

The

HINDU & EXPRESS NOTES

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1st November 2024

Warmer, windier: why post-Diwali Delhi air was cleaner this year-Indian Express Explained

Environment

Easy Explanation

Delhi experienced cleaner air post-Diwali this year compared to previous years, except 2022, largely due to favorable meteorological conditions. The post-Diwali 24-hour average Air Quality Index (AQI) recorded was 339, an improvement from 358 in 2023. This year, Diwali occurred in late October, which had unusually warm weather, the warmest October in 73 years with average temperatures reaching up to 35.1 degrees Celsius. Higher temperatures can help prevent the trapping of pollutants closer to the ground, which typically worsens with cooler conditions. Stronger winds also contributed significantly to dispersing pollutants quickly. The observed wind speeds were favorable for clearing the air of pollutants, including PM2.5 and PM10, which had initially spiked due to firecrackers and stubble burning.

Key Takeaways

- 1. **Timing and Temperature:** Diwali in late October coincided with unusually warm weather, the warmest October in 73 years, helping to mitigate air pollution levels.
- 2. **Increased Wind Speed:** Favorable wind conditions post-Diwali, with speeds reaching up to 15 kmph, significantly aided in dispersing pollutants.
- 3. Lower Pollution Accumulation: The combination of higher temperatures and stronger winds prevented the accumulation of pollutants near the surface, which is more common in cooler conditions.
- 4. **Reduction in Pollutants:** There was a noticeable reduction in the levels of PM2.5 and PM10 the day after Diwali, attributed to the effective dispersal of these particles by the wind.
- 5. **Meteorological Advantage:** This year's meteorological conditions, including temperature and wind patterns, played a critical role in maintaining lower pollution levels despite the festivities.

Consumption & food inflation-Indian Express Explained

Economy

| Clear your doubts now.

Easy Explanation

The recent trends in consumer behavior in India indicate a divergence between urban and rural areas. Urban India is experiencing a softening in consumer demand, notably in the mega cities, where there's been a reduction in consumption of goods such as cars, household items, and cereals. In contrast, rural India is showing a robust increase in demand, particularly evident in the rising sales of Fast Moving Consumer Goods (FMCG), which saw a 5.2% growth in volume in the first quarter of FY25. This shift is occurring despite the backdrop of persistent high food inflation, which has been impacting rural households more severely than urban ones. The disparity in how inflation affects these demographics is attributed to the different weightages of food costs in the rural versus urban consumption baskets, making rural areas more sensitive to increases in food prices.

Key Takeaways:

- 1. **Urban Consumption Decline:** Urban areas, especially large cities, are witnessing a decrease in consumer spending on various goods, influenced partly by high food inflation.
- 2. **Rural Demand Resilience:** Despite economic pressures, rural India shows increased consumer activity, supported by stronger demand for FMCG products.
- 3. **Impact of Food Inflation:** High food inflation has a more pronounced effect on rural households due to the greater relative importance of food in their consumption baskets.
- 4. **Variable Inflation Effects:** The inflationary impact of food prices varies significantly between rural and urban areas, with rural regions feeling a sharper pinch due to their consumption patterns.
- 5. **Policy Changes and Price Impacts:** Policy decisions, such as the increase in import duties on edible oils, tend to affect rural areas more adversely, underscoring the uneven impact of inflation across different regions.

How small but rich Indian American community votes, and why-Indian Express Explained

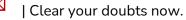
International relations

Easy Explanation

The Indian American community, though small but financially influential, remains largely supportive of the Democratic Party, albeit with a reduced margin since 2020. The latest Carnegie survey reveals that while 47% of Indian Americans still identify as Democrats, a shift towards Republican and Independent affiliations is evident. Indian Americans are significant as they make up large populations in key battleground states, where even a small swing in votes could determine election outcomes. Factors influencing their voting preferences include perceptions of party stances on minority rights, economic policies, and social issues like immigration and identity politics. Additionally, gender differences in voting intentions have become more pronounced, with women favoring Democrats more strongly, partly due to social issues such as abortion rights.

Key Takeaways:

- 1. **Decreased Democratic Lean:** Support for the Democratic Party among Indian Americans has declined from 56% in 2020 to 47% in 2024, with increases in those identifying as Independent and Republican.
- 2. **Significant Voter Base in Swing States:** Indian Americans are a crucial voting bloc in several battleground states due to their substantial numbers relative to the margin of victory in previous elections.



- 3. **Gender Differences in Voting:** There is a noticeable gender gap in political preferences, with a higher percentage of Indian American women supporting the Democrats compared to men, which may reflect differing priorities such as abortion rights and immigration policies.
- 4. **Economic and Social Influences:** Voting tendencies are swayed by perceptions of each party's stance on the economy, immigration, and tolerance towards minorities. Republicans are viewed as stronger on economic issues, while Democrats are preferred for their inclusivity.
- 5. **Cultural Identity and Voting Impact:** Kamala Harris's Indian heritage appears to have a limited influence on voting preferences, with some voters feeling she identifies more with her Black ancestry, affecting her support among Indian Americans.

FIRST 'BLACKHOLE TRIPLE SYSTEM DISCOVERED:WHAT DOES IT MEAN?-Indian Express Explained

Science and technology

Easy Explanation

Scientists have discovered a "black hole triple" system for the first time, shedding new light on the formation of black holes. Located in the constellation of Cygnus, about 8,000 light-years away, this system includes a central black hole, V404 Cygni, which is nine times the size of the Sun and currently consuming a nearby star. A second, more distant star orbits the black hole every 70,000 years. This unique triple system suggests that the central black hole formed not through a supernova but via a "failed supernova," where the star imploded gently without exploding. This finding, published in Nature, could reshape our understanding of celestial mechanics and black hole formation.

Key Takeaways:

- 1. **First Discovery of Its Kind:** The identification of a black hole triple system is unprecedented, highlighting a complex celestial arrangement involving two stars and a black hole.
- 2. **Formation of Black Holes:** The system suggests alternative black hole formation processes, such as direct collapse, challenging the traditional supernova theory.
- 3. **Implications for Astronomy:** This discovery could have significant implications for how astronomers understand and predict the dynamics of celestial bodies in multiple-star systems.
- 4. **Gentle Implosion:** The central black hole's formation through a failed supernova indicates a gentler implosive process that does not expel matter, unlike typical supernovae.
- 5. **Evolution of Celestial Systems:** The ongoing consumption of the nearby star by V404 Cygni implies that some binary systems may originally have been triples, with one member eventually devoured by the black hole.

THE UN-LIFTED GRAIN-Indian Express Editorial

Economy

Easy Explanation

The slow pace of paddy procurement in Punjab reflects significant short-term and long-term policy failures. During the crucial marketing months of October and November, government agencies significantly reduced their procurement compared to the previous year due to insufficient storage capacity.



This has left farmers with large quantities of un-lifted grain, disrupting their harvesting schedules and potentially affecting the subsequent sowing of the wheat crop. The failure to move last year's milled rice from Punjab's warehouses has exacerbated the situation, leading to a bottleneck. This not only impacts the farmers directly but also risks increasing stubble burning as farmers rush to clear fields for the next planting season, thereby harming air quality. Moreover, the situation underscores a deeper policy flaw: the persistent cultivation of paddy in Punjab and Haryana, despite the environmental sustainability issues and the feasibility of growing rice in other regions of India.

