.

3. **Relaxing the Oversight Mechanism:** Investigative agencies should not investigate the empowered Committee's bona fide decisions. Failure as well as time and cost overruns are natural in such an initiative and must be accepted to avoid subsequent audit investigations.

4. Assigning Responsibility: A firm, consortia, technical institution, individuals or any combination of these could be given the task of finding a solution to a problem based on the real need of the government agency.
5. Funding: The effort to be undertaken in a project mode would need to be fully funded by the sponsoring agency.

6. **Negotiated Procurement:** After success, the price at which the product would be purchased would have to be settled through negotiations. There is no alternative to accepting procurement at a negotiated price and trusting the negotiators.

7. **Expanding to all Government Agencies:** Successful work has been done along these lines by the departments of atomic energy, space and DRDO. It should be extended to cover all public procurement.

After this process results in initial success, other players would start to identify a gap, innovate, come up with a solution, and get orders from the government and its agencies. Innovation would then start taking place in the economy.

Topic: Inclusive growth and issues arising from it

Reduction in poverty and income inequality in India

News: The article talks about the Indian government's recently released Fact Sheet on the Household Consumption Expenditure Survey (HCES) for 2022-23. It highlights a major reduction in poverty and income inequality in India over the last 11 years.

How has poverty been measured?

Poverty is measured using the World Bank's purchasing power parity (PPP)-based \$1.9 per capita per day line. Adjustments for inflation and rural-urban differences were made to calculate the poverty rates for 2022-23. For information on Poverty Measurement in India <u>read here</u>

What does the new government report say about poverty in India?

1. **Dramatic Decline in Poverty:** The new government report shows a significant reduction in poverty in India, from 12.2% in 2011-12 to just 2% in 2022-23.



- 2. **Poverty Lines Updated:** The poverty lines have been revised to ₹1452 for rural and ₹1752 for urban areas per month, accounting for inflation rates of 5.7% and 5.6% respectively since 2011-12.
- 3. **Extreme Poverty Nearly Eliminated:** Based on the World Bank's \$1.9 per day poverty line, the report suggests that extreme poverty in India is almost eradicated.
- 4. **Shift in Higher Poverty Line:** Even with a higher poverty line of \$3.2 PPP, poverty in India decreased significantly from 53.6% in 2011-12 to 21% in 2022-23.
- 5. **Reduction in Inequality:** The report also indicates a decline in income inequality, with the Gini coefficient from 28.7 to 27.0, and urban from 36.7 to 31.9.
- 6. **Economic Growth:** This reduction in poverty and inequality has coincided with substantial economic growth in both rural (3.1%) and urban (2.6%) regions.

What does critics say about poverty levels in India?

- 1. **Skepticism About Poverty Reduction**: Critics were of the opinion that poverty levels hadn't significantly changed over the past 11 years.
- 2. **Questioning Data Quality:** The skepticism partly stems from the non-release of the 2017-18 Household Consumption Expenditure Survey data, which was cited for poor quality.
- 3. **Debate on Poverty Estimation:** There is an ongoing debate among experts about the methodologies and data used to estimate poverty levels in India.
- 4. **Diverse Estimates:** The range of poverty estimates by various entities, from 5% to 20%, using the World Bank's \$1.9 poverty line, adds to the confusion and debate.

Subject: Agriculture

Topic: Storage, Transport and Marketing of Agricultural Produce, Issues of Buffer Stocks and Food Security.

Government's new grain storage plan to be executed by cooperatives

News-The article discusses the importance of cooperatives in storage of food grains.

What is the state of food grain storage in India?

The Food Corporation of India currently has a storage capacity of 361.62 lakh tonnes and state government agencies have capacities of another 400.74 lakh tonnes.

What is the world's largest grain storage plan?

The pilot project will be carried out in 11 states by primary agricultural credit societies. The government aims to build storage capacity of 700 lakh metric tons which is almost **double the existing storage** capacity in the country.

A detailed article on World's largest grain storage plan can be read here.

What are the benefits of an increase in storage facilities?



1) It will **cut down losses** due to lack of adequate infrastructure.

2) It will enable farmers to **sell their output at an opportune time** in terms of prices.

3) It points towards the **increasing emphasis of the government** on **cooperatives**.

What is the importance of primary agricultural credit societies?

1) Large network of societies- As per Reserve Bank of India's report, there are 1.02 lakh societies in the country at the end of March 2021.

