

9 PM Current Affairs Weekly Compilation

For UPSC CSE mains examination



3rd Week

Apr. 2024

Features :

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

INDEX

GS Paper 1	4
Topic: Society- poverty and developmental issues, urbanisation, their problems and their remedies	4
Impact of Silicon Valley's growth on local urban areas: Concrete jungles and Silicon Valleys	4
GS Paper 2	5
Subject: Indian Polity	5
Global context of elections in 2024: How India's 'one citizen, one vote' democracy came to be .5	5
Topic- Salient Features of the Representation of People's Act	6
Voting process reforms in India	6
Topic- mechanisms, laws, institutions and bodies constituted for the protection and betterment of these vulnerable sections	7
Government created a committee related to the queer community: Express View on Centre's panel of queer rights: Better late than never	7
Article 15 important for disability rights: Political space for disability rights, a sliver of hope .8	8
Topic- Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes	9
4Ps of India's Development Strategy: How India has achieved success in national programmes	9
Challenges facing India's public housing programs	9
Subject: Governance	10
Topic: -Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources	10
Bidirectional relationship between economic growth and human development: Priority for human development	10
Topic-Government policies and interventions for development in various sectors and issues arising out of their design and implementation	11
New FDI rules in India's space sector: Express View on FDI in space: Opening up	11
Topic- Important Aspects of Governance, Transparency and Accountability, E-governance- applications, models, successes, limitations, and potential;	12
Network effects and their impact on digital markets: Managing competition in a digital world	12
New changes in India's competition law: Competition penalties going by global turnover call for a rethink	13
Subject: International Relations	14
Topic- Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests	14
Importance of Arctic for India	14

9 PM Compilation April [Third Week] 2024

Topic- India and its neighborhood- relations.....	15
Impact of Myanmar's internal conflicts: Myanmar and regional security.....	15
India and Maldives relations, after Muizzu's re-election.....	16
Topic- Important International institutions, agencies and fora, their structure, mandate.....	16
B-READY Index.....	16
GS Paper 3.....	17
Subject: Indian Economy.....	17
Topic- Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment.....	17
Significance of Decentralized industrialization model.....	17
Difference in rural and urban consumption: Not as big as it seems.....	18
India's food inflation: Climate change is driving food prices up.....	19
India's strong economic growth, focusing on renewable energy, digital technology, and female empowerment.....	20
Increased tax collections in Northeast India: GST adoption gave north-eastern states a big developmental push.....	21
Topic- Changes in Industrial Policy and their Effects on Industrial Growth.....	22
Implications of Implementing Labour laws in IT/ITeS Sector.....	22
Impacts of Elon Musk's plan for his visit to India: Musk set to arrive: potential win-win for Tesla and India, some challenges too.....	23
Subject: Agriculture.....	23
Topic- Major Crops - Cropping Patterns in various parts of the country.....	23
Issues with the sugarcane cultivation.....	23
Subject: Science & Technology.....	24
Topic- indigenization of technology and developing new technology. Indian economy- Government budgeting.....	24
What Indian scientists want from the upcoming government: Scientists and a wish list for the incoming government.....	24
Implications of amendment to patent laws.....	25
Subject:Environment.....	26
Topic- Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment.....	26
Conflict between renewable energy development and the protection of the Great Indian Bustard in India.....	26
Just Transition Framework-A path to ecological justice.....	27
Reasons for heavy rains in the UAE: What's behind heavy rainfall in Dubai.....	28
Implication of SC ruling on right against climate change.....	29

9 PM Compilation April [Third Week] 2024

Impact of large-scale solar parks in India: The challenges of renewable energy.....	29
Subject: Disaster Management.....	30
Heat Action Plans.....	30
Impacts of water scarcity on India.....	32
How did Taiwan improve its earthquake preparedness?	32



GS Paper 1

Topic: Society- poverty and developmental issues, urbanisation, their problems and their remedies.

Impact of Silicon Valley's growth on local urban areas: Concrete jungles and Silicon Valleys

News: The article discusses the impact of Silicon Valley's growth on local urban areas. It highlights the challenges of high living costs, homelessness, and resource strains caused by rapid startup expansion. It also emphasizes the need for sustainable urban planning and collaboration between startups and urban planners.

For details information on India's urban development read Article 1, Article2

What is the allure of Silicon Valley?

Innovation and Technology Hub: Silicon Valley is celebrated for its dynamic culture of innovation and creativity, attracting global entrepreneurs.

Economic Powerhouse: It significantly contributes to the economy with a 12.1% GDP share from just San Mateo and Santa Clara counties, underscoring its financial influence in California.

Opportunity Center: It symbolizes the pursuit of excellence in technology and human advancement, drawing professionals and companies worldwide.

What are the impacts of Silicon Valley?

Economic Impact:

GDP Contribution: Silicon Valley's GDP share stands at 12.1% for San Mateo and Santa Clara counties, highlighting its significant role in California's economy.

Wealth Concentration: The top 10% of households hold 70% of the area's wealth, indicating major economic disparities.

Urban Growth:

Housing Crisis: Skyrocketing housing prices and high rents exacerbate homelessness, making it tough for low-income families to afford housing.

Startup Exodus: In 2021, a New York Times headline discussed the departure of tech workers from the Bay Area due to unsustainable living costs.

Social Impact:

Homelessness: The severe cost of living and lack of affordable housing has led to a growing homeless population, which includes diverse groups from long-term residents to new arrivals struggling in the harsh economic environment.

How can startups contribute to India's urban solutions?

Collaborative Urban Planning: Startups in cities like Bengaluru can collaborate with urban planners to integrate innovative technologies in managing traffic, waste, and water resources efficiently.

Sustainability Initiatives: They can lead sustainability efforts by investing in renewable energy projects and sustainable housing developments, helping reduce urban environmental impacts.

Data-Driven Solutions: Utilizing big data and AI, startups can optimize public transportation and infrastructure management, improving service delivery and reducing congestion.

Regulatory Engagement: By working closely with government bodies, startups can ensure their growth aligns with the city's capacity and sustainability goals, mitigating adverse impacts on infrastructure

GS Paper 2

Subject: Indian Polity

Global context of elections in 2024: How India's 'one citizen, one vote' democracy came to be

News: The article discusses the start of India's 2024 general elections, reflecting on the history and significance of voting rights. It compares India's direct implementation of universal adult suffrage to the gradual extension of voting rights in the U.S. It also mentions global elections occurring in 2024, highlighting the widespread political activity this year.

How has voting evolved in India compared to the United States?

Founding Principles: Right from its first general elections in 1951-1952, India implemented the "one citizen, one vote" principle, allowing all adults to vote regardless of property, education, or gender. The U.S., established in 1787, initially restricted voting to property-owning white men.

For details information on **One person, one vote, one value** [read here](#)

Progressive Amendments: India implemented universal suffrage from its inception, unlike the U.S., which required several amendments (15th (African American men), 19th (women), and 26th (lowering the voting age to 18).) to expand voting rights. During the drafting of the Indian Constitution (1946-1950), advocates like Alladi Krishnaswami Ayyar argued for inclusivity, ensuring no exclusions based on qualifications.

First Elections and Participation: India's first general elections in 1952 saw 173 million people vote. In contrast, earlier U.S. elections had far fewer voters due to restrictive qualifications.

Election Management: India's elections are managed by an independent Election Commission, ensuring impartiality and fairness across vast and diverse voter demographics.

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

What is the global context of elections in 2024?

Global Election Wave: In 2024, countries accounting for over 60% of the world's economic output and more than half its population will hold elections, highlighting a significant year for global democracy.

Examples of Elections: Specific countries mentioned include Bangladesh, Pakistan, Russia, the United Kingdom, the United States, and South Africa, all participating in this electoral wave.

Economic Implications: According to a Reuters report citing the Institute of International Finance, the "tsunami" of elections in 2024 could impact the already substantial global debt, which was estimated to have hit \$310 trillion by the end of 2023.

Varying Electoral Outcomes: Russia saw Vladimir Putin retain his presidency predictably in March, illustrating the varying political landscapes and outcomes of these elections.

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

Voting process reforms in India

Context-The Supreme Court has decided to hear petitions asking for 100% cross-verification of Voter Verifiable Paper Audit Trail (VVPAT) slips against the electronic vote count from Electronic Voting Machines (EVMs).

How has the voting process evolved in India since the first general election?

- 1) **First two elections-**In the first two general elections of 1952 and 1957, there was a separate box for each candidate with their election symbol. Voters had to put a blank ballot paper into the box of the candidate they wanted to vote for.
- 2) **Third election-**Starting from the third election, ballot papers with candidate names and symbols were introduced, and voters put a stamp on the candidate of their choice.
- 3) **Introduction of EVM-**The EVM was introduced on a trial basis in 1982 in the Assembly constituency of Paravur in Kerala. They were deployed in all booths during the Assembly elections of Tamil Nadu, Kerala, Puducherry and West Bengal in 2001. In the 2004 general elections to the Lok Sabha, EVMs were used in all 543 constituencies.
- 4) **Introduction of VVPAT-** The Supreme Court In *Subramanian Swamy versus Election Commission of India* (2013) held that a paper trail is an indispensable requirement for free and fair elections. From 2019 general elections, EVMs backed with 100% VVPAT in all constituencies were introduced.

What are the benefits of EVMs?