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Key Takeaways:

- 1. **Reduced Paddy Procurement:** Government procurement of paddy in Punjab has drastically dropped due to a lack of storage space, with old stocks not being moved out efficiently.
- 2. **Impact on Farmers:** The slow procurement process has left farmers with heaps of paddy that cannot be sold, affecting their income and operational cycles.
- 3. **Ripple Effects on Crop Scheduling:** Delays in paddy procurement could shorten the window for wheat sowing, crucial for the next harvest cycle.
- 4. **Potential Increase in Stubble Burning:** To clear fields for timely wheat sowing, farmers might resort to stubble burning, which would worsen air quality in northern India.
- 5. **Storage and Logistics Issues:** The inefficiency of the Food Corporation of India (FCI) in relocating the previous year's rice stock has contributed significantly to the current crisis.
- 6. **Policy Failure in Crop Diversification:** There has been a lack of effective policy to shift agricultural patterns in Punjab and Haryana from paddy cultivation to more sustainable alternatives.
- 7. **Oversupply of Rice:** The ongoing issue is reflective of a broader problem where India produces an excess of rice, evidenced by record-high stocks in government warehouses, indicating a need for strategic policy reform in agriculture.

Piercing the pall-Indian Express Editorial

Environment

Easy Explanation

Delhi's enduring struggle with air pollution is highlighted by the tardy responses to its causes, chiefly the burning of crop residues in neighboring regions and other persistent pollution sources like vehicle emissions, industrial discharge, and residential fuel burning. Although efforts like banning stubble burning are steps forward, they only marginally address the overall issue, as stubble burning contributes a minor portion to annual pollution levels. Effective long-term solutions have been stymied by a lack of institutional robustness and coherent policy-making. The 2021 establishment of the Commission for Air Quality Management (CAQM) by the Indian government, prompted by Supreme Court directives, aimed to consolidate efforts yet mirrored the inadequacies of existing bodies, lacking the budget and scientific staff necessary to make impactful regulations. Effective pollution control is not just about forming new bodies but empowering existing ones with sufficient resources, autonomy, and accountability to enact and justify regulations through transparent, scientifically backed processes.

Key Takeaways:

1. **Minor Role of Stubble Burning:** Although a well-known target, stubble burning contributes minimally to the annual PM2.5 levels in Delhi, highlighting the need for broader pollution control measures.



- 2. **Inadequate Institutional Response:** Existing bodies like the CAQM and pollution control boards lack the necessary resources and authority to effectively tackle the complex issue of air pollution.
- 3. **Need for Comprehensive Policy:** Effective management requires a well-rounded approach addressing multiple pollution sources year-round, not just temporary or seasonal fixes.
- 4. **Importance of Scientific Backing:** Regulations need to be based on solid data and scientific analysis to avoid being arbitrary and ensure they are targeted and effective.
- 5. **Reform for Real Change:** Institutional reform is crucial, emphasizing the need for enhanced capabilities, transparency, and public engagement in regulatory processes.
- 6. **Gradual Implementation of Costs:** Introducing new regulations that impact costs must be done gradually to allow time for adjustment and avoid significant economic disruptions.
- 7. **Flexibility and Incentives in Regulation:** Regulators should have the flexibility to adapt measures to specific challenges and potentially use market mechanisms like pollution permit trading to encourage compliance and reduce resistance.

The Nilgiris as a shared wilderness-The Hindu Editorial

Environment

Easy Explanation

Twenty years ago, the author's journey of ecological discovery and commitment began in the Nilgiris, which spans over 5,500 square kilometers across Karnataka, Kerala, and Tamil Nadu. This UNESCO-designated biosphere is home to unique flora and fauna, like the Baeolepis nervosa plant and the star-eyed bush frog. Despite its ecological richness, the region faces increased human activity from tourism and agriculture, leading to challenges like waste management and pesticide pollution. Local communities and organizations have been proactive in conservation and sustainability efforts, aiming for a carbon-neutral future and the restoration of native species. The area has become a hotspot for human-wildlife interactions, increasing the urgency for innovative conservation methods. The narrative stresses the importance of a collaborative approach involving communities, businesses, and government to preserve the Nilgiris.

Key Takeaways

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- 1. **Ecological Significance:** The Nilgiris is designated as UNESCO's first biosphere reserve in India, highlighting its immense ecological importance with unique endemic species and diverse habitats.
- 2. **Challenges from Human Activities:** The region is experiencing increased human activities such as tourism and agriculture, which bring both economic benefits and environmental challenges, including pollution and resource depletion.
- 3. **Conservation Efforts by Local Communities:** Local communities and organizations in the Nilgiris have been pivotal in driving conservation efforts, utilizing innovative approaches to sustainability and resilience against climate impacts.
- 4. **Wildlife-Human Interaction:** The interaction between wildlife and humans is increasing, with animals adapting to live in modified landscapes, leading to frequent encounters and conflicts.
- 5. **Government Initiatives:** The state government aims to implement policies for carbon neutrality and the reduction of plastic waste, showing a proactive stance in conserving the Nilgiris.
- 6. **Importance of Public-Private Partnerships:** Collaborative efforts, such as public-private partnerships, have been effective in managing environmental issues, such as solid waste, showcasing a model that could be replicated in other regions.



7. **Need for Broader Engagement:** Protecting the Nilgiris requires the involvement of all stakeholders, including local communities, businesses, and the government, emphasizing a holistic approach to conservation that integrates economic and environmental goals.

3rd November 2024

What are the key takeaways from COP-16?: TH FAQ

Environment

Easy Explanation:

The 16th Convention on Biological Diversity (CBD), which recently wrapped up in Cali, Colombia, saw representatives from around 190 countries discussing urgent global goals for protecting nature. The focus was on implementing the **Kunming-Montreal Global Biodiversity Framework (KMGBF)**, an ambitious set of 23 goals, including the well-known **30-by-30 goal**—protecting 30% of land and water by 2030. The convention discussed steps to reduce harmful species, pollution, and promote biodiversity in laws and development. However, funding is a big challenge, as the estimated \$200 billion needed annually to achieve these targets is far from being met.

Key topics included the **Digital Sequence Information (DSI)** agreement, which is about sharing benefits from commercial products made using DNA from natural organisms. There were also talks on involving indigenous groups in conservation efforts, and specific plans for tackling invasive species and climate-related biodiversity issues.

India's Contribution: India played a significant role, with Minister of State for Environment Kirti Vardhan Singh presenting an updated biodiversity plan. India expects to spend about ₹81,664 crore (\$9.8 billion) on biodiversity from 2025-30. However, Indian officials emphasized the need for international financial support to meet these goals, as outlined in KMGBF's Target 19, which calls for mobilizing \$200 billion annually, including \$30 billion from international funding. India also highlighted key initiatives, such as the International Big Cat Alliance and increasing its Ramsar sites (protected wetlands) from 26 to 85 since 2014.

Key Takeaways:

- **Convention Purpose**: The CBD focused on implementing biodiversity protection goals, including the **30-by-30 agreement** (protecting 30% of land and water by 2030), reducing pollution, and controlling invasive species.
- **Funding Gap**: Achieving these goals requires an estimated \$200 billion annually, but far less has been committed so far, making funding a major roadblock.
- India's Efforts: India presented an updated biodiversity spending plan, committing ₹81,664 crore from 2025-30. India emphasized the need for international financial support to meet KMGBF goals.
- **Digital Sequence Information (DSI)**: DSI agreements, a point of debate, involve sharing benefits from commercial use of DNA from organisms with local communities. However, specific funding and contribution details are still undecided.
- India's Achievements: India highlighted biodiversity initiatives, including the International Big Cat Alliance and expanding Ramsar sites from 26 to 85 since 2014, with projections to reach 100 soon.