These societies have a sizeable presence in the western part of the country, serving 13.7 crore members and 5.4 crore borrowers.

2) **Empowerment of small farmers**- The data shows that small and marginal farmers and others accounted for **81 per cent of these 13.7 crore** members. Around 60 per cent of lending of district central cooperative banks is through these societies.

3) **Collective Strength**-They operate through group/collective strength ensuring that no one is left behind. For ex: **Amul and Lijjat Papad**.

What are the steps taken by the government to promote primary agricultural credit societies?

1) **Establishment of new cooperatives**- The government aims to establish two lakh primary agricultural credit societies (PACS) and dairy and fisheries cooperatives in the country.

2) **Modernization of PACS** -The Union Budget 2023-24 has started the process of computerization,63000 PACS with an investment of Rs 2,516 crore.

3) **Creation of separate ministry**- The government has created a dedicated ministry namely **Ministry of Cooperation** for promoting cooperative societies in India.

Subject: Science & Technology

Topic: Indigenization of technology and developing new technology

Sustainable funding for science

News-The article highlights the need to ensure sustainable funding for science to achieve developed country status by 2047.

What is the state of science funding in India?

India's research and development (R&D) expenditure is around **0.64% of GDP**. There has been a decline in science funding from 0.8% in 2008-2009 and 0.7% in 2017-2018 to 0.64 currently.

This is despite the fact that both 2013 Science, Technology, and Innovation Policy and Economic survey have urged the government to take R&D spending to 2% GDP.

A detailed article on Funding Issues of Indian Science can be read here.

With respect to other countries, funding for fundamental research in India is amongst the world's lowest. In 2021, member-countries of the **OECD** on average spent **2.7% of their GDP** on R&D. The U.S. and the U.K. have consistently spent more than 2% of their GDPs on R&D for the past decade.

What are the issues with science funding in India?



1) Lack of private sector participation- In 2020-2021, the private sector industry contributed **36.4% of the GERD** whereas in economically developed countries, a major share — 70% on average — of R&D investment comes from the private sector.

2) **Regulatory Issues**- Issues like lack of clear exit options for investors in sectors such as biotechnology and fears of intellectual property rights theft discourage private investment in R&D in India.

3) **Under-utilization of allotted funds**- In 2022-2023, the Department of Biotechnology (DBT) used 72% of its estimated budget allocation while the Department of Science and Technology (DST) used only 61%. 4) **Lack of capacity-** There is lack of capacity to evaluate projects or clear utilization certificates and release grant and salary disbursements on time.

What should be the way forward?

1) **Enhanced private sector participation-** Finance Minister highlighted the need for enhanced R&D expenditure from the private sector.

2) **Budget optimization-** There should be a reduction in the under-spending and underutilization of funds earmarked for R&D.

3) **Political prioritization**- R&D spending should be given utmost importance by political class. This prioritization must happen within the ministries concerned and at the Ministry of Finance, which disburses the funds.

4) **Overcoming regulatory hurdle**- There should be incentives for private investment, including relaxation of foreign direct investments, tax rebates, and clear regulatory guidelines for private players.

5) **Evaluation & monitoring-**There should be capacity building of bureaucrats so that they can evaluate science projects and, after allocations, monitor utilization.

India should spend at least 3% of the GDP on R&D annually until 2047 reach the 'developed nation' status.

Topic: Developments and their applications and effects in everyday life

Rise of deepfake-Threat to election integrity

News-The article discusses the potential impact of deepkake on upcoming general elections.

A detailed article on Deepfakes can be read here.

What is deepfake technology?

Deepfakes are synthetic media that use Artificial Intelligence (AI) to manipulate or generate visual and audio content. They are manipulated usually with the intention of **deceiving or misleading someone**. A detailed article on **New IT Rules for social media and its Challenges** can be <u>read here</u>.

How does deepfake technology pose a threat to integrity of elections in India?

1) **Emergence of generative adversarial networks (GANs)**- This is a variant of generative AI which facilitates the rapid **generation** of deepfakes on a real-time basis.

Due to its easy **accessibility**, it may lead to the creation of a large number of deepfake accounts that can **suppress factual information** in every constituency. For ex-deepfake videos of **Indian Prime minister**. 2) **Weaponization of social media**- Deepfake videos evoke emotions and exaggerate **confirmation bias** by spreading **more misinformation on** social media platforms.



3) **External election interference-** Digital businesses can create context-specific fake videos for politicians and **foreign powers**. These fake videos may be abused by **hostile foreign countries** to threaten the integrity of Indian elections.