- 1) It has eradicated booth capturing by limiting the rate of vote casting to four votes a minute and thus significantly increasing the time required for stuffing false votes
- 2) It has eliminated the problems of invalid votes in the elections.
- 3) It is eco-friendly as it reduces the consumption of paper.
- 4) It provides administrative convenience for the polling officers on the day of the poll and has made the counting process faster and error-free.

What are the mechanisms to uphold the integrity of EVM and VVPAT process?

- 1) There is random allocation of EVMs to booths before polls.
- 2) Mock polls are conducted before the actual poll to display the correctness of EVMs and VVPAT.
- 3) EVM serial numbers and total votes cast are shared with candidates' agents during vote counting for verification.
- 4) As per the Election Commission of India, EVM is a standalone device like a calculator with no connectivity to any external device and hence free from any kind of external hack

What are the issues associated with EVMs?

- 1) EVMs are susceptible to hacking as it is an electronic device.
- 2) Currently, the sample size for checking EVM counts with VVPAT slips is five per assembly constituency/segment. This isn't based on scientific criteria and may not detect faulty EVMs during counting.
- 3) In the present process, booth-wise polling behaviour is identified by various parties. This may result in profiling and intimidation.

What should be the way forward?

- 1) **Scientific approach-**The sample for comparing EVM count and VVPAT slips should be determined scientifically by dividing each state into larger regions. If there's even one mistake, all VVPAT slips for that

area should be counted fully, and they should decide the results.

2) **Introduction of Totaliser machines**-Totaliser machines that are equipped to aggregate votes in 15-20 EVMs before revealing the candidate-wise, count can be introduced. This would minimise the possibilities of profiling and intimidation.

Topic- mechanisms, laws, institutions and bodies constituted for the protection and betterment of these vulnerable sections.

Government created a committee related to the queer community: Express View on Centre's panel of queer rights: Better late than never

News: The article discusses a new committee formed by the Indian government to address issues faced by the LGBTQIA+ community. The Supreme Court has asked the legislature to recognize certain rights for same-sex couples. Progress on queer rights has been slow and uneven in India.

Why has the Indian government created a committee related to the queer community?

Address Discrimination and Violence: The Indian government formed a committee to combat the systemic discrimination and violence that the LGBTQIA+ community faces, especially in accessing social welfare programs.

Supreme Court's Directive: The creation of the committee follows a directive from the Supreme Court, which, in a landmark judgment, emphasized the need for legislative action to recognize and protect the rights of same-sex couples.

Public Support for LGBTQIA+ Rights: A Pew Research survey showed that 53% of Indian adults favor legalizing same-sex marriages, indicating a shift in public opinion that supports the committee's objectives.

What is the view of the Supreme Court regarding the queer community?

The Supreme Court did not grant constitutional validity to same-sex marriage but instead shifted the responsibility to the legislature.

Specific Rights Mentioned: The court listed specific rights for same-sex couples, including being treated as family for banking, medical needs, jail visitations, and last rites.

Legal Consequences: The Court also outlined legal consequences like succession rights, maintenance, financial benefits under laws like the Income Tax Act, and rights related to employment such as gratuity, family pension, and insurance.

How has progress on queer rights been in India?

Inconsistent Progress: The progress on queer rights in India has been described as "chequered at the best of times," indicating a slow and uneven advancement.

Judicial Landmarks: A significant judicial action includes the Supreme Court's decision to read down the provisions of Article 377, which was a pivotal moment for queer rights but not a complete resolution.

Public Opinion: A Pew Research survey conducted between June 2022 and September 2023 showed that 53% of Indian adults support the legalization of same-sex marriages, reflecting growing public acceptance.

Political Manifestos: Only a few political parties, like Congress and CPI(M), address LGBTQIA+ rights in their election manifestos, highlighting the lack of widespread political support for queer rights.

Article 15 important for disability rights: Political space for disability rights, a sliver of hope

News: The article discusses efforts to amend India's Constitution to protect people with disabilities from discrimination. It highlights the long-standing demands of disability rights groups and notes recent political support for this cause in election manifestos by Congress and CPI(M).

For details information on **Persons with Disabilities** read [Article 1](#), [Article 2](#), [Article 3](#)

What is the current status of disability rights?

UN Convention on the Rights of Persons with Disabilities (UNCRPD): Adopted in 2006, this convention established global standards to ensure equal rights for persons with disabilities. Over 160 countries have ratified it, committing to uphold the rights of disabled persons.

Legal Framework: India ratified the UNCRPD in 2007 and passed the **Rights of Persons with Disabilities Act in 2016**, but these have not amended the Constitution to give disability rights constitutional protection.

Recent manifestos from Indian political parties like Congress and CPI(M) show a commitment to amending the Constitution to specifically include disability as a ground for discrimination.

Why is amending Article 15 important for disability rights?

Inclusion in Fundamental Rights: Currently, Article 15 does not mention disability as a ground for discrimination. Amending it would elevate disability rights to the level of a fundamental right, offering stronger legal protection against discrimination.

Alignment with International Standards: The amendment would bring India's constitution in line with the UN Convention on the Rights of Persons with Disabilities, which India ratified in 2007. This aligns domestic law with global commitments to protect the rights of persons with disabilities.

Closing Legal Loopholes: The Rights of Persons with Disabilities Act 2016 allows exceptions in cases deemed to have a 'legitimate aim.' By embedding disability rights in the Constitution, these exceptions would be scrutinized more rigorously, reducing potential misuse.

Promoting Equality: Recognizing disability in the Constitution would address historical injustices and recognize the unique challenges faced by disabled persons, promoting true equality and integration into society.

Judicial and Political Responsibility: The amendment would shift responsibility for protecting disability rights from the judiciary to the legislature, fostering more proactive governance and less reliance on the courts to interpret protections.

For details information on **Important Judgments by Chief Commissioner of Persons with Disabilities** [read here](#)

How are disability rights groups advocating?

Disability rights groups in India are advocating in several effective ways:

Manifesto Release: In February 2024, organizations like the **National Centre for Promotion of Employment for Disabled People** and the **National Disability Network** released a disability-focused manifesto, urging political parties to prioritize disability issues.

Consistent Advocacy: These groups have consistently pushed for the inclusion of disability as a ground for discrimination under Article 15 of the Constitution.

Political Engagement: They have successfully influenced political parties to include promises for constitutional amendments in their election manifestos, reflecting a shift in political attention toward disability rights.

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

4Ps of India's Development Strategy: How India has achieved success in national programmes

News: The article discusses how India's approach to improving sanitation and public health, known as the Swachh Bharat Mission, has successfully used four key strategies: political leadership, public financing, partnerships, and people's participation.

What is the Swachh Bharat Mission (SBM)?

The Swachh Bharat Mission (SBM) is a significant public health initiative launched by the Indian government, aimed at eliminating open defecation and improving sanitation across the nation:

Massive Scope: Targeted to enhance the lives of over 550 million Indians through the construction of over 100 million toilets.

Behavioral Change: Encouraged a nationwide behavioral shift and public participation in sanitation practices.

For more information on Swachh Bharat Mission read [Article 1](#), [Article 2](#), [Article 3](#)

What are the 4Ps of India's Development Strategy?

India's development strategy, particularly exemplified by the Swachh Bharat Mission (SBM), is structured around four key principles known as the 4Ps:

Political Leadership: Prime Minister Narendra Modi's direct involvement and advocacy were pivotal. He announced the initiative during his first Independence Day speech in 2014, highlighting the urgency of addressing open defecation.

Public Financing: The government invested approximately \$20 billion in sanitation. This investment shows a commitment to prioritizing sanitation alongside other national developmental goals.

Partnerships: The SBM collaborated with international organizations like the World Bank, UNICEF, and the Bill and Melinda Gates Foundation, alongside local governments and NGOs, demonstrating a multi-stakeholder approach.

People's Participation: Emphasizing community involvement, the initiative saw mass movements across rural India, with villages striving to become open defecation free through collective local efforts.

Why are India's 4Ps relevant globally?

The principles of the SBM are now being applied to other critical global challenges, including climate change and pandemics, by the World Bank and other international agencies.

The approach emphasizes the importance of leadership, funding, cooperation, and community involvement in tackling large-scale public issues.

Challenges facing India's public housing programs

News: The article discusses challenges in India's public housing programs, especially in urban areas.

For details information on **Pradhan Mantri Awas Yojana** read [Article 1](#), [Article 2](#), [Article 3](#)

Why are urban public houses less demanded?

- 1.Many urban public houses under PMAY-U are not in "liveable condition," lacking basic components such as windows and doors.
- 2.There have been reports of illegal occupancy by "anti-social elements," deterring legitimate beneficiaries.
- 3.The selection process for beneficiaries has faced criticism for inaccuracies, with ineligible individuals receiving housing benefits.
- 4.Urban public housing often involves apartment complexes, which present challenges in shared-resource maintenance and community living, known as the 'tragedy of commons'.

How are urban migrants affected the demand for urban public houses?

Community and Cultural Comfort: Urban migrants often seek housing with people from their own states, preferring community familiarity and cultural comfort, which public housing may not provide.

Assimilation Challenges: Assimilation into larger urban communities can be challenging and time-consuming for migrants, making them hesitant to apply for public housing.

Difficulties with Officials and Barriers: Migrants may face difficulties with local public officials due to language and cultural barriers, complicating access to public housing.

Lack of Information: Unclear information dissemination about available rental housing and application processes also affects migrants' decisions regarding public housing.

What should be done?

Promote Rental Vouchers: Implement the National Urban Rental Housing Policy's rental voucher scheme more broadly to help urban poor and migrants afford private rentals in suitable locations.