• **Involvement of Indigenous Communities**: A decision was made to include indigenous communities in future discussions on conservation, recognizing their critical role in biodiversity preservation.

Study finds long-term dynamics of transplanted stem cells: TH FAQ

Science Tech

Easy Explanation:

For the first time, scientists have observed what happens to stem cells decades after they are transplanted into patients. This research, solving a long-standing mystery in medical science, could help improve how doctors select donors and make transplants safer and more effective.

Study Highlights:

- **Observation Period**: The study tracked stem cells in patients' bodies for up to **31 years after** transplant.
- Older vs. Younger Donors: It revealed that stem cells from younger donors are more likely to survive long-term in recipients. Transplants from older donors had around ten times fewer vital stem cells, which is linked to lower success rates.
- Immune System Impact: Some surviving cells from older donors couldn't produce the full range of blood cells needed for a strong immune system, making the body more vulnerable to infections and relapse.
- Advanced Techniques: Using new genome sequencing, researchers analyzed blood samples from ten pairs of siblings to track how many stem cells continued functioning long-term in the recipient's body.
- Aging Effect: The transplant process itself "ages" the recipient's blood system by **10-15 years**, especially because of the reduced variety in stem cells, impacting immune health.

Key Takeaways:

- **Breakthrough in Understanding**: This is the first study to map the survival and function of stem cells over decades in transplant patients, which was previously uncharted territory.
- **Importance of Donor Age**: Younger donors have stem cells that are more resilient and lead to better long-term transplant outcomes. This information could guide donor selection for future transplants.
- **Reduced Immunity with Older Donors**: Transplants from older donors may lead to a weakened immune system in recipients because fewer vital stem cells survive and function properly.
- **Potential Improvements**: Insights from this study could help doctors refine transplant strategies, select better donors, and predict outcomes, making transplants safer and more successful.
- Aging of Blood System: Transplants appear to speed up the aging of the recipient's blood system by a decade or more, suggesting that maintaining stem cell diversity is essential for better immune health.

WHO's database on polio cases hides more than it reveals: TH Science

Science Tech

Easy Explanation:

| Clear your doubts now.

On June 17, 2022, the World Health Organization (WHO) reported a case of vaccine-derived polio virus (VDPV) type-1 found in Kolkata's sewage. The virus, detected in an environmental sample, wasn't linked to any known VDPV cases, leading experts to believe it likely originated from an immunodeficient person who had received the polio vaccine. However, WHO has not yet disclosed details about a similar case in Meghalaya, detected in August 2023, leaving many puzzled.

VDPV cases are generally classified into three types:

- 1. Circulating VDPV (cVDPV): Spreads among people.
- 2. Immune-deficiency associated VDPV (iVDPV): Excreted by people with weak immune systems.
- 3. Ambiguous VDPV (aVDPV): Not easily classified into the above categories.

However, WHO's public registry only shares data on circulating VDPV cases, not on immune-deficient (iVDPV) or ambiguous (aVDPV) cases, raising questions about transparency. This is concerning because the oral polio vaccine (OPV), which contains a weakened live virus, can occasionally mutate and cause polio in children with weak immunity or those unvaccinated. Tracking these iVDPV cases is essential as they can act as hidden carriers of the virus, threatening eradication efforts.

Key Takeaways:

- WHO's Limited Data Disclosure: WHO's registry includes only cases of cVDPV, excluding iVDPV and aVDPV cases, which limits public understanding of vaccine-derived polio risks.
- **Concerns Around OPV**: The oral polio vaccine (OPV) can sometimes cause polio if the weakened virus mutates. This can happen in children with compromised immunity or those not fully vaccinated.
- **Immune-Deficiency Polio Cases (iVDPV)**: Individuals with immune deficiencies can excrete the mutated virus for long periods, creating a potential risk of spreading polio strains.
- **Transparency Issues**: WHO and the Global Polio Eradication Initiative (GPEI) have not been fully transparent in reporting all types of VDPV cases. This lack of real-time data on iVDPV cases is seen as a potential threat to global polio eradication efforts.
- Why Tracking iVDPV is Crucial: People with immune deficiencies excreting the virus could be reservoirs for mutated, dangerous strains, posing a significant risk to eradication campaigns. This underlines the need for comprehensive and timely data sharing by WHO.

WHO's cautious approach and lack of detailed reporting on iVDPV cases reveal the complexities in managing polio eradication, particularly when the vaccine itself can sometimes become a source of the virus under specific conditions.

Glacial lakes rise as glaciers retreat: TH FAQ

Environment

Easy Explanation:

Glaciers are huge, dense masses of ice found on mountains. These glaciers slowly move due to gravity and their own weight, grinding and breaking down the land beneath them into smaller materials called moraine, which include everything from large rocks to fine "rock flour." When glaciers melt, they retreat, leaving behind deep holes that can fill up with water, forming glacial lakes. The moraine can act as a natural dam, holding the water in place.



Glacial lakes, which often have a striking blue color due to the scattering of light by rock particles in the water, are common in the Himalayas. Notable examples include Gurudongmar Lake in Sikkim, Pangong Tso in Ladakh, and Samiti Lake. However, climate change is causing glaciers to melt faster, which raises the risk of these moraine dams breaking and releasing large amounts of water in a sudden flood, called a Glacial Lake Outburst Flood (GLOF).

For example, Sikkim's South Lhonak Lake, a relatively new lake that formed in the 1960s, has rapidly grown in size due to rising temperatures and is at risk of causing a severe flood. In 2023, heavy rains caused its moraine dam to fail, resulting in a massive outburst that raised the Teesta River by six meters, damaging the Teesta III dam and causing widespread destruction. Scientists are now closely monitoring the lake to prevent future disasters.

Key Takeaways:

- Formation of Glacial Lakes: When glaciers melt and retreat, they leave behind deep holes that fill with water, forming lakes. The moraine left by glaciers acts as a natural dam for these lakes.
- **The Blue Color**: The bright blue color of these lakes comes from the scattering of light caused by fine rock particles suspended in the water.
- Impact of Climate Change: Melting glaciers due to rising temperatures are causing glacial lakes to expand, increasing the risk of these natural dams breaking, which can lead to devastating floods downstream.
- South Lhonak Lake Case: In Sikkim, South Lhonak Lake has grown significantly due to glacier melt. In 2023, a dam break caused the Teesta River to flood, leading to massive damage.
- **Disaster Monitoring and Prediction**: Scientists are now using modeling and monitoring techniques to predict potential outbursts from glacial lakes, helping to plan and mitigate future flood risks for nearby communities.

Glacial lake monitoring and understanding the effects of climate change on these lakes are essential to prevent future disasters, making it vital for both local communities and scientists.

4th November 2024

Paradox of stagnant rural wages-Indian Express Explained

Economy

Easy Explanation

India's economy has shown strong growth with an average annual GDP increase of 4.6% from 2019-20 to 2023-24 and 7.8% in the last three fiscal years. However, rural wages have stagnated or fallen in real terms despite this growth. The main reasons include an increase in the rural female labor force participation rate (LFPR), which has risen significantly due to initiatives that freed up women's time for work, thereby increasing labor supply and suppressing wages. Additionally, the growth of India's economy has become more capital-intensive and less reliant on labor, favoring profits over wages. This trend results in rural women primarily finding work in low-productivity agricultural jobs, which depresses wages further. Income transfer schemes from the government, such as Maharashtra's Ladki Bahin Yojana, have partially mitigated the impact by providing supplemental income to women, easing the pressure on household finances.