What are the issues in regulating deepfakes?

The April 2023 amendment to IT rules empowers the **central government** to instruct social media platforms and intermediaries to remove deepfakes or objectionable content. There are certain issues: A) This provision may be abused by **the ruling party** for targeting political adversaries. B) The current IT rules focus on content takedown but do not provide **penal provisions** for creating deepfakes. C) The **Bhartiya Nyaya Sanhita** places the burden of proof on the **prosecution** for establishing deep fake related crime.

D) Most deepfakes are uploaded from **abroad** with masked entities. However, Indian law does not have **extra-territorial jurisdiction** to prosecute entities outside India which endangers Indias interest.

What steps can be taken to preserve the sanctity of the electoral process?

1) **Continuous monitoring-** The ECI (Election Commission of India) can continuously monitor social media posts which are trending. The ECI may collaborate with IITs to deploy **Fakecatcher technology** which is capable of identifying **tampered videos** in real-time.

2) **Empowering the ECI**- There is a need to amend the IT rules to grant the **ECI** the power to **directly instruct** intermediaries to take down fake videos. This will also ensure political neutrality.

3) Overcoming regulatory hurdles-

a) The IT rules need to be amended to put the burden of proof on fake content creators. There should be **penal provision** for creating deepfakes.

b) There should be enactment of some laws which can be **extra-territorial** in nature.

4) **Global Cooperation**- This involves collaborating with global platforms to share information regarding **uploads**, assistance in **investigation** and quick **removal** of objectionable content.

Deepfake poses a great challenge to the 2024 general elections. Nonetheless, the ECI must take all the necessary steps to ensure the **sanctity** of electoral process and uphold the **democratic ethos** of India.

Topic: Awareness in the fields of IT, Space, Computers, Robotics, Nano-technology, Bio-technology

Significance of moon landings missions- A new success

News: The article discusses recent moon landings by different countries and organizations. It highlights India's successful Chandrayaan-3 mission, Russia's failed Luna 25 mission, and the U.S.-based Intuitive Machines' first private moon landing. The article emphasizes the role of collaboration and private sector involvement in space exploration.

What recent moon landings have occurred?

India's Chandrayaan-3 successfully soft-landed on the moon, a significant achievement for ISRO. Russia's Luna 25 mission failed, showing challenges for Roscosmos. The U.S. company Intuitive Machines achieved the first private soft landing on the moon.



What is the significance of moon landings missions?

- 1. **Global Participation:** Recent missions like India's successful Chandrayaan-3 and Russia's Luna 25 indicate a growing global interest in lunar exploration.
- 2. **Private Sector Milestone:** The U.S.-based Intuitive Machines' successful landing marks a new era of private companies playing a significant role in space exploration, facilitated by NASA's CLPS program.
- 3. **Technological Advancements:** These missions showcase advancements in space technology, with ISRO's Chandrayaan-3 highlighting India's capabilities and Intuitive Machines overcoming a navigation glitch, demonstrating the importance of innovation and problem-solving in space missions.
- 4. **Learning from Success and Failure:** Both successful and failed missions provide valuable insights for future space exploration, enhancing understanding and strategies in this field.

How are different countries contributing?

- 1. **United States:** Through NASA's Commercial Lunar Payload Services (CLPS) program, the U.S. is nurturing private space ventures, exemplified by Intuitive Machines' successful moon landing, highlighting the synergy between government initiatives and private sector innovation.
- 2. **India**: By successfully launching Chandrayaan-3, India, under ISRO, is demonstrating its growing prowess in space technology, emerging as a significant player in lunar exploration and showcasing advancements made in space research post-colonial era.
- 3. **Russia**: Despite the setback with Luna 25, Russia, via Roscosmos, continues its long-standing tradition in space exploration, contributing valuable experiences and lessons to the global space community, albeit facing challenges in maintaining its historical reputation in the field.

Private participation in India's space sector

News-The article discusses the significance of increasing private sector participation in space.

What is the need for attracting private sector participation in the space sector?

1) **Unleashing the true potential of space economy**- Currently, India's space economy is worth \$8 billion. This is just 2 per cent of the global space economy.

2) **Space station**-India intends to launch its own space station by 2035. Thus, it would require funding not only from government sector but private sector also.

3) **Strategic Goals**-Space has become one of the dimensions of modern warfare. This requires optimal use of space and private sector participation can help in achieving this objective.