Unlock Private Housing Stock: Amend rental laws to encourage homeowners to lease their properties, thus increasing the supply of available rental accommodations.

Simplify Regulations: Ease building regulations to facilitate faster construction of new homes, increasing overall housing supply in urban areas.

Focus on Urban Housing Needs: Redirect some resources from rural to urban housing projects to support the workforce in urban and semi-urban settings, thereby enhancing labor mobility and economic productivity.

Subject: Governance

Topic: -Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

Bidirectional relationship between economic growth and human development: Priority for human development

News: The article discusses the need for significant changes in education, health, and technology policies for India to become a developed country by 2047. It highlights the bidirectional relationship between economic growth and human development, emphasizing the importance of government spending in these areas.

How much does the government spend on education and health?

In 2021, the Indian government allocated 14.7% of its total government expenditure to education. Despite this allocation, education contributed only 4% to the gross value added by the economy in 2021-22. Health spending was much lower, with only 3.5% of government expenditure going to health in 2018,

significantly less than the 5.1% average in lower middle-income countries. Health's contribution to the gross value added in the economy was even smaller, at 1.6% in 2021-22. Additionally, the inadequacy in public health provisions led to out-of-pocket expenses accounting for 52% of current health expenditure, placing significant financial strain on households.

What is the relationship between human development and economic growth?

Bidirectional Relationship: Research by Janak Raj, Vrinda Gupta, and Akanksha Shraavan identifies a bidirectional relationship between the Human Development Index (HDI) and economic growth in India, highlighting that improvements in human development can drive economic growth and vice versa.

Specific Impacts of Education: The same study notes that improvements in primary education do not significantly impact inter-state growth variations, whereas enhanced secondary education positively influences growth in agriculture and manufacturing, and better higher education boosts the services sector.

Public Spending and HDI: The analysis did not find a clear impact of increased public spending on education and health on the HDI, suggesting that simply increasing funding without strategic improvements may not effectively enhance human development.

What should be done?

1. Significantly enhance government expenditure on education and health to match or exceed averages seen in other middle-income countries.
2. Develop comprehensive performance assessment systems for educational institutions to ensure better teaching quality from primary to higher education levels.
3. It is important to focus on improving people's lives through better healthcare, rather than solely on economic impacts.
4. In education, enhancing teaching quality and implementing rigorous performance assessments are key priorities.
5. Encourage technological innovation, which is essential for human development.

Topic-Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

New FDI rules in India's space sector: Express View on FDI in space: Opening up

News: The article discusses India's new foreign direct investment (FDI) rules aimed at enhancing its space industry. These rules increase FDI limits for various space-related activities. The changes are part of India's broader strategy to strengthen its position in the global space economy.

For details information on Indian Space Policy read Article 1, Article 2

What are the new FDI rules in India's space sector?

India has updated its FDI policy to boost its space sector:

74% FDI is now permitted under the automatic route for satellite manufacturing and data products.

49% FDI is allowed for launch vehicles and spaceports.

Up to 100% FDI is possible for manufacturing components required by the space sector.

Why is this change significant?

Enhancing Global Standing: The new FDI rules aim to position India as a major player in the global space market. India currently holds 2-3% of this market, with aspirations to increase this share to over 10% by 2030.

According to Indian National Space Promotion and Authorisation Centre (IN-SPACe), an investment of \$22 billion is projected over the next ten years to meet these growth targets.

Private Sector Engagement: By allowing higher FDI limits, India is encouraging private companies to participate more actively. For instance, Skyroot Aerospace's launch of a privately built rocket demonstrates the potential and capabilities of private entities under this new policy framework.

Development of Infrastructure: The allowance of up to 49% FDI in spaceports is particularly significant as it opens up opportunities for private investment in critical infrastructure, which is currently operated by ISRO.

Alignment with National Objectives: The policy changes align with India's broader strategic goals, enhancing space capabilities and supporting national security and development objectives. These initiatives include using advanced space technology for agriculture and climate change mitigation.

What should be done?

Expand ISRO's role in R&D, aligning with the Space Policy to encourage both public and private sector contributions.

Focus on regulatory clarity, such as specifying FDI limits in new segments like spaceports, to attract foreign investments and partnerships.

India's space economy now requires a proper mix of government regulation and freedom for the market.

Topic- Important Aspects of Governance, Transparency and Accountability, E-governance- applications, models, successes, limitations, and potential;

Network effects and their impact on digital markets: Managing competition in a digital world

News: The article discusses how network effects in digital products can lead to monopolies. It explores past regulations in industries like telephony and suggests a multi-stakeholder approach, inspired by internet governance, to regulate the digital economy and ensure competition and innovation.

What is the network economy?

The network economy is where products or services gain more value as more people use them, due to network effects.

Examples include Google Search, Facebook, and WhatsApp, which dominate the market because their value increases with each new user.

Digital networks can lead to monopolies, as seen with AT&T in telephony a century ago.

This economy's significance is growing, with digital networks now a major part of the global GDP, underscoring the necessity for effective regulatory measures.

What are network effects and their impact on digital markets?

Network Effects Defined: Network effects occur when a product or service becomes more valuable as more people use it. This is common in the digital economy.

Impact on Market Dynamics: Strong network effects can lead to monopolies or oligopolies as dominant players emerge. For instance, Google Search and Facebook have become almost indispensable due to their vast user bases.

Historical Context: Similar effects were seen in traditional network industries like telephony, where companies like AT&T once described their services as natural monopolies.

Digital Examples: Today, platforms like WhatsApp and Android OS demonstrate network effects by becoming more functional and essential as more users join.

Economic Implications: As these networks grow, their role in the economy expands, significantly influencing GDP and requiring new forms of regulation to manage their dominance and ensure fair competition.

How have governments historically managed networks?

Regulatory Measures: Governments have traditionally managed networks such as telephony through strict regulatory frameworks intended to prevent monopolies and ensure competitive markets.

Licensing and Price Controls: These regulations often included licensing requirements, territorial subdivisions, and price controls to encourage market entry and competition.

International Frameworks: At a global level, entities like the International Telecommunication Union were set up to oversee network standards and practices internationally.

Results of Regulation: Despite regulatory efforts, these measures often resulted in slowed innovation and perpetuated high costs, maintaining the dominance of a few players in the industry.

What should be done?

Implement Ex Ante Regulation: Proactive regulations are recommended to prevent anti-competitive practices in digital markets before they become dominant. This approach has been endorsed by the Parliamentary Standing Committee on Finance and the Committee on Digital Competition Law.

Adopt Multi-Stakeholder Governance: Following the internet governance model, a multi-stakeholder approach involving academia, startups, industry, and civil society can ensure fair representation and prevent any single entity from dominating.

Maintain Minimal Government Interference: The government should avoid direct intervention while retaining oversight to address national security and public interest concerns, promoting a balance between regulation and innovation.

New changes in India's competition law: Competition penalties going by global turnover call for a rethink

News: The article discusses recent updates to India's competition law, including new regulations on penalties, settlements, and global turnover calculations. It emphasizes the need for stronger enforcement to ensure penalties are effective and considers the impact of these laws on foreign investment and economic growth.

What are the new changes in India's competition law?

Monetary Penalty Guidelines: Updated guidelines define how penalties are calculated, emphasizing up to 30% of relevant turnover with a cap at 10% of global turnover.

Regulations for Settlements and Commitments: New regulations allow companies to settle cases or make commitments to adjust their business practices to comply with competition law, aiming for faster resolutions.

New Thresholds for Application: Adjustments to thresholds that determine which cases are subject to these rules, enabling the CCI to address anti-competitive practices more effectively.

Draft Bill on Digital Competition Law: A committee's report led to a draft bill specifically aimed at regulating competition within digital markets, showing a move towards specialized regulation in this rapidly evolving sector.

What are the major criticisms of the new changes in India's competition law?

Low Recovery of Fines: Despite imposing substantial fines, the recovery rate has been very low, with only 0.4% of fines recovered over the past five years, indicating inefficiency in enforcement.

Lengthy Legal Processes: Most fines are challenged in courts, leading to long legal battles that not only delay the enforcement but also reduce the deterrent effect of the penalties.

Potential Deterrent to FDI: The application of fines based on global turnover could discourage multinational companies from investing in India due to the fear of severe financial penalties.

What comparisons can be made with other jurisdictions regarding India's competition law changes?

Penalty Caps Comparison: India's penalty cap can reach up to 10% of global turnover, similar to Germany's cap, but lower than the EU's potential 20% cap for digital market violations, providing a severe but not the harshest framework for fines.

Methodology for Calculations: Like the EU and UK, India incorporates factors such as the nature of the violation and the duration in determining fines. However, India specifically emphasizes relevant turnover, aligning with the EU's two-step approach and the UK's six-step approach to penalty assessments.

Resolution Mechanisms: Similar to practices in the EU and UK, India now promotes settlements and commitments as viable alternatives to traditional litigation, aiming to resolve cases faster and more efficiently.

Digital Market Regulation: India's draft bill on Digital Competition Law aligns with global movements such as the EU's Digital Markets Unit, signaling a shift towards specialized regulations for the increasingly influential digital sector.

Subject: International Relations

Topic- Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests.

Importance of Arctic for India

Context- In March 2024, India has successfully completed its first winter mission in the Arctic. While scientists will be proud, India's previous hesitation to undertake a year-round Arctic mission needs reflection. For more than ten years, India's National Centre for Polar and Ocean Research didn't find the necessity of winter Arctic mission.