Key Takeaways:

- 1. India's GDP growth has not led to a proportional increase in rural wages.
- 2. The rural female labor force participation rate has increased, boosting the labor supply and exerting downward pressure on wages.
- 3. Economic growth has shifted to being more capital-intensive, reducing the demand for labor.
- 4. Women are mostly finding employment in agriculture, which has low productivity, further impacting wages.
- 5. Government income transfer schemes provide some relief by supplementing rural incomes.

A new tryst with destiny-Indian Express Editorial

Economy

Easy Explanation

The article "A New Tryst with Destiny" explores why China, an autocracy, has achieved strong wage growth but weak shareholder returns, while India, a democracy, has seen the opposite—strong shareholder returns but weak wage growth. India's main challenge is "employed poverty," with a significant portion of its workforce in low-productivity sectors like agriculture (45%), services (30%), construction (14%), and manufacturing (11%). The lack of manufacturing jobs and high-productivity firms has hindered mass prosperity.

Key obstacles include "regulatory cholesterol"—excessive compliance and bureaucratic hurdles—that stifle small and informal firms. While infrastructure and skills have improved through investments and educational reforms like the National Education Policy 2020, regulatory burdens remain a significant barrier to industrial growth.

The article advocates for policy shifts to simplify regulations, adopt new labor codes, and leverage India's large domestic market through strategic use of tariffs and incentives. Early successes in electronic assembly indicate potential for labor-intensive manufacturing. By fostering high-productivity firms and easing regulatory constraints, India can increase manufacturing employment to 18-20% of the workforce in the next decade, moving toward greater social mobility and mass prosperity.

Key Takeaways:

- **Employed Poverty:** A large portion of India's workforce is stuck in low-productivity jobs, leading to widespread poverty despite employment.
- **Regulatory Hurdles:** Excessive bureaucracy hampers the growth of manufacturing, especially for small and informal businesses.
- **Need for Policy Reform:** Simplifying regulations and adopting new labor codes are crucial for attracting manufacturing firms and boosting employment.
- Leveraging Domestic Market: Strategic policies, including tariffs and incentives, can promote domestic manufacturing and capitalize on India's large consumer base.
- **Potential for Manufacturing Growth:** With the right policies, manufacturing could employ 18-20% of India's workforce in the next decade, enhancing productivity and wages.
- **High-Productivity Firms:** Establishing more high-productivity firms is essential for increasing social mobility and achieving mass prosperity.

| Clear your doubts now.

• **Realizing Economic Potential:** Addressing regulatory challenges and fostering manufacturing growth can help India fulfill its goal of widespread economic development—a "new tryst with destiny."

On the new coastal zone plan of Kerala-The Hindu Text and Context

Environment

Easy Explanation

The Union Ministry of Environment, Forest and Climate Change has approved the Coastal Zone Management Plan (CZMP) for 10 coastal districts in Kerala, in line with the Coastal Regulation Zone (CRZ) Notification of 2019. This approval relaxes certain CRZ rules, allowing development activities closer to the coastline, including reducing the No Development Zone (NDZ) from 100 meters to 50 meters from the High Tide Line in specified areas. Approximately one million people stand to benefit from eased restrictions on constructing new houses and repairing existing ones.

However, the plan raises environmental concerns. The reduction in NDZ and buffer zones around mangrove forests may lead to increased exploitation of these sensitive ecosystems. The legal protection for mangroves on government land is limited to a 50-meter buffer zone, and mandatory buffer zones around mangroves on private land have been removed, potentially accelerating the depletion of these crucial habitats.

Key Takeaways:

- **Relaxed CRZ Rules:** Kerala can now implement the CRZ Notification, 2019, facilitating development activities closer to the coast.
- **Reduced No Development Zone:** The NDZ is reduced from 100 meters to 50 meters in certain areas, allowing more construction.
- **Reclassification of Areas:** Some regions are reclassified to permit increased development along the coastline.
- Environmental Concerns: Reduced protections for mangroves and coastal ecosystems may lead to environmental degradation.
- **Need for Balance:** There's a critical need to balance developmental benefits with the conservation of fragile coastal ecosystems.

What are major challenges faced by Indian cities?-The Hindu Text and Context

Sociology

Easy Explanation

World Cities Day is observed annually on October 31, and this year's theme is **'Youth Climate Changemakers: Catalysing Local Action for Urban Sustainability'**. The global urban population has reached approximately 4.7 billion, accounting for 57.5% of the world's total population, with projections to double by 2050. Cities worldwide, especially in the Global South, are facing unprecedented challenges including climate change, poverty, inequality, and environmental degradation.



| Clear your doubts now.

In India, urbanization has been largely driven by economic distress rather than industrialization, leading to "poverty-driven urbanization." This contrasts with the urbanization patterns in Western countries, where industrial growth absorbed rural labor. The COVID-19 pandemic exposed significant gaps in India's urban infrastructure, highlighting the strain on urban planning due to massive reverse migration.

Major challenges faced by Indian cities include inadequate and outdated spatial planning, rapid migration leading to overcrowding (with 40% of the urban population living in slums), widening inequality, and governance limitations. Climate change poses a significant threat, manifesting in severe pollution, urban flooding, and heat island effects. Governance issues persist as urban local bodies have limited control over planning and resources, despite the 74th Constitutional Amendment intended to empower them.

Key Takeaways:

- Theme of World Cities Day 2023: 'Youth Climate Changemakers: Catalysing Local Action for Urban Sustainability'.
- **Challenges in Global South Cities:** Rapid urbanization without adequate infrastructure leads to intensified issues like housing shortages, poor sanitation, and vulnerability to climate events.
- India's Unique Urbanization Path: Driven by economic distress and migration, India's urban growth differs from the industrialization-led urbanization of the Global North.
- **Inadequate Urban Planning:** Outdated plans fail to accommodate population growth, resulting in overcrowding and a high percentage of urban dwellers living in slums.
- **Climate Change Impact:** Indian cities face severe pollution, increased urban flooding, and heat island effects, exacerbating living conditions.
- **Governance Limitations:** Urban local bodies lack adequate control and resources, hindering effective urban management and planning.
- Need for National Interventions: Addressing these challenges requires comprehensive efforts to improve infrastructure, promote inclusive growth, and empower local governance for sustainable urban development.

The BRICS summit boost to India-Iran ties-The Hindu Editorial

International relations

Easy Explanation

At the 16th BRICS Summit in Kazan, Russia (October 22-24, 2024), Indian Prime Minister Narendra Modi and Iranian President Masoud Pezeshkian held their first bilateral meeting. This encounter marked a significant step toward revitalizing the stagnating partnership between India and Iran, two nations with deep civilizational ties. The leaders acknowledged the untapped potential in their relationship, discussing areas of cooperation such as the Chabahar port and the International North-South Transport Corridor (INSTC).

Amid the ongoing conflict in Gaza, Iran sought India's support in de-escalating tensions, recognizing India's balanced relations with both Israel and Iran. India, advocating for a ceasefire and de-escalation, is seen globally as a potential mediator due to its trust and goodwill in the region.

Beyond connectivity projects, Iran's vast reserves of crude oil and natural gas present significant opportunities for India's energy security. Prior to 2019, Iran supplied nearly 12% of India's crude oil needs. Resuming energy imports and exploring projects like the Iran-Oman-India gas pipeline could enhance bilateral ties.



Potential areas for enhanced collaboration include military cooperation, particularly in drone technology, and joint counterterrorism efforts against threats from Pakistan-based groups. Both nations recognize the need to manage diplomatic sensitivities carefully to prevent setbacks in their relationship.