4) **Lower the burden on ISRO-**Enhanced private sector participation would allow the Indian Space Research Organization to exclusively focus on research and development.

A detailed article on **Private-sector participation in space** can be <u>read here</u>.

What are the steps taken by the government to enhance private sector participation in the space sector?

1) **IN-SPACE**: This was launched to provide a level playing field for private companies to use Indian space infrastructure.

2) **New Space India Limited (NSIL)**: Its aim is to use research and development carried out by ISRO over the years for commercial purposes through Indian industry partners.

3) **Indian Space Association (ISpA)**: It aims to open the Indian space industry to private companies and startups. For ex- around 190 startups are working in this area.



What is the significance of enhanced private participation in the space sector?

1) Boost to space economy- It will increase India's share in the global space economy.

2) **Innovative Solutions**-It can provide innovative solutions in areas such as telecommunication, agriculture, climate change, and disaster management.

3) **Employment Generation**-Increased private-sector participation in the country's space sector can provide employment to youths.

4) **Growth of industrial sector**-It will lead to development of industrial clusters. For ex- Salem aerospace cluster in Tamil Nadu and the Belagavi aerospace cluster in Karnataka.

What is the recent decision to improve private sector participation in space?

On February 21, the government took the decision to allow:

1. **100% FDI** in the "manufacturing of components and systems/sub-systems for satellites, ground segment and user segment".

2. Up to 74% FDI in satellite-manufacturing, operations, and data products.

3. Up to **49% FDI** in launch vehicles, space ports, and their corresponding systems.

What will be the implications of this decision?

Raise Private Sector Participation: This will increase the contributions of private space flight operators, technology-developers, and application designers to the national space economy, in line with the Space Policy.
 Ability to Compete with China: The decision gives India the ability to take advantage of China's strained foreign ties to catch up with China's more advanced position as a space power.
 Investment in Indian Startups: Nw investments can add to India's space economy by improving start-ups' access to talent and capital, boosting local manufacturing, and improving investor confidence.

What should be the way forward?

The government must do the following:

- a) Keep the regulatory environment clear.
- b) Reduce red tape.
- c) Increase public support.
- d) Make it easy for Indian companies to access foreign markets.

GAGANYAAN- Indian Human Spaceflight Programme.

News-The article discusses about India's most ambitious space programme Gaganyaan.

Background: Prime Minister has recently announced the names of the four astronauts who are undergoing training for the country's maiden human space flight mission, Gaganyaan.

What is Gaganyaan Mission?

It is a space mission to demonstrate ISRO's human spaceflight capability by launching a human crew to an orbit of **400 km** and bringing them safely back to earth.

What is its goal?

The **short-term goal** is to demonstrate human spaceflight to Low Earth Orbit. The **long-term goal** is to lay the foundation for a sustained Indian human space exploration programme.

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Further, India also intends to demonstrate the fact to the world that it is capable of indigenously developing this complex technology.

Read more: Private participation in India's Space Sector.

What is the significance of Gaganyaan Mission?

1) **Scientific temper-** The mission will help in inculcating scientific temper and creativity that will inspire the next generation of students.

2) **Manned Missions**-It will help in developing the critical technology for carrying out scientific human space exploration in future.

3) **Enhanced private participation**-The success of the mission will encourage the private sector to invest in space technologies. Recently, the government has allowed 100 % FDI in space sector.

4) **Foster International Collaboration**- India's technological demonstration will encourage collaboration with like-minded countries for future international space collaboration.

Genome India Project

News-The article highlights the significance of genome sequencing.

Background- The government's Genome India initiative has recently announced successful sequencing of 10,000 whole genomes of healthy persons from across the country, creating a genetic map of the population.

What is Genome sequencing?

Genome sequencing is figuring out the order of DNA nucleotides, or bases, in a genome—the order of Adenine, Cytosine, Guanines, and Thymine that make up an organism's DNA. The human genome is made up of **23 chromosomes pairs** with a total of about 3 billion DNA base pairs.

How is it sequenced?

1) Researchers first extract the information from the blood to sequence the genome.

2) Scientists cut 3 billion pairs into small pieces and tag because a complete sequence of 3 billion pairs would be extremely hard to handle.

3) The A, C, G, T code of these smaller chunks are written down by a DNA sequencer and then the complete sequence is put together.

Read more: Genome Sequencing in context of Coronavirus epidemic.

What is Genome India Project (GIP)?