What are the reasons for India's change in policy towards the Arctic region?

- 1) **Climate change-** Scientific data revealed that the Arctic was warming faster than expected. When proof linked severe climate events in India to the melting Arctic Sea ice, decision-makers felt the need to change policy towards the Arctic.
- 2) **Geo-economic reasons-** New Delhi is interested in using Arctic Sea routes, especially the Northern Sea Route, for Indian trade. This could lower costs and save time, fuel, and enhance security for shipping goods.
- 3) **Geopolitical reasons-** Russia's decision to grant China an expanded access to the Northern Sea Route has necessitated the need of enhanced involvement of India in the arctic region.

What is India's present policy towards Arctic regions?

India's current policy is to work with Arctic nations on green energy and clean industries to enhance its reputation as a responsible stakeholder.

- 1) **Denmark and Finland-** India has collaborated in areas such as waste management, pollution control, renewable energy, and green technology.
- 2) **Norway-** Ties with Norway will emphasize on scientific research and climate/environmental protection. These are 2 of India's six Arctic Policy pillars. Partnership with Norway could help in tackling issues such as

the blue economy, connectivity, maritime transportation, investment and infrastructure, and responsible resource development.

Topic- India and its neighborhood- relations.

Impact of Myanmar's internal conflicts: Myanmar and regional security

News: The article discusses the complex political situation in Myanmar. It highlights the long-standing conflicts involving Myanmar's military, ethnic groups, and civilian government. India's interactions with Myanmar, influenced by security and insurgency concerns, are also covered, showing a need to possibly rethink support to Myanmar's military.

For details information on **India- Myanmar relations** [read here](#)

How has Myanmar's political landscape evolved?

Independence to Military Dominance: Myanmar gained independence from Britain in 1948 and quickly entered a state of internal conflict. The military junta, known as the **Tatmadaw**, has been a dominant force, consistently clashing with ethnic groups across the country. These groups have either sought independence or a significant degree of autonomy.

Era of Civilian Government: The **National League for Democracy (NLD)**, led by **Aung San Suu Kyi**, represented significant civilian governance attempts. Despite the military's underlying control, there were brief periods when democracy seemed to take root. However, these were always precarious due to the military's power.

Military Coups: The military has repeatedly disrupted Myanmar's democratic processes through coups, notably rejecting the 2021 election results, which were overwhelmingly in favor of the NLD. This led to the arrest of Aung San Suu Kyi and other political leaders, with the military justifying their actions by declaring the elections invalid.

Armed Resistance: Facing relentless oppression, various ethnic armed groups alongside the NLD formed the National Unity Government (NUG) and established the People's Defense Force (PDF). This coalition has actively resisted Tatmadaw rule, aligning forces and gaining control over strategic areas, significantly challenging the military's authority.

What has been the impact of Myanmar's internal conflicts?

Impact on Myanmar: The conflicts have led to alliances between various ethnic armed groups and the NLD, forming a resistance against the military. This includes the People's Defense Force (PDF) and groups like the Karen National Union. Their successes, especially in controlling border areas, have weakened the military's control and morale.

Impact on India: The ongoing civil war in Myanmar has led to refugees, including civilians and soldiers, fleeing to India. This has pressured the northeastern states, especially Mizoram, which has provided shelter to ethnic kin from Myanmar. India's measures like border fencing and suspending free entry have not fully controlled the spillover of conflict.

Impact on China: Strategic Maneuvering- China plays a dual role, supporting the Myanmar military while also making local deals with ethnic groups controlling border outposts, ensuring influence regardless of internal fluctuations in power.

What should be done?

Reassess Support for Myanmar's Military: India should reconsider its tacit support to the military due to the legitimacy and resistance strength of the National Unity Government (NUG).

Engage with Resistance Forces: Discreet engagement with the NUG and ethnic resistance groups might help maintain stability in India's Northeast and influence outcomes favorably.

Enhance Border Security Measures: Strengthening security measures along the border is crucial, particularly by improving infrastructure and increasing patrols to manage refugee inflows and prevent insurgent crossings.

India and Maldives relations, after Muizzu's re-election

News: Maldives President Mohamed Muizzu has won the recent elections, with huge number of seats. It will provide him with the power to make all the major legal and legislative changes.

What anti-India steps have been taken by Muizzu?

One of the pillars of Muizzu's politics is an anti-India stance.

First, he campaigned on an "India Out" theme, asked for withdrawal of Indian troops,

Second, he scrapped agreements allowing Indian hydrographic surveys by India.

Third, he has drawn Maldives closer to China, by giving them infrastructure projects.

However, the parliamentary elections were fought on domestic issues like corruption, economy, housing, jobs and shifting political alliances rather than foreign policy issues. Therefore, it should not be taken as a country's stand.

What has been India's approach to Muizzu's anti-India Stance?

First, India has done well not to overreact to Maldives' attempts to distance itself and treat it with a soft approach, recognizing a neighbour's domestic politics is their own affair.

Second, Maldives is an important part of India's **Neighbourhood First and SAGAR policies**. Given Maldives' proximity and importance, India must continue engaging with the country no matter the government to make bilateral ties "politics proof" in the long run.

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

B-READY Index

News: The article discusses India's preparation for the **new World Bank Index Business Ready (B-READY)**, replacing the defunct Ease of Doing Business (EoDB) Index.

For details information on **Lessons from the death of the ease of doing business index** [read here](#)

What is the B-READY Index?

The B-READY Index is a new metric designed by the World Bank to assess business environments, set to launch in September 2025.

It aims to replace the now-defunct Ease of Doing Business Index and plans to cover 180 economies.

This index focuses on broader qualitative assessments, including regulatory quality and environmental considerations.

How is India Preparing for the B-READY Index?

India is gearing up for the B-READY Index through proactive steps taken by the Department for Promotion of Industry and Internal Trade (DPIT).

DPIT is conducting bi-monthly meetings with nodal ministries to evaluate responses to over 1,300 questions from the B-READY questionnaire.

These meetings aim to assess and enhance India's position in terms of business readiness and attractiveness for foreign investments.

Why India need B-READY Index?

Addressing Subdued FDI: India has seen limited success in attracting foreign direct investment (FDI), making the B-READY Index crucial for enhancing its investment climate.

Improving Business Environment: The B-READY Index aims to go beyond the former Ease of Doing Business metrics by including qualitative assessments that more accurately reflect the business landscape.

Policy and Implementation Gaps: Examples like Apple's vendors leaving India and Vinfast's subsidy issues highlight the need for clearer policies and better communication, issues the B-READY Index seeks to address.

Encouraging Multinational Presence: A refined index could help attract more multinationals, as current policy uncertainty has deterred significant investments.

GS Paper 3

Subject: Indian Economy

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

Significance of Decentralized industrialization model

Context-The article highlights the reason behind Tamil Nadu's success in achieving industrialization and diversification beyond agriculture. Tamilnadu is India's No.1 state in terms of economic complexity, measured by the diversity of its gross domestic product (GDP) and employment profile.

What is the share of respective industries in Tamilnadu 's GDP?

According to the data table, Tamil Nadu's farm sector contributes less to its gross value added (GVA) and employs fewer people compared to the national average. However, the state has higher shares of industry, services, and construction in its economy compared to the whole of India.

What are the reasons behind TN's relative success in achieving industrialization and diversification beyond agriculture?

1) **Cluster-based industrialization-** Tamil Nadu's economic shift hasn't been driven much by big corporations but by medium-sized businesses whose turnover range from Rs 100 crore to Rs 5,000 crore. The state's industrialization has also been more widespread and decentralized, focusing on the development of clusters.

For ex- Tirupur for cotton knitwear, Coimbatore for spinning mills and engineering goods, Sivakasi for safety matches etc.

2) **Sub-specialized clusters-**There are many sub-specialized clusters that have developed in small towns or areas near cities in Tamilnadu. These clusters provide jobs for people from nearby villages and prevent rural

to urban migration.

Further, these clusters have helped in providing job opportunities beyond farming and reducing the number of agriculture dependent population in Tamilnadu.

3) **Grass root entrepreneurship**– Recent decentralized industrialization in Tamil Nadu has been led by entrepreneurs from ordinary farming backgrounds and local merchant communities.

For ex-Coimbatore's spinning mills, foundries, machines and pumps & valves etc ,were mostly started by Kammavar Naidus.

4) **Diverse entrepreneurial culture**– Tamil Nadu's entrepreneurial culture is diverse, spreading among different communities and across various industries. For ex- Christians-MRF, Johnson Lifts and Aachi Masala Foods and Muslims -Farida Group etc.

The grassroots entrepreneurship, along with substantial investments in public health and education, helps in explaining Tamil Nadu's relative success in industrialization and diversification away from agriculture.

Difference in rural and urban consumption: Not as big as it seems

Context-As per the government's latest data on household consumption expenditure, the per-person monthly spending in urban areas of India in 2022-23 was 1.72 times that in rural areas. The article highlights the fact that there is not much difference in rural and urban consumption. The increase in spending in rural areas indicate their rising aspirations.

What are the categories that create the gap in rural-urban consumption?

1) **Rent**-The average monthly rent spending is only ₹30 in rural areas, whereas it is ₹423 in urban areas. This is because most families live in their own homes in rural areas.

2) **Conveyance**-In rural areas, it is ₹285, while in urban areas, it is ₹555.

3) **Beverages and processed food**-The average rural spending was ₹363 and nearly double that in urban areas. Similarly, the rural-urban gap in spending on entertainment and other goods is also high.