Key Takeaways:

- **Renewed Engagement:** The meeting between PM Modi and President Pezeshkian signals a commitment to reinvigorate India-Iran relations.
- Mediation Role in Gaza Conflict: Iran seeks India's support in de-escalating the Gaza crisis, acknowledging India's balanced diplomatic stance.
- **Strategic Projects:** Continued development of the Chabahar port and the INSTC enhances trade connectivity and offers strategic advantages for India.
- **Energy Security:** Resuming oil and gas imports from Iran could significantly contribute to meeting India's growing energy demands.
- **Military Cooperation Opportunities:** Collaboration in defense technologies, such as armed drones, presents mutual benefits.
- **Counterterrorism Collaboration:** Joint efforts could be initiated to combat terrorism, especially from groups operating in Pakistan.
- **Diplomatic Sensitivities:** Both countries need to navigate sensitive issues thoughtfully to avoid hindering their partnership.
- India's Strategic Autonomy: India's ability to maintain relationships with adversarial nations like Iran and Israel showcases its diplomatic flexibility.
- Strengthening Ties in West Asia: Enhanced India-Iran relations could lead to greater strategic convergence and stability in the West Asian region.
- **Momentum from BRICS Summit:** The recent meeting may provide the necessary impetus for both nations to deepen their bilateral cooperation.

Model by Chennai, Pune team predicts birth weight from routine scans-The Hindu Science

Science

Easy Explanation

Researchers from the Institute of Mathematical Sciences and Seethapathy Clinic in Chennai, along with the Indian Institute of Science Education and Research in Pune, have developed a new model to predict the birth weight of newborns using routine pregnancy scans. The model leverages the Gompertz formula—a mathematical equation historically used in biology for modeling growth in constrained environments, such as tumors or cell populations—to estimate fetal growth parameters from ultrasound data. This allows healthcare providers to predict birth weight without the need for late-term ultrasounds, which are often unavailable in public healthcare settings. The team tested the model on over 750 pregnant women, and it accurately predicted birth weights with less than 10% error in over 70% of cases. They are now planning to create an online calculator and are considering access requests from other researchers to further validate the model.

Key Takeaways:

- 1. The model uses routine ultrasound scans to predict a newborn's birth weight using the Gompertz formula.
- 2. It enables predictions without late-term ultrasounds, potentially reducing the number of scans needed.

- 3. The model performed comparably or better than existing methods, predicting over 70% of birth weights within a 10% error margin.
- 4. The researchers aim to expand the model's use in clinical settings and have made their prediction software code publicly available online.
- 5. Further validation and adaptation are needed to account for factors like maternal nutrition and to confirm the model's effectiveness across different populations in India.

6th November 2024

What Trump 2.0 could mean for US-India trade: IE Explained

International Relations

Easy Explanation:

The U.S. presidential race is a tight contest between Kamala Harris and Donald Trump. If Harris wins, she may continue policies similar to those under the Biden administration. If Trump returns, we could see more disruptions, especially in trade and business policies affecting India.

Trump has often criticized India's trade practices, calling it a "trade abuser" and hinting that he may reimpose tariffs on Indian exports, which are essential for India's economy. During his previous term (2017-21), Trump imposed high tariffs and blocked the World Trade Organization (WTO) from resolving disputes. Biden did not completely undo Trump's policies but attempted to negotiate with allies instead of lifting tariffs.

For India, trade with the U.S. is critical, as it's India's biggest trade partner. The U.S. is also a major source of foreign exchange for India. The two countries share a positive trade balance, meaning India exports more to the U.S. than it imports. However, Trump's return could mean higher tariffs on Indian goods, potentially harming Indian industries like pharmaceuticals and IT.

China is often a bigger target in U.S. trade wars, which can indirectly benefit India by attracting investments away from China. But, if Trump's protectionist policies lead to inflation in the U.S., it could make American goods more expensive and lower demand for Indian exports. Higher inflation in the U.S. would particularly impact industries like textiles, jewelry, and leather, which employ millions in India.

Key Takeaways:

- **Potential Impact of Trump vs. Harris**: Harris would likely continue Biden's policies, while Trump could introduce more trade tensions, impacting India directly.
- India's Trade with the U.S.: The U.S. is India's largest trading partner, providing significant foreign exchange and benefiting diverse sectors in India.
- **Tariffs and Trade Barriers**: Trump may increase tariffs on Indian exports, affecting industries like pharmaceuticals, IT, and labor-intensive sectors. Biden has retained some of Trump's protectionist measures, but has chosen to negotiate with allies.
- India's Rising Tariffs: India has increased tariffs to support its manufacturing and productionlinked incentive (PLI) schemes, especially in clean energy, electronics, and other sectors. However, these high tariffs have made Indian goods less competitive.
- Inflation Concerns: Trump's policies could push up inflation in the U.S., impacting the demand for Indian exports. Higher inflation would affect labor-intensive sectors, leading to job losses in India.



• **Global Trade Dynamics**: The U.S. has pulled back from free trade deals, especially with China, which could open opportunities for India. However, disruptions in global trade, rising tariffs, and inflation could challenge India's export-based growth.

If tardigrades crowd-sourced their remarkable genes, can humans?: TH Science

Science Tech

Easy Explanation:

Tardigrades, often called water bears or moss piglets, are tiny, resilient creatures that can survive extreme conditions like intense radiation, freezing temperatures, and even the vacuum of space. They have evolved unique survival mechanisms, such as entering a state called cryptobiosis, where they pause their biological functions to withstand harsh environments. This ability has made them fascinating to scientists, who hope to use tardigrade biology to advance fields like medicine and biotechnology.

One recent study explored proteins that help tardigrades survive without water and extreme heat. By transferring tardigrade genes into other organisms, scientists increased these organisms' resistance to drying out or high temperatures. This research shows that tardigrades' special proteins could help protect cells and biological materials, like medicines and vaccines, making them more stable.

Another study from China focused on understanding tardigrades' radiation resistance. The researchers found unique genes, like DODA1, which produces antioxidants to protect cells, and TRID1, which helps repair DNA. These findings indicate that tardigrade biology operates at the cellular level to ensure survival, opening doors for potential applications in medicine, like making cells and proteins more stable in harsh environments.

Key Takeaways:

- **Extreme Resilience**: Tardigrades can survive in extreme conditions—freezing cold, scorching heat, and even high radiation—thanks to specialized proteins and genes that protect and repair their cells.
- Unique Proteins for Survival: Some tardigrade proteins, like secretory-abundant heat-soluble proteins, help resist drying up. Scientists are experimenting with these proteins in other organisms to improve resilience.
- **Radiation Resistance Genes**: Tardigrades possess unique genes that help protect their cells from radiation. Some genes, like DODA1, produce antioxidants, while others, like TRID1, repair DNA, showing that their survival abilities start at the cellular level.
- **Potential Medical Applications**: Understanding tardigrade biology could lead to new ways to stabilize and protect medical treatments, vaccines, and cells, especially in extreme conditions, making them more effective and accessible.
- **Future Implications**: The remarkable abilities of tardigrades could inspire innovations in medicine, biotechnology, and space exploration, helping to create more resilient treatments and technologies.

Rising STEM research demands revitalised education: TH Editorial

Science Tech

Easy Explanation:

| Clear your doubts now.

Higher education in India is facing a significant challenge: while there are more institutions than ever, many students are not gaining the skills needed by industries or research sectors. Most students attend large "teaching institutions," while a small percentage study at "research institutions" like the IITs. Unfortunately, these teaching institutions are often focused on publishing research rather than prioritizing quality teaching, leading to poorly prepared graduates.