1) **Description**-It is a scientific initiative inspired by the Human Genome Project (HGP), an international effort that successfully decoded the entire human genome between 1990 and 2003.

2) **Objective**-It was started in 2020 to better understand the genetic variations and disease-causing mutations specific to the Indian population, which is one of the most genetically diverse in the world.

3) **Partners**-It involves the collaboration of 20 institutions across India and is being led by the Centre for Brain Research at IISc in Bangalore.

4) **Findings**-Researchers have analyzed 5,750 of the genome sequences and have already identified 135 million genetic variants found in India.

What is the significance of Genome India Project (GIP)?



1) **Understanding genetic history**-A map of genetic diversity is essential for understanding the history of our evolution, discovering the genetic basis for various diseases, and creating therapies of the future. 2) **Identification of distinct genetic makeup**-India with population of 1.4 billion has more than 4,600 distinct groups.

Endogamy (marrying within the same community) is quite common in India so various groups have been able to maintain their distinct genetic makeup. This can help in understanding the impact of genetic variations on physical health.

3) Precision Healthcare-It can help in targeted treatments, especially for rare diseases that usually arise from genetic anomalies. It can help develop new therapies that can cure these diseases For ex- the under-development mRNA vaccine which will be used to prevent relapse of pancreatic cancer.
4) Identification of resistance-indicating variants-It can help in identifying resistance-indicating variants. These variants genes might make certain medicines or anesthetics ineffective in certain populations. For example- Vaishya community from South India lack the gene for properly processing common anesthetics.

Subject: Environment

Topic: Conservation, environmental pollution and degradation

Green elections - Stop the dithering and encourage green elections in India

News: The article discusses the need for environmentally friendly elections in India. It highlights the harmful environmental impact of traditional elections.

What is the carbon footprint of an election?

- 1. **Significant Emissions from Campaign Flights:** In the 2016 US presidential election, the carbon footprint from the campaign flights of just one candidate was equivalent to the annual emissions of 500 Americans.
- 2. **Primary Sources of Emissions:** According to a study, the main sources of carbon emissions during elections are transportation for voters and logistics to and from polling booths.
- 3. **Impact of Traditional Election Practices:** The use of non-biodegradable materials like PVC banners, loudspeakers, and disposable items in traditional election methods contributes substantially to the carbon footprint.
- 4. **Effects of Large Scale Elections**: In populous countries like India, the sheer scale of elections, involving crores of voters and mass rallies, significantly amplifies the environmental impact.

What are the challenges of conducting green elections?

- 1. **Technological Challenges:** Implementing digital voting systems requires robust infrastructure, and needs changes in behavior, especially in rural areas, and safeguards against hacking and fraud.
- 2. **Financial Constraints:** There are high upfront costs for eco-friendly materials and technology, which can be a barrier for financially constrained governments.
- 3. **Access and Training:** Ensuring that all voters have equal access to new technologies and adequately training election officials are significant hurdles.

What successful green election initiatives exist?



India

Kerala's Initiative: During the 2019 general election, the Kerala State Election Commission encouraged political parties to avoid single-use plastics. The Kerala High Court also banned flex and non-biodegradable materials in electioneering.

Eco-Friendly Booths in Goa: In the 2022 Assembly elections, the Goa State Biodiversity Board created election booths using biodegradable materials crafted by local artisans.

Global

Sri Lanka's Carbon-Sensitive Campaign: In 2019, Sri Lanka's SLPP party conducted the world's first carbonsensitive environmentally friendly election campaign. They measured and compensated for carbon emissions from vehicles and electricity in political campaigns by planting trees. **Estonia's Digital Voting:** Estonia introduced digital voting, reducing the carbon emissions related to transportation to polling stations. This method also improved voter participation while being eco-friendly.

What should be done?

- 1. **Legislation for Eco-Friendly Practices:** Enact laws mandating environmentally friendly electoral practices, integrating them into the Model Code of Conduct.
- 2. **Digital and Door-to-Door Campaigning:** Shift to digital platforms for campaigning to reduce energyintensive public rallies and encourage public transportation for election work.
- 3. **Use of Sustainable Materials:** Replace plastic and paper-based materials with sustainable alternatives like natural fabrics and recycled paper in polling booths.
- 4. **Digital Voting Implementation:** Adopt digital voting systems with robust security measures, as demonstrated successfully by Estonia.
- 5. **Education and Equitable Access:** Ensure all voters have access to digital technologies and provide necessary education and support.
- 6. **Collaboration Among Stakeholders:** Involve political parties, Election Commissions, governments, voters, media, and civil society in promoting and implementing green election initiatives.