4) **Impact of government transfer**-As per the survey result, the average government transfers are higher in rural areas as compared to urban areas. Additionally, the large difference in education and healthcare spending between rural and urban areas may decrease once government subsidies are taken into consideration.

What are the differences in the quality of consumer spending between rural and urban areas in food and non-food categories?

In order to calculate the real consumption levels, there is a need to remove the impact of inflation in rural and urban areas over the last decade.

1) Food categories–

A) Rural areas spend slightly more per person each month on vegetables compared to urban areas. The difference in spending on pulses and pulse products between rural and urban areas is also small. In the main protein-rich foods like eggs, fish, and meat, the rural-urban gap in average monthly spending is only about ₹21.

B) In consumption of sugar, salt, and spices, the gap in real consumption between rural and urban areas is marginal.

C) **Fruits and milk products**-Two nutritious item groups are fruits and milk and milk products. The average monthly urban real spending on fruits is about 1.7 times that in rural areas and about 1.5 times that of milk and milk products.

However, spending levels alone doesn't indicate if the gaps between rural and urban consumptions is due to

lack of affordability or lack of accessibility.

For ex- in rural areas, there are probably fewer cold storage facilities for perishable items like fruits and milk compared to urban areas.

2) **Non-food categories**-In consumption of paan, tobacco and other intoxicants, rural-urban gap is smaller and almost negligible.

What does this data about rural-urban spending indicate?

Once all government transfers are considered, spending in rural India will resemble that of urban India more closely.

What should be the way forward?

In order to experience real welfare gains by householders, it is important to ensure that family members don't have to separate in search of jobs. So, to achieve this objective, there is a need to create non-farm jobs in rural areas and minimise relative cost of housing in urban areas by providing affordable housing.

India's food inflation: Climate change is driving food prices up

News: The article discusses India's food inflation since 2019, highlighting that high food prices have significantly contributed to overall inflation. It criticizes the government's ineffective measures, such as monitoring rice and wheat stocks, and suggests that deeper issues like global warming and inadequate agricultural output are driving the inflation.

For details information on **Inflation in India** [read here](#)

What is the current situation of inflation in India?

Since 2014, inflation in India has been relatively low, but it started rising sharply in 2019-20 before the COVID-19 pandemic and the war in Ukraine. This suggests domestic factors are a major cause. Food products, especially, form a significant part of this inflation, often contributing more than 50% to the overall inflation rate.

What are the deeper causes of inflation?

1. Global warming is a major cause of inflation, particularly affecting agricultural yields in regions like North India.
2. Rising temperatures have led to decreased wheat yields, contributing to lower supply and higher prices.
3. The consistent shortfall in agricultural production relative to increasing demand drives food inflation.
4. Ecological issues such as declining water tables and soil degradation further reduce agricultural output.
5. The indirect effects of these ecological problems also impact industrial costs, adding to the overall inflationary pressures.

What measures has the government taken?

1. The government has required wholesale traders and retailers dealing in rice and wheat to report their stock holdings every Friday.
2. This measure is part of a broader concern about high food inflation and is intended to monitor and possibly control market supplies.
3. The policy reflects a shift from earlier plans to repeal the Essential Commodities Act, indicating a move towards tighter regulation of essential food items.

Why are government measures not so effective?

1. Government measures like mandatory stock reporting for rice and wheat traders are seen as temporary rather than effective solutions.
2. These measures do not address the root causes of inflation, such as supply shortages and increased production costs.
3. The perishable nature of goods like rice and wheat limits the traders' ability to manipulate the market through stockpiling.
4. Historical patterns show that prices typically decrease after the harvest season, indicating that traders have incentives to sell rather than hoard.
5. The real drivers of inflation, like global warming affecting agricultural yields, are not directly tackled by these measures. It requires sustainable agricultural practices to stabilize prices.

India's strong economic growth, focusing on renewable energy, digital technology, and female empowerment

News: The article discusses India's strong economic growth, focusing on renewable energy, digital technology, and female empowerment. It highlights India's success in these areas and the potential to use these strategies in other developing countries. The World Bank supports these efforts, helping to expand and replicate them globally.

How is India advancing in renewable energy?

Renewable Power Capacity: Renewable sources account for 42% of India's total power generation capacity.

Investment in Renewables: Annually, about \$10 billion is invested in renewable energy sectors.

Global Standing: India ranks as the world's fourth largest renewable energy market.

Solar Manufacturing: It holds 3% of global solar manufacturing capabilities.

World Bank Support: The World Bank has invested approximately \$1 billion in India's solar projects, notably in solar parks and rooftop solar installations, stimulating substantial commercial investment in the sector.

What innovations are occurring in digital infrastructure?

Digital Public Infrastructure (DPI): Facilitates millions in accessing social safety nets, banking, and government services digitally, reducing the need for in-person interactions.

Efficiency in Payments: The implementation of digital payments has shortened the payout time for maternal health programs by 43%.

Expansion of Business Reach: Women micro-entrepreneurs in Tamil Nadu are leveraging digital networks to serve broader markets and access finance, illustrating the transformative impact of DPI on rural business activities.

World Bank Involvement: The World Bank is taking lessons from India's digital infrastructure to assist other countries, highlighting the successful application and benefits of these innovations.

How is female empowerment being promoted?

National Rural Livelihoods Mission: Organizes rural women into self-help groups, supporting women-led cooperatives and rural enterprises.

Credit Mobilization: More than \$4 billion in commercial credit has been mobilized to empower women in business.

Labor Force Participation: Female participation in industry is now 43% of the national total.

Safe Urban Housing: Policies promoting investment in safe urban housing are helping more women enter the workforce.

World Bank Support: The World Bank's backing assists in scaling these initiatives, enhancing female empowerment across the country.

Increased tax collections in Northeast India: GST adoption gave north-eastern states a big developmental push

News: The article discusses how the introduction of the Goods and Services Tax (GST) in India in 2017 has significantly helped the northeastern states by increasing their tax revenues. This boost in funds has allowed these states to improve infrastructure and participate more in national economic activities.

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

What is the current status of tax collections in Northeast India?

Exceptional GST Revenue Growth: Since the GST was implemented in 2017-18, the northeastern states have experienced a compound annual GST revenue growth rate of 27.5% through to 2022-23, which is significantly higher than the pre-GST tax revenue growth rate of 9%.

Substantial Increase in State Revenues: The northeastern states' total revenue contribution to the central exchequer now stands at around ₹20,000 crore annually, with ₹8,000 crore from GST and ₹12,000 crore from central excise. This demonstrates a major increase in financial resources due to efficient tax collection and compliance under GST.

Financial transfers from the central government to northeastern states have significantly increased. For example, Arunachal Pradesh received a 1,665% increase in tax devolution from 2014 to 2024. Other states like Mizoram, Manipur, Nagaland, and Sikkim also saw over a 500% rise in devolution, allowing them more budget for development.

What were the reasons for increased tax collections in Northeast India?

Consumption-Based Tax System: GST, levied at the point of consumption rather than production, benefited northeastern states which are primarily consumer states. This shift from the origin-based Central Sales Tax, which they hardly benefited from before, significantly increased their tax collections.

Improved Tax Compliance: The GST system encourages better compliance through a tax-credit mechanism. This self-policing setup minimizes tax evasion, enhancing revenue collection.

Use of Technology: States like Assam employed big-data software to identify tax discrepancies, which significantly improved collection efficiency, resulting in the recovery of about ₹730 crore in tax settlements.

Spillover Effects on Revenue Collection: The implementation of GST has refined the overall mechanism of revenue collection in states, helping to streamline various tax collection processes beyond just GST.

Balancing Fiscal Imbalances: GST has played a crucial role in addressing the vertical fiscal imbalances between the northeastern states and the Central government, contributing to a more equitable financial structure across the country.

Enhanced Participation in National Market: The adoption of GST has enabled northeastern states to more actively engage in the national market, opening up greater opportunities for trade and investment, which in turn boosts economic activity and development in the region.

What role has GST played during economic challenges?

GST and the associated compensation packages helped northeastern states manage economic challenges during the COVID-19 pandemic. This support prevented a collapse in revenue and enabled continued investment in development projects.

Way forward -With the increase in revenue and development funding, northeastern states are encouraged to further develop their infrastructure and explore new economic opportunities. This will help them fully utilize their potential and contribute more significantly to the national economy.

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

Implications of Implementing Labour laws in IT/ITeS Sector

News: A new workers' union called Karnataka State IT/ITeS Employees Union (KITU) has demanded the removal of the exemption given to IT/ITeS establishments from the Industrial Employment (Standing Orders) Act, 1946. The union alleges that the exemption has allowed employers to flout labor regulations. They are enforcing long working hours, and engaging in unfair practices without proper grievance redressal mechanisms. Karnataka has nearly 2 million workers engaged in the IT/ITeS sector.

How effective is the standing order?

The law in question does not provide new labor protections but aims to enhance transparency and workers' awareness of their existing rights.

In Karnataka, businesses with 50 or more employees are required to create and display 'Standing Orders' detailing service conditions, which must be certified by the government. This legislation allows worker representatives to advocate for conditions that exceed legal obligations, solidifying these conditions through formal agreements.

Employers must consult with worker representatives before implementing these Standing Orders, and in cases of disagreement, a tripartite discussion involving the employer, worker representatives, and the government is mandatory.

Employers face significant pressure from worker representatives to adopt conditions of employment that are not mandated under any law.