To improve the system, experts suggest that teaching institutions should focus more on effective teaching than on producing research papers, which could ease pressure on faculty and improve student outcomes. Additionally, they recommend creating partnerships between research and teaching institutions to improve teaching quality, with research institutions mentoring teaching faculty and helping design effective curricula.

One suggestion is to create joint degree programs, where students from teaching institutions spend their final years at a research institution, gaining advanced training and a degree reflecting both schools' reputations. This approach could lead to better-prepared graduates, improved teaching, and a more collaborative academic environment.

Key Takeaways:

- 1. **Prioritize Teaching Over Research**: Teaching institutions should focus on quality teaching rather than producing research to improve student skills. Faculty promotions could be based on teaching effectiveness instead of research output.
- 2. **Partnerships with Research Institutions**: Collaboration between research and teaching institutions could enhance curriculum and pedagogy, benefiting both student preparation and teaching quality.
- 3. Joint Degree Programs: Research institutions could offer joint degree programs with teaching institutions, allowing top students to study at research-focused campuses in their final years. This would increase the quality of graduates and foster faculty exchanges.
- 4. **Improved Funding for Pedagogy**: Funding could be used to create centers of excellence in teaching and pedagogical training, encouraging better teaching practices across institutions.
- 5. Focus on Practical Outcomes: By focusing on effective teaching and strategic partnerships, the education system could create a skilled workforce capable of meeting industry and research demands without needing major additional resources.

Aadhaar biometric data access will aid forensics: TH Editorial

Sociology

Easy Explanation:

India's Unique Identification Authority (UIDAI) has strict rules about Aadhaar data privacy, especially for sensitive biometric data like fingerprints and iris scans. Under the Aadhaar Act, even the police cannot access biometric data without a high-level court order, and core biometric data cannot be shared at all. However, this absolute restriction poses challenges when trying to identify unknown deceased individuals, especially those from marginalized communities who may lack family support or official identification.

The police typically rely on physical evidence, photos, and fingerprint comparisons to identify unknown bodies. However, fingerprint databases are limited to criminal records, and often, they are not digitized. In



cases where Aadhaar fingerprints could help in identifying a body, the strict privacy rule limits such access, creating an ethical dilemma between privacy and the right to dignity in death.

Some countries, like the U.S., allow controlled access to fingerprint databases for such purposes, helping law enforcement identify deceased individuals quickly. Legal experts suggest that India could also permit controlled access to Aadhaar biometric data for deceased identification, regulated by a judicial magistrate's order, instead of a High Court order. This approach would respect privacy concerns while allowing a practical solution for law enforcement.

Ultimately, the ability to identify unknown deceased individuals isn't just helpful for law enforcement or for bringing closure to families; it is a constitutional right that supports the dignity and welfare of marginalized communities.

Key Takeaways:

- 1. **Strict Privacy Protections**: UIDAI restricts access to Aadhaar biometric data, even for law enforcement, to protect individuals' privacy rights.
- 2. **Challenge in Deceased Identification**: In cases involving unidentified bodies, access to Aadhaar's fingerprint data could help identify individuals, especially from marginalized backgrounds.
- 3. Limited Alternatives: Police rely on existing fingerprint databases, which are often incomplete or undigitized, making it hard to identify unknown individuals.
- 4. **Controlled Access Proposal**: Allowing limited access to Aadhaar biometric data for deceased identification, with judicial oversight, could offer a balanced solution.
- 5. **Constitutional Right to Dignity**: Identifying deceased individuals is part of upholding the right to dignity, especially for those from disadvantaged backgrounds.

On India-Canada diplomatic relations: TH Text&Context

International Relations

Easy Explanation:

Recently, Canada and India had a diplomatic fallout where each country expelled the other's top diplomat. This tension arose after Canadian Prime Minister Justin Trudeau alleged that Indian intelligence might have been involved in the killing of a Canadian citizen, Hardeep Singh Nijjar, who India viewed as a Khalistani extremist. Although Nijjar had no criminal charges in Canada, he was on a no-fly list, and his bank accounts were frozen.

Background on Canada-India Relations:

India has long criticized Canada for providing a "safe haven" for Khalistani separatists, especially since the 1985 Air India bombing carried out by Canada-based extremists, which killed 329 people.

Sikh Influence in Canada:

Though Sikhs only make up about 2% of Canada's population, they have considerable political influence due to concentrated communities, particularly in Justin Trudeau's Liberal Party. However, not all Canadian Sikhs support Khalistan.

Cultural Misunderstandings and Media Role:

Canada sees freedom of speech broadly, allowing even separatist advocacy and protests. In Canada, legal standards make it difficult to extradite individuals to countries with differing human rights records,



including India. Canada's media has addressed India's concerns about Khalistani influence, while Indian media has been more one-sided, uncritically supporting the Indian government's stance.

Legal Complexities:

Canada often denies India's extradition requests due to differing legal standards and concerns over human rights, making extraditions from Western democracies challenging for India.

The Role of Evidence:

While Canadian news outlets have pressed Trudeau for more evidence on India's alleged involvement, current revelations from Canadian police claim "strong evidence" rather than mere allegations. It's unclear if this evidence will hold up in court, leaving the outcome uncertain.

Key Takeaways:

- 1. **Diplomatic Tensions**: Canada and India expelled each other's top diplomats following allegations from Canada that India might have links to the killing of Hardeep Singh Nijjar.
- 2. **Historical Friction**: India has criticized Canada's stance on Khalistani separatists, especially since the 1985 Air India bombing, which impacted Canada's view on terrorism.
- 3. **Cultural and Legal Misunderstandings**: Canada's strong stance on free speech and high legal standards for extradition create challenges for India, especially with concerns over human rights.
- 4. **Media Dynamics**: Canadian media has asked hard questions, while Indian media has leaned towards government narratives, highlighting differing journalistic approaches.
- 5. **Current Evidence**: Canadian authorities claim "strong evidence" of Indian involvement in Nijjar's case, but whether this evidence holds up legally remains to be seen.

7th November 2024

RNA editing is promising to go where DNA editing can't: TH Science

Science tech

Easy Explanation

On October 16, Wave Life Sciences, a U.S.-based biotech company, made history by being the first to treat a genetic disorder through RNA editing at the clinical level. While this marks an important breakthrough, scientists had long anticipated the potential of RNA editing due to its critical role in gene expression and regulation.

Understanding RNA Editing:

RNA editing is a technique that allows scientists to fix errors in mRNA (messenger RNA) before it is used to make proteins. Faulty proteins are often the cause of genetic disorders. An enzyme called ADAR (adenosine deaminase acting on RNA) helps in this process by altering the RNA to correct mistakes. Using a guide RNA (gRNA), scientists can direct ADAR to specific parts of the mRNA, allowing it to restore normal protein production.

Wave Life Sciences and RNA Editing for Disease Treatment:

Wave Life Sciences used RNA editing to treat α -1 antitrypsin deficiency (AATD), a genetic disorder that causes liver and lung issues. By guiding ADAR enzymes to correct specific mutations in the SERPINA1 gene, they enabled cells to produce normal levels of the required protein. Wave Life Sciences is exploring RNA editing for other diseases like Huntington's, Duchenne muscular dystrophy, and obesity.



RNA Editing Advantages and Challenges:

Unlike DNA editing (like CRISPR-Cas9), RNA editing doesn't make permanent changes. This allows doctors to stop treatment if there are issues, reducing long-term risks. However, RNA editing still faces challenges with accuracy and delivery, especially since it requires repeated treatments to maintain effects.