Forest (Conservation) Amendment Act 2023 controversy- Red signal for green dilution

News: The article discusses a recent Supreme Court decision in India. The court ruled that the government must use a broad definition of forests from a 1996 judgment. This affects how the Forest Conservation Act is applied and protects more forest areas.

What was the Supreme Court decision on forests?

The Supreme Court of India reverted to the broader definition of forests from a 1996 judgment. This decision affects the application of the Forest Conservation Act (FCA). The 2023 amendments to the FCA had limited its application to notified or recorded forests only. The Court's decision protects more forest areas from being excluded under the FCA.

For more information on Forest (Conservation) Amendment Act 2023 read here

Why were the amendments to the FCA controversial?

1. **Impacts on Forest Area**: The 2023 amendments to the Forest Conservation Act (FCA) made it applicable only to notified or recorded forests. This narrowed the definition of forests, potentially leading to the declassification of millions of hectares.



- 2. **Impact on Non-Forest Use:** The amendments facilitated infrastructure development, like roads and highways, in forest areas. They enabled non-forest uses of land that were previously protected, weakening environmental safeguards.
- 3. **Environmental Concern:** Critics argued the amendments posed significant environmental risks. The amendments raised fears about increased degradation and loss of biodiversity in forest areas not covered by the FCA. For example, Haryana's plan for an animal safari park in the Aravalli forests, a pristine forest area, was a direct result of these amendments.

What is the government's justification for this?

The government justified the 2023 amendments to the Forest Conservation Act (FCA) citing development and infrastructure needs.

It argued that the original FCA hindered the construction of essential facilities like schools and infrastructure for tribal communities.

The government claimed that these amendments were necessary to balance environmental protection with development requirements.

As an example, the amendments aimed to facilitate road and highway construction, which was difficult under the strict provisions of the original FCA.

However, the Forest Rights Act already allowed for forest land diversion for such projects, making the amendment somewhat redundant.

Subject: Internal Security

Topic: Challenges to Internal Security through Communication Networks, Role of Media and Social Networking Sites in Internal Security Challenges

Threats posed by Artificial intelligence

News-The article discusses the threats posed by artificial intelligence to nations territorial sovereignty and highlights the need for a robust global AI governance body.

What is Artificial Intelligence?

AI refers to the ability of machines to perform cognitive tasks like thinking, perceiving, learning, problem solving and decision making.

<mark>It includes</mark> technologies like machine learning, Deep Learning, Big Data, Neural Networks, Computer vision, Large Language Models etc.

A detailed article on the Significance and Challenges of Artificial Intelligence (AI) can be read here.

What are the threats posed by Artificial Intelligence?

1) Reshaping traditional notions of sovereignty:

a) It is challenging the power dynamics between states, private technology companies, and individuals. As AI systems become more autonomous, they are creating new digital spaces that are not governed by traditional laws or state control.

b) It has started a new era of digital sovereignty which is altering the concept of territorial sovereignty. Here, Created with love • by ForumIAS- the knowledge network for civil services.

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countries that lack in development of AI will become more dependent on advanced nations by compromising their sovereignty in strategic sectors.

2) Undermining Democracy:

a) It can be used to manipulate information and influence public opinion. For example, AI can generate disinformation and misinformation at scale, which can trigger tensions and electoral-related conflict and violence.

b) It can be abused by hostile foreign powers to promote campaigns that can deepen divisions within societies, distort objective information and weaken democratic systems.

3) Lethal Autonomous Weapons Systems (LAWS):

a) **Technical challenge-** It is equipped with advanced AI algorithms which can independently identify and engage targets without human intervention. It can enhance military conflicts because it may lead to indiscriminate or erroneous targeting of civilians without human intervention.

b) **Ethical challenge**- It undermines fundamental principles of humanitarian law and responsibility. The absence of human oversight in the decision-making process of life and death raises moral questions about accountability.

c) **Arms race**- The proliferation of LAWS could lead to an arms race. This can destabilize international peace and security.

4) Threat to cybersecurity:

AI-enhanced methods, such as advanced persistent threats and spear phishing, can penetrate and disrupt critical national infrastructures. This can weaken nations cybersecurity.

Considering these challenges, there is a need for a robust global AI governance body which must ensure that advancement in AI can be used for serving humanity.