What are the issues in implementing regulations?

It requires consultation with worker representatives and government involvement in determining conditions of service. Which would hinder the present fluid and flexible approach, where managers and workers find middle roads.

Certain demands from worker representatives, such as the "right to disconnect" after office hours, may not be feasible for IT/ITeS establishments serving clients across different time zones, potentially affecting their global competitiveness.

Well-educated workers in the IT/ITeS sector have a degree of agency and market mobility. It reduces the potential need for state coercion or union intermediation in determining employment conditions. Moreover, Standing Orders cannot be amended for six months without the consent of worker representatives. Excessive regulation or unionization could hamper the growth and flexibility of the IT/ITeS industry.

What should be done?

The IT/ITeS sector in Karnataka is the backbone of the state's economy. Furthermore, Services exports were a full \$325 billion in 2022-23 and can reasonably double every decade. Therefore, striking a balance between worker rights, economic dynamism, and global competitiveness is essential. State government should improve monitoring and public disclosure of compliance with existing labor laws like PoSH and the Industrial Disputes Act. It will allow workers to make informed decisions when choosing employers.

Impacts of Elon Musk's plan for his visit to India: Musk set to arrive: potential win-win for Tesla and India, some challenges too

News: The article discusses Elon Musk's planned visit to India to potentially invest in a car manufacturing plant and other business opportunities. It covers Tesla's situation, India's electric vehicle policies, and meetings with Indian officials. Musk will also explore space and internet projects through his other companies.

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

How is the electric vehicle market performing in India?

Electric vehicle (EV) sales in India are growing from a small base.

Currently, EVs account for 2% of all automobiles in the country.

Projections suggest that by 2030, EVs will make up about 5% of all vehicles in India.

This projection falls significantly short of the government's target of 30%.

What are the impacts of Elon Musk's plan for his visit to India?

Investment in Manufacturing: Elon Musk plans to invest over \$2 billion in a new car manufacturing facility in India, potentially creating jobs and boosting the local economy.

Policy Engagement: His visit includes a roundtable with space startups and a meeting with Prime Minister Narendra Modi, highlighting collaboration on future technology and policy initiatives.

Tariff Reductions: The government has tailored policies specifically for Tesla, such as reducing import duties to 15% for 8,000 electric cars annually, which can increase Tesla's market presence in India.

Expansion of Technology: Musk is expected to discuss Starlink, aiming to offer high-speed internet via satellites, which could improve connectivity in remote areas of India.

Political and Economic Influence: His interactions might influence future economic policies, especially related to technology and manufacturing sectors, making India a potential hub for EV and technology exports.

What challenges does Tesla face in India?

Market Size and Preference: India's luxury car market is relatively small, limiting Tesla's mass market potential as their cars are positioned in the higher price segment.

Local Competition: Tata Motors, a local leader, has succeeded by adapting existing models for EV technology rather than developing new EVs from scratch, providing stiff competition.

Infrastructure Challenges: Tesla's Model 3 has faced issues like insufficient ground clearance for Indian roads, requiring potential redesigns for local conditions.

Subject: Agriculture

Topic- Major Crops - Cropping Patterns in various parts of the country

Issues with the sugarcane cultivation

Context- Sugarcane growers in India are facing extreme uncertainty. With the new sugar year's crushing season set to begin in October, mills still owe sugarcane growers around Rs 3,000 crore for cane purchased back in 2013-14. The article highlights the need for paying more attention to sugarcane rather than sugar, by acknowledging its untapped potential.

What is the economic and ecological importance of cultivation of sugar cane?

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1) **High yields-** Cane has a higher yield as compared to other crops. For ex- Even the top Punjab farmer can only harvest around 5-6 tonnes of wheat and 8-9 tonnes of paddy whereas the least successful sugarcane grower in Uttar Pradesh can yield around 40 tonnes.

Thus, sugarcane, uses less water per day and even less for every unit weight of biomass produced. This is because it exhibits "C4 photosynthesis" which is a more efficient mechanism of deploying solar energy to convert atmospheric carbon dioxide and water into plant matter.

2) **Meeting fodder needs-** The green top-leaves of sugarcane meet most of the fodder needs for Uttar Pradesh farmers in winter and spring and is highly efficient at carbon sequestration.

3) **Electricity generation-** The high-pressure boilers used in modern sugar mills can generate around 130 kilowatt-hours of electricity from every tonne of cane that is, 300 kg bagasse or 660 kg steam.

4) **Renewable source of energy-** The largest component of sugarcane, that makes up about 30% of its weight, is bagasse. It's the fibrous material left over after the juice is extracted and is a valuable source of biofuel.

5) **Production of alcohol-** Molasse is the leftover juice after extraction of the maximum possible sugar from three cycles of boiling and crystallization. This non-recoverable sugar in the molasses gets fermented into alcohol.

Read more- [Is India's sugar surplus leading to a crisis?](#)

What are the problems faced by sugarcane Cultivators?

1) **Pseudo-environmentalists** -There is no awareness about C4 carbon fixation ability of sugarcane. It is often presented as a water guzzling crop, threatening the availability of water for other crops.

2) **Obsession with sugar**-There is too much importance given to the production of sugar from sugarcane. This is despite the fact that it makes up just 10 % of the cane in terms of recovery during processing.

3) **Overlooking bagasse-based generation of electricity-** Bagasse-based electricity generation is mentioned incidentally, whereas more importance is given to wind and solar energy. However, sugar mills have installed around 2,700 MW of grid-interactive capacity producing real and reliable power.

4) **Lack of robust policy-** Centre does not have a robust ethanol-blending programme. In Brazil, ethanol is used for either a 25% blend with petrol or as 100% hydrous spirit for flex-fuel vehicles, but India is not properly implementing even a 5% blend.

5) **Role of State governments-** The UP government sets aside 34% of molasses produced by mills for supplying to country liquor makers. This implies that while cane farmers don't get paid, country liquor makers get subsidized molasses.

Subject: Science & Technology

Topic- indigenization of technology and developing new technology. Indian economy- Government budgeting.

What Indian scientists want from the upcoming government: Scientists and a wish list for the incoming government

News: The article discusses what Indian scientists want from the upcoming government.

What do Indian scientists expect from the new government?

9 PM Compilation April [Third Week] 2024

Indian scientists have clear expectations from the new government to advance research and innovation in the country:

Increase in R&D Spending: Scientists expect a substantial increase in the national gross expenditure on R&D, aiming for it to reach nearly 4% of GDP by the end of the government's term. Currently, R&D spending is below 0.7% of GDP, with less than 40% coming from private sectors. They propose enhancing private sector contributions through significant funding (₹36,000 crore over five years) to the Anusandhan National Research Foundation.

For details information on **India's R&D Funding Status** [read here](#)

Infrastructure Improvements: Upgrades are needed for the physical and intellectual infrastructure of public sector institutions, including modernization of science labs in universities and doubling the number of quality teachers and researchers over the next five years.

Merit-Based Hiring: Implementation of transparent, fast, and influence-free hiring processes that align with global standards and are completed within six months.

Grant Management Reforms: A more efficient grant management system is needed, with less bureaucracy and more autonomy for scientists. This includes the flexibility to make purchases outside of the government's e-marketplace to ensure the quality of research materials.

For details information on **Recent Concerns with India's Science Management** [read here](#)

Freedom for Scientists: The government is expected to provide scientists with the freedom to speak, write, and innovate without interference, along with the autonomy to manage their funds and resources effectively. This freedom is crucial for them to contribute effectively to India's ambition of being a leading economy by 2050.

Implications of amendment to patent laws

Context: The article discusses the importance of a robust and affordable pharmaceutical industry in maintaining a good health system.

The Article highlights the role of generic pharmaceutical companies in providing competition to patented drugs, thereby reducing costs and improving access to essential medicines.

Medicines constitute nearly 50 per cent of the health costs incurred by people.

The high cost of medicines is primarily due to patenting, which can be mitigated by allowing competition from generic pharmaceutical companies.

The Indian Patent Law allows for opposition to patenting of medicines, enabling generic companies to produce the same drug and foster competition, which is key to lowering prices.

How patent laws in India amended?

The change in the Patent Act in the early 1970s, which protected only the process but not the product. It facilitated the growth of the generic industry and made India a leading exporter of affordable drugs.

The TRIPS Agreement of 1995 mandated the re-introduction of product patents, but India introduced amendments like Section 3(d) to prevent evergreening of patents and ensure therapeutic efficacy. In Novartis case, Madras High Court upheld Section 3(d) of the Indian Patent Act.

The Indian Patent Act allows the government to issue compulsory licenses to other companies for producing patented drugs in the public interest or if the drug is not reasonably affordable.

Amendment Introduced: However, recently new amendments have been moved, due to some international agreement negotiations and pressure from big pharma companies. Old rules facilitated the filing of Pre-Grant Oppositions (PGOs) by Civil Societies and other parties, which was to be replied by the patent applicant.

The amended Indian Patent Law make it difficult to file pre-grant oppositions (PGOs) to patents, potentially leading to easier patenting and higher drug prices.

Implications of amendment

It discourages patient groups or civil society organizations from opposing frivolous patents. It gives the patent controller arbitrary power to dismiss PGOs without hearing the opponent. The amendments also reduce the frequency of reporting on the “working” of patents, making it harder to seek compulsory licensing for non-worked patents.