The Future of RNA Editing:

RNA editing is still in the early stages, with many companies investing in this field. Major pharmaceutical firms, such as Eli Lilly and Roche, have shown interest, suggesting that RNA editing could soon become a standard tool in treating genetic disorders.

Key Takeaways:

- 1. **RNA Editing Milestone**: Wave Life Sciences became the first company to treat a genetic condition clinically through RNA editing, correcting mRNA errors that lead to faulty proteins.
- 2. **Mechanism and Benefits**: RNA editing uses ADAR enzymes and guide RNA to target errors in mRNA, offering a non-permanent, reversible approach compared to DNA editing.
- 3. Application to Genetic Disorders: The company successfully used RNA editing to treat α -1 antitrypsin deficiency (AATD) and is planning to apply it to Huntington's disease and muscular dystrophy.
- 4. **Challenges**: RNA editing has hurdles in accuracy, delivery, and repeat treatments needed for lasting effects.
- 5. **Outlook**: With growing interest from major pharma companies, RNA editing is likely to become a major tool in precision medicine.

What explains the deadly Spain floods?: TH Science

Environment

Easy Explanation

In eastern Spain, flash floods caused by intense rainfall led to a major disaster, destroying homes, cars, and businesses in minutes. The sudden floodwaters left people trapped in vehicles, homes, and low-lying areas, with many losing their lives. Rescuers, including police, firefighters, and soldiers, have so far recovered 217 bodies, mostly in Valencia, and continue to search for over 80 missing people.

The flooding concentrated around the Magro and Turia rivers and the Poyo canal, which overflowed, sweeping water into streets, railways, and buildings. In some areas, more rain fell in just eight hours than in the past 20 months combined. By the time emergency alerts reached people, many were already on the roads or in danger.

Scientists suggest climate change played a major role. Warmer air can hold and release more rain, while shifts in the jet stream may lead to more extreme weather patterns. Additionally, the Mediterranean Sea's surface temperature hit a record 28.47°C in August, which likely contributed to the rainfall. The flooding followed two years of drought in Spain, highlighting the growing cycle of extreme weather events linked to climate change. Although autumn storms are common in Spain's Mediterranean coast, this flash flood was one of the most severe in recent memory.

Key Takeaways:

1. **Sudden Flooding Disaster**: Flash floods in eastern Spain killed hundreds and caused widespread destruction, leaving many still unaccounted for.

- 2. **Rapid Rainfall**: In some areas, intense rain in eight hours surpassed the total rainfall of the past 20 months, leaving residents with little time to react.
- 3. **Climate Change Factors**: Scientists link the extreme weather to climate change, citing warmer air and changes in the jet stream that can increase rainfall intensity.
- 4. **Unusually Warm Mediterranean**: The sea reached its highest recorded surface temperature in mid-August, potentially fueling the heavy rain.
- 5. **Extreme Weather Cycle**: Following years of drought, Spain now faces more frequent cycles of extreme weather, with this event marking one of the worst flash floods in recent years.

A West Asia under Donald Trump: TH Editorial

International Relations

Easy Explanation

One of the major foreign policy challenges during Joe Biden's presidency has been Israel's ongoing conflict with Palestine, specifically in Gaza. Biden's administration initially aimed to expand diplomatic relations between Israel and other Arab countries, following the Abraham Accords established under Trump, with hopes of a potential Saudi-Israel normalization. However, the October 2023 Hamas attack on Israel shifted the focus entirely. Biden supported Israel's military response in Gaza, while trying to prevent the conflict from escalating into a larger regional war. Despite these efforts, the conflict worsened, tarnishing America's reputation and further destabilizing West Asia.

The next U.S. president, likely Donald Trump if he wins, will inherit this complex situation. Trump's previous term had seen strong support for Israel, including moving the U.S. embassy to Jerusalem and withdrawing from the Iran nuclear deal. However, Trump's stance will face new challenges. He will likely support Israel, but like Biden, he may want to avoid the U.S. being pulled into a prolonged regional conflict, which could be costly and unpopular among his voter base. Trump will have to balance supporting Israel with preventing a war that could drive up oil prices and inflation, further impacting the U.S. economy.

Trump's foreign policy focus is expected to be on U.S. interests, primarily avoiding high costs in West Asia and concentrating on China as a rival. To stabilize the region, Trump might need to address the ongoing conflicts in Gaza and Lebanon more directly. If Trump continues with policies similar to Biden's, the risk of worsening chaos in West Asia remains.

Key Takeaways

- 1. **Biden's Policy and Conflict Escalation**: Biden supported Israel in Gaza while trying to prevent a broader regional conflict. Despite this, violence escalated, impacting America's standing in West Asia.
- 2. **Trump's Potential Approach**: Trump's strong pro-Israel stance may continue, but he will likely avoid deeper U.S. involvement in West Asia, as his base prefers focusing on U.S. issues, not foreign wars.
- 3. **Economic and Strategic Balance**: Trump faces the challenge of supporting Israel without triggering a costly regional war, which could drive up oil prices and hurt the U.S. economy.
- 4. **Restoring Stability**: To improve U.S. influence, Trump may need to address ongoing conflicts with a more balanced approach to stabilize the region, as continued conflict could further harm West Asia.

| Clear your doubts now.

International Relations

Easy Explanation

In 2019, Indian Prime Minister Narendra Modi expressed support for Donald Trump, saying "Abki Baar Trump Sarkar," which hinted at a close relationship between the two leaders. Now that Trump has returned as U.S. President, there is optimism for stronger ties between India and the U.S., although some areas could see tension.

Positive Aspects: The Modi government welcomes Trump's pro-India stance. He's expected to pursue closer trade relations, make more military tech available to India, and possibly revive negotiations for a Free Trade Agreement (FTA), which Biden did not prioritize. Trump is also less likely to press India on issues like human rights, press freedom, or climate action. He has shown support for India's position on Khalistani separatists, which has been a sensitive topic in recent U.S.-Canada relations.

Challenges: Trump's focus on reducing trade tariffs could bring friction, as he previously removed India's special trade benefits (GSP status) and imposed tariffs. Trump's habit of publicly discussing private conversations is another concern; during his last term, he made several misleading claims about conversations with Modi on sensitive topics like Kashmir and China, leading to diplomatic unease. His stance on Iran and Venezuela also previously pressured India to cut oil imports from these countries.

Regional Concerns: India's neighbors may face challenges under Trump. For instance, Pakistan may lose U.S. support on international loans, and Bangladesh, along with other smaller South Asian countries, could receive less attention compared to the outreach Biden had extended to them.

Key Takeaways

- 1. Enhanced India-U.S. Relations: Modi welcomes Trump's return, expecting strengthened trade ties, military support, and less pressure on issues like human rights.
- 2. **Trade Tensions Possible**: Trump's tariff policies could impact India, as he may again push for reduced trade barriers.
- 3. **Unpredictability in Diplomacy**: Trump's tendency to disclose private conversations and make exaggerated claims could lead to diplomatic challenges.
- 4. **Regional Concerns**: India's neighbors, like Pakistan and Bangladesh, may lose U.S. support or receive less attention under Trump's administration.

Why did SC uphold U.P. madrasa Act?: TH Text&Context

Polity

Easy Explanation

On November 5, 2024, India's Supreme Court upheld most of the *Uttar Pradesh Board of Madarsa Education Act*, 2004, allowing madrasas to operate under state regulation but with some limits. This decision reversed a previous Allahabad High Court ruling that argued the Act violated secularism principles. The Supreme Court clarified that madrasas can still function as educational institutions, but they cannot grant higher degrees, as this would conflict with the *University Grants Commission (UGC) Act*, which governs higher education nationwide.