Subject: Environment

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

Conflict between renewable energy development and the protection of the Great Indian Bustard in India

News: The article discusses the conflict between renewable energy development and the protection of the Great Indian Bustard in India. It covers court decisions on whether to place power lines underground to prevent the birds from dying due to collisions. It mentions different viewpoints from environmentalists, the government, and energy companies.

For details information **Great Indian Bustard** [read here](#)

What is the issue with the Great Indian Bustard?

Endangered Species Protection: The Great Indian Bustard is critically endangered, listed by IUCN in 2013 and included in CMS COP13 as an endangered migratory species in 2020, emphasizing the need for strict protection.

Habitat Collision: The Great Indian Bustard, a critically endangered bird, frequently collides with overhead power lines in its desert habitat, leading to fatal accidents.

Population Decline: From over 1,500 individuals in the 1970s, the population dwindled to less than 150 by 2018 due to these collisions.

Energy Development vs. Conservation: The bird's habitat overlaps with areas ideal for wind and solar energy, creating a conflict between renewable energy development and species conservation.

How has the Indian Supreme Court responded to the issue of the Great Indian Bustard?

Initial Order: In April 2021, the Supreme Court mandated the undergrounding of power lines in an 80,688 sq. km area to prevent bustard collisions.

Industry Challenges: Faced with industry backlash over high costs and feasibility concerns, the court reconsidered the decision.

Revised Order: In March, the area required for underground wires was reduced to 13,663 sq. km, focusing on the 'priority' bustard habitat.

Balancing Act: The court aimed to balance conservation needs with India's renewable energy goals, reducing the scope of mandatory underground wiring while still addressing the threat to the bustards.

What are the challenges of Undergrounding power lines?

High Costs: The cost of undergrounding is estimated to be over 150,000 crore, which could increase power tariffs in the states involved. For future projects, underground wires could push costs up by approximately 80%, making them unviable.

Technical Feasibility: Industry representatives mentioned that undergrounding is feasible in urban areas for shorter distances, but in vast desert areas, it presents significant technical challenges.

Slow Implementation: Three years post the initial Supreme Court order, minimal undergrounding has been achieved. A 10-km segment of a 66 KV line in Gujarat is one of the few that has been laid underground.

Financial Impact: The potential financial impact on consumers and the viability of renewable energy projects due to increased costs was a significant concern raised by the energy industry and noted in court discussions.

What is the future for the Great Indian Bustard?

The future of the Great Indian Bustard remains uncertain. With continued habitat encroachment and the challenges of implementing protective measures, the species faces a high risk of extinction. The outcomes of ongoing legal and environmental management efforts will play a critical role in determining the survival of this endangered bird.

Just Transition Framework-A path to ecological justice

Context- The recent Supreme Court judgment acknowledges a fundamental right to be free from the adverse effects of climate change. While environmentalists have mainly focused on its impact on protecting the Great Indian Bustard, this article analyses the judgment from the lens of inclusive climate action.

Read more- [Conflict between renewable energy development and the protection of the Great Indian Bustard in India](#)

What is the significance of the court's decision beyond the protection of the Great Indian Bustard?

- 1) **Space for discussion-** Since the court has not enunciated the content of right, it has allowed time and space for a productive discourse on the content of the rights. This approach of the court could enable a more informed articulation of the right in the future.
- 2) **Just Transition Framework-** It allows the opportunity to utilize the just transition framework. This framework can facilitate equitable climate action.
- 3) **Counter allegations of judicial overreach-** The Courts have been appreciated for their environmental pro- activism because they have contributed to development of India's majority environmental laws. However, this practice has been criticized for judicial overreach and the creation of imprecise rights. So, the restraint exercised by the court in this judgement will help in countering this criticism.

What are the issues with this judgement?

- 1) **Conflict between two important issues-** It projects biodiversity protection and climate action as adversarial choices.
- 2) **Lack of inclusive approach-** The right that is being recognized by the court gives importance to only protecting humans' interests against climate change. It does not include non-humans.

What is just transition framework?

This framework makes transitions to a low carbon economy more equitable and inclusive without endangering the interests of those communities which are the most affected by such transitions. For ex- workers, vulnerable communities etc.

What is the significance of just transition framework?

- 1) **Ending Conflict**-It will prevent climate action and biodiversity protection from being seen as conflicting choices. Instead, it can promote inclusive climate action that recognizes diverse rights and interests.
- 2) **Ecological justice**- It can be utilized in climate litigations to highlight the significance of being sensitive to the interests of non-human nature and advance the principle of ecological justice.
- 3) **Inclusive decision**-If the framework is applied in the Court's final decision, it would become one of the earliest instances where a legal process about transitioning considers the interests of non-human beings.

It's important to involve activists, litigants, and others, not just the government, in defining, explaining, and enforcing these rights.

Reasons for heavy rains in the UAE: What's behind heavy rainfall in Dubai

News: The article describes a record-breaking rainstorm in the UAE that caused severe flooding and disruptions

What happened in the UAE due to the rainstorm?

Historic Weather Event:

The UAE experienced the heaviest rainfall on record since 1949, with Dubai receiving over 142 millimeters of rain in just one night. Typically, Dubai sees about 94.7 millimeters of rain in an average year. Al Ain recorded 254 millimeters, and Fujairah saw 145 millimeters.

Rain Affecting Daily Life:

The downpour caused widespread flooding in homes, major roads, and shopping centers like Dubai Mall and Mall of the Emirates.

Air travel was severely disrupted, leading to temporary suspension of flights and significant delays at Dubai International Airport.

Other Impacts:

Schools across the UAE were closed.

The government mandated work-from-home directives to cope with the situation.

In nearby Oman, the rains resulted in the deaths of 18 people, including school children.

What are the reasons for heavy rains in the UAE?

Storm System: A significant storm system moved across the Arabian Peninsula, bringing unusually high rainfall to the region.

Cloud Seeding: The UAE utilized cloud seeding technology, which involves spraying salt mixtures into clouds to induce rain. Meteorologists at the National Center for Meteorology conducted six or seven cloud-seeding flights before the storm.

For details information on **Artificial Rain by Cloud Seeding** [read here](#)

Climate Change: Global warming may have contributed, as higher temperatures lead to increased water evaporation, allowing the atmosphere to hold more moisture. The UAE has seen a temperature rise of almost 1.5 degrees Celsius over the last 60 years.

Natural Climate Variability: It's challenging to link this specific event directly to climate change due to the influence of natural climate patterns such as El Niño and La Niña, which also affect weather extremes.

Implication of SC ruling on right against climate change

Context: Supreme Court (SC) recently recognized the fundamental right of citizens to be free from the adverse impacts of climate change. It will increase the climate related litigations in India, as well. Globally, according to the UN Environment Programme's 2023 Global Climate Litigation Report, there are currently 2,180 climate-related cases being heard in 65 countries. Which has increased from 1,550 cases in 39 countries in 2020 and 884 cases in 24 countries in 2017.

What would be the implication of SC ruling?

- 1) The court's ruling aligns with a global surge in climate litigation. It will increase the number of people seeking legal remedies for climate change-related issues as government and corporate actions remain inadequate.
- 2) India's courts, particularly the National Green Tribunal, have been dealing with climate-related issues for a long time. However, there have been few instances of petitions directly addressing the broader problem of climate change.
- 3) Ruling might potentially pave the way for a new jurisprudence that prioritizes people, socio-economic development, nature, and climate change mitigation.

What are the challenges of SC ruling?

- 1) Climate change is a multi-dimensional problem that cannot be tackled through any single or small set of interventions.
- 2) Courts may adopt a "hands-off approach" in climate cases due to their intricate links with complex socio-economic issues and policy choices made by the executive branch.
- 3) While courts may require the government to consider appropriate mitigation or adaptation plans and policies, they are unlikely to strictly enforce such directions, apart from occasional reprimands.

Impact of large-scale solar parks in India: The challenges of renewable energy

News: The article discusses the impact of large solar parks in India on local communities and the environment. It explores the need for better policies and community involvement to ensure that renewable energy projects like solar parks benefit everyone and don't harm the environment or local livelihoods.

What is the impact of large-scale solar parks in India?

Positive Impacts of Large-Scale Solar Parks

Steady Income for Landowners: In regions like Pavagada, Karnataka, farmers benefit from leasing their drought-stricken land to solar parks, providing a reliable annual income.

Renewable Energy Production: Solar parks significantly contribute to India's renewable energy output, helping reduce dependency on fossil fuels and aiding in the pursuit of Net Zero emissions by 2070.

Employment Opportunities: Large-scale renewable energy projects can generate job opportunities at the local level, contributing to employment growth in the regions where they are developed.

Negative Impacts of Large-Scale Solar Parks

Land Requirements: Currently, 214 sq. km of land are under solar parks; however, estimates suggest up to 75,000 sq. km may be needed, to reach Net Zero greenhouse gas emissions by 2070

Loss of Common Lands: Near Bhadla, Rajasthan, solar parks have led to the loss of sacred common lands and grazing areas, negatively affecting local farmers and pastoralists.

Resource Competition: The large water demand for maintaining solar panels can conflict with local water needs, impacting water security.

Biodiversity and Ecosystem Disruption: Construction of solar parks can lead to biodiversity loss, especially in sensitive ecosystems like deserts, impacting overall ecological balance.

What should be done?

Expand Community Engagement: Solar Park developments should involve local communities in planning and decision-making to align projects with local needs and prevent conflicts, similar to the community leasing in Pavagada.

Revise Legal Frameworks: Strengthen laws to require Environmental and Social Impact Assessments for solar parks to prevent adverse effects on local communities and ecosystems.

Promote Agrivoltaics: Implement agrivoltaic systems that combine agriculture with solar energy, providing dual land use for energy production and farming, maximizing land efficiency and supporting local economies.

Enhance Training Programs: Develop targeted training programs to equip local populations with new skills, ensuring they benefit from shifts in employment opportunities due to renewable energy projects.

Subject: Disaster Management

Heat Action Plans

Context- This year heat alerts have already begun from February itself. Parts of northeastern and western India are already experiencing significantly warmer temperatures (3.1-5 degrees Celsius above normal) ahead of summer.

The IMD has also predicted an increase in the maximum temperature and the frequency of heatwave conditions in the upcoming days over eastern and southern India. This raises question about India's readiness to face heat wave effectively.

What is a heat wave?

Definition- Heat waves are prolonged periods of excessively hot weather that can cause adverse impacts on human health, the environment, and the economy.

Criteria for Declaring Heat Wave in India

Heat wave is considered if maximum temperature of a station reaches at least 40 degree C or more for plains and at least 30 degree C or more for hilly regions.

A) Based on Departure from Normal

Heat Wave: Departure from normal is 4.50 C to 6.40 C

Severe Heat Wave: Departure from normal is >6.40C

B) Based on Actual Maximum Temperature

Heat Wave: When actual maximum temperature ≥ 45 degree C

Severe Heat Wave: When actual maximum temperature ≥ 47 degree C

If the above criteria are met in at least 2 stations in a Meteorological subdivision for at least two consecutive days, it is declared so on the second day.

For coastal areas - When maximum temperature departure is 4.5 degree C or more from normal, heat wave may be described provided actual maximum temperature is 37 degree C or more.

What is a heat action plan?

- 1) **Aim**- Its aim is to increase preparedness and lower the adverse impacts of extreme heat by outlining strategies and measures to prepare for, address, and recover from heatwaves.
- 2) **Mapping Heat Risks**-They give an overview of each region's heat conditions, showing past heatwaves, trends in summer temperatures, land surface temperature, and more. Then, they assess vulnerability to identify areas needing urgent attention and plan a response.
- 3) **Collaborative Efforts**-The National Disaster Management Authority and IMD are working with 23 States to develop HAPs. It outlines the roles and responsibilities of various line departments, such as the disaster management authority, labour department, and police.
- 4) **Significance**- In the wake of the rising severity and frequency of heatwaves nationwide, governments at different levels, state, district, and city have formulated heat action plans (HAPs).

What are the recommendations of heat action plan?

1) Recommendation for short term

- A) **Early warning**- It recommends the use of forecasts and early warning systems to alert the public and relevant authorities about heatwaves.
- B) **Awareness**- It suggests informing the public through awareness campaigns that share information about the risks linked with heatwaves.
- C) **Structural Measures**-It recommends the building of heat shelters and cooling centres.
- D) **Guidelines to Hospitals**: It asks hospitals to have enough supplies and trained healthcare workers to recognize and treat many patients with heat-related illnesses.

2) Recommendation for long term

- A) **Sustainable urbanization**- It recommends using urban planning methods such as planting trees, using heat-resistant building materials, and employing cool roofing technologies. This helps in reducing the urban heat island effect and lowers the indoor temperatures.
- B) **Multi-stakeholder coordination**- It pushes for effective coordination among different groups, like government agencies, healthcare providers, community organizations, and emergency services.

What are the challenges in the smooth implementation of Heat Action Plans?

- 1) **The local context**- The existing Heat Action Plan does not take local conditions like the urban heat island effect, the type of roofing, and proximity to water or green bodies into consideration before formulating their strategies to combat heatwave.
- 2) **Inconsistent methods**- The methods adopted by various heat action plans to conduct vulnerability assessments are inconsistent.
- 2) **Lack of recognition of various socio-economic differences**- There is a lack of dedicated intervention which considers the different needs of people based on local social and demographic factors.
- 4) **Resource Allocation**-Implementation of HAPs differs a lot based on what local governments prioritize and the resources they have. That's why it's important to have dedicated budgets for implementing HAPs.
- 5) **Working in silos**-HAPs are individual plans with no integration with broader plans of urban resilience and climate adaptation. As a result, there's no pooling of resources for effective implementation.

What should be the way forward?

- 1) **Enhancing Heatwave Definition**- There is a need to broaden the definition of heatwaves by also including humid heat, warmer nights, and extreme dry heat. This requires development of heat index that considers more than just temperature.
- 2) **Comprehensive Climate Risk Assessment**- There is a need to transition to a robust, full-fledged climate risk assessment that can identify the possibility of heatwaves in different areas and figure out how much people and important things may be affected by heatwaves.

Further, geospatial data should be used for hotspot mapping that will help in prioritizing and formulating targeted interventions.

3) **Collaborative Planning for Heatwave Protection** –There is a need to hold dialogues between the state, civil society organizations, and worker unions to devise a financial mechanism that can allow informal workers to be indoors during a heatwave without losing their incomes.

4) **Integration with broader plan**- HAPs should be integrated with broader action plans that promote urban resilience and climate adaptation. This will enhance the effectiveness of HAP because of improved data collection and monitoring systems.

Nature-based solutions should be incorporated to tackle extreme heat in areas that are particularly affected to improve the effectiveness of HAPs.

Impacts of water scarcity on India

News: The article discusses India's need to prepare for hotter summers and water stress, shifting from temporary disaster relief to long-term climate resilience. It highlights the interconnectedness of water, food, and energy, and calls for policies, efficient water use, and increased adaptation funding.

For details information on water crisis read Article 1, Article 2, Article 3

What are the impacts of water scarcity on India?

Agricultural Dependency: About 45% of India's population works in agriculture, which is highly dependent on water for irrigation, influencing crop yields and harvest timing.

Economic Impact: Water scarcity affects the economy, particularly through agriculture, which employs the largest sector of the workforce.

Energy Production: Water is crucial for clean energy solutions like green hydrogen production and pumped storage hydropower, necessary for a sustainable power grid.

Climate Vulnerability: Increased frequency of extreme weather events like floods and droughts disrupts water availability and agriculture.

Urban Stress: Urban areas face challenges like insufficient water for domestic use and industrial activities due to inefficiencies and pollution.

What should be done?

Improve Policy Integration: Develop and implement policies that recognize the interconnections between water, food, and energy systems to manage resources more holistically.

Enhance Water Use Efficiency: Focus on achieving the National Water Mission's goal to increase water efficiency by 20% by 2025, utilizing water accounting to measure and manage water usage effectively.

Expand Reuse Initiatives: Promote the reuse of urban wastewater as detailed in AMRUT 2.0, reducing non-revenue water and maximizing available resources.

Increase Funding for Adaptation: Boost financial support for water-related climate adaptation, utilizing tools like the Green Credit Programme to fund initiatives that improve water management and promote agricultural resilience.

How did Taiwan improve its earthquake preparedness?

News: The article discusses how earthquakes happen in areas where tectonic plates meet and move. It explains how Taiwan has improved its earthquake safety measures after a major quake in 1999, resulting in fewer damages in a recent earthquake. It also suggests how India can enhance its earthquake preparedness.

What causes earthquakes?

Tectonic Plate Movements: Earthquakes primarily occur due to the movement of Earth's tectonic plates. For instance, the 2015 earthquake in Nepal originated from the movement of the Indian plate against the Eurasian plate.

Convergent Plate Boundaries: Many earthquakes happen along convergent plate boundaries where plates collide. The Himalayas, where India meets Eurasia, are a prominent example of such a region experiencing frequent seismic activity.

Specific Regional Occurrences: In Taiwan, the collision of the Philippine Sea plate with the Eurasian plate causes significant seismic activity, as evidenced by the 1999 Chi-Chi and 2024 Hualien earthquakes.

How has Taiwan improved its earthquake preparedness?

Strengthening Building Codes: Following the devastating 1999 Chi-Chi earthquake, Taiwan implemented stringent building codes to enhance the structural integrity of buildings. This led to minimal damage during the 2024 Hualien earthquake, despite it being nearly as strong.

Establishing Early Warning Systems: Taiwan has developed one of the most advanced earthquake-monitoring networks and early warning systems in the world. These systems provide critical early alerts that help reduce casualties and damage.

Public Awareness and Training: Regular awareness campaigns and drills have significantly improved public understanding of earthquake risks and preparedness.

Legislative Reforms: The Disaster Prevention and Protection Act was passed, and national centers were established to coordinate earthquake response and training, improving overall disaster management.

Innovative Technologies in Construction: Key structures in Taiwan, such as Taipei 101, employ advanced technologies like **seismic dampers and base isolation systems** to mitigate earthquake effects. Notably, Taipei 101 uses a tuned mass damper, a large steel sphere that acts like a pendulum to stabilize the building during quakes. This technology played a crucial role in preventing damage during recent seismic events.

What can India learn from Taiwan?

Implementing Building Codes: India can adopt Taiwan's approach of enforcing stringent building codes post-earthquake, ensuring safer constructions.

Enhancing Infrastructure Safety: India should prioritize earthquake-resistant infrastructure, especially in vulnerable regions like the Himalayas, to mitigate risks effectively.

Improving Emergency Response: Following Taiwan's lead, India can establish better emergency response systems and public awareness campaigns to minimize casualties and damages during earthquakes.

For details information on **Reflection of Earthquake Source Process in the Ionosphere** [read here](#)

For details information on **How to make India earthquake prepared** [read here](#)