How Madrasas Function: Madrasas are traditional institutions for Islamic education in India, dating back centuries. They are primarily funded by state governments, with around 24,000 madrasas in India, the majority located in Uttar Pradesh. The *Madarsa Education Act* was introduced in 2004 to regulate these institutions' curriculum and examination standards through the Uttar Pradesh Board of Madarsa Education.

The Case and High Court's Position: The Act was challenged in 2019 when a madrasa teacher, seeking fair pay and employment regulation, brought the matter to the High Court. Lawyer Anshuman Singh Rathore also filed a public interest petition, claiming the Act violated secularism and other constitutional rights. The High Court sided with this view, arguing that the Act allowed religious-based education exclusive to Islam, which it found to contradict secular principles and the universal right to quality education.

Supreme Court Decision: The Supreme Court disagreed with the High Court, stating that religious minority institutions can offer secular education while preserving their unique character. However, it ruled that madrasas should not be allowed to issue higher education degrees like undergraduate or postgraduate qualifications, as this is a domain regulated by the UGC and not by state law.

Balancing Autonomy and Quality: The Court emphasized that madrasas could offer religious education alongside secular studies but cannot force students to participate in religious practices, especially if they receive public funds. This approach is meant to balance educational quality and the autonomy of minority institutions.

Key Takeaways

- 1. **Madrasas Can Continue**: The Supreme Court upheld the *Madarsa Education Act*, allowing madrasas to operate and offer both religious and secular education but without granting higher educational degrees.
- 2. Focus on Secularism and Quality: The ruling emphasized that madrasas, as educational institutions, must balance religious and secular studies, supporting the state's responsibility to ensure quality education without compromising the institutions' minority status.
- 3. **Restrictions on Higher Degrees**: Madrasas cannot issue degrees like Kamil or Fazil, as higher education is regulated by the UGC, which lies outside the state's jurisdiction.
- 4. **Student Rights Protected**: The Court underscored that no student should be forced into religious instruction in madrasas that receive state aid, protecting individual freedom in education.
- 5. **Respect for Religious Minorities**: This decision supports the autonomy of religious minority institutions while ensuring they adhere to broader educational standards and constitutional principles.

Trumponomics and India: IE Explained

Economy

Easy Explanation

Donald Trump's economic agenda as the new U.S. President includes ambitious policies like imposing a 20% tariff on all imports, more than 200% on car imports, deporting millions of undocumented immigrants, and extending tax cuts even though the U.S. budget deficit is already high. If he follows through on these plans, they could present some economic challenges, affecting not only the U.S. but also



countries like India due to potential trade wars, tariff increases, currency volatility, and fluctuations in global investments.

Implications for Inflation and Interest Rates: Higher tariffs and a possible trade war could raise inflation in the U.S., leading to doubts about lending unlimited funds to the U.S. government. These concerns might force the U.S. Federal Reserve to reconsider its planned rate cuts, which could, in turn, affect monetary policies in other countries, including India.

Impact on the Dollar and Investments: A rise in tariffs and fiscal spending could weaken the U.S. dollar, which may lead to increased volatility in global financial markets. For India, this means that the Reserve Bank of India (RBI) might be cautious with rate cuts until economic uncertainties are clearer. Trump's policies, including tax cuts, could drive demand for India's IT services as U.S. companies have more budget to spend.

Green Card and Immigration Policies: Trump has pledged to curb immigration but suggested offering automatic green cards to foreign nationals graduating from U.S. colleges. This could benefit Indian students in the U.S. by providing them an easier pathway to stay.

Elon Musk's Role and India's Policy Adjustments: Elon Musk could play a prominent role in Trump's administration. Earlier, Musk had pressured India to lower import duties on Tesla cars, which India did not fully accept. Trump's support could now intensify demands for India to provide more favorable terms, especially for Tesla and Musk's ventures in areas like satellite services.

Watch for Global Events: Upcoming events include the U.S. Federal Reserve's policy meeting on inflation and China's economic stimulus package discussions. A stimulus in China could help its economy but may also reduce investment appeal in other markets, including India.

Key Takeaways

- 1. **Economic Challenges**: Trump's policies could raise U.S. inflation, potentially disrupting the Fed's rate-cut plans and impacting global markets.
- 2. **Currency Effects**: Expected higher tariffs and fiscal spending could weaken the U.S. dollar, influencing other central banks, including the RBI, to act cautiously.
- 3. **Immigration Benefits**: Proposed green card policies for foreign students could benefit Indian graduates in the U.S.
- 4. **Musk's Influence**: Trump's backing of Musk may lead to increased lobbying for favorable terms in India for Tesla and SpaceX ventures.
- 5. **China's Stimulus Impact**: A Chinese stimulus could make India less attractive to foreign investors as China boosts domestic demand.

Recalling India-US relations in Trump 1.0: IE Explained

International Relations

Easy Explanation

India and the United States grew closer during Donald Trump's first presidency (2017-2021), especially in defense, energy, and counter-terrorism, although there were a few challenges. Here's a look at what shaped this relationship during Trump's term.



Defense and Security Cooperation:

Under Trump, the U.S. strongly supported India on key security issues. After the Pulwama attack in 2019, the U.S. backed India's designation of Jaish-e-Mohammed's leader Masood Azhar as a global terrorist and supported Pakistan's grey-listing by the Financial Action Task Force (FATF) in 2018. India also increased its defense purchases from the U.S., reaching \$18 billion in 2019, and gained access to advanced American defense technology under the Strategic Trade Authorization (STA) Tier 1 license.

Energy Partnership:

The U.S. and India launched a Strategic Energy Partnership in 2018, leading India to start importing crude oil and LNG from the U.S. In two years, this grew to a \$6.7 billion trade. However, this partnership partly resulted from Trump's insistence that India stop buying oil from Iran.

Challenges in Trade and Immigration:

Although U.S.-India trade in goods and services grew, Trump frequently pushed India to lower tariffs, especially on products like Harley-Davidson motorcycles. He was also critical of India's immigration policies and wanted restrictions on H-1B visas, affecting Indian skilled workers.

Kashmir Controversy:

One of the biggest controversies came when Trump offered to mediate on the Kashmir issue between India and Pakistan, which was met with strong resistance from India. Trump later clarified that the U.S. would only mediate if both countries requested it.

China as a Common Rival:

Trump's administration was the first to establish China as a major strategic threat, creating a strong alignment between India and the U.S. He revived the Quad group (India, U.S., Australia, Japan) and promoted a strategy to counter China's actions in the Indo-Pacific region.

Human Rights and Internal Policies:

Trump largely refrained from commenting on India's internal human rights record, which was well received by New Delhi.

Key Takeaways

- 1. **Defense & Security**: Enhanced cooperation, increased defense purchases, and intelligence sharing.
- 2. **Energy Partnership**: Grew rapidly with U.S. crude and LNG imports but was partly driven by Trump's stance on Iran.
- 3. Trade Challenges: Trump demanded better tariffs and visa restrictions, causing friction.
- 4. Kashmir Issue: Trump's mediation offer created controversy, but he later walked it back.
- 5. **Strategic Stance on China**: Firmly positioned China as a rival, aligning India and the U.S. on common security goals.

Trump 2.0 and the world: IE Ideas

International Relations

Easy Explanation

Donald Trump has been elected as the next U.S. President, with Republicans gaining power across both the Senate and the House of Representatives. Trump's administration is expected to focus on major economic changes, foreign policy shifts, and immigration reform, which could impact both U.S. domestic policies and international relations.



Trade and Economy:

Trump has proposed significant tariffs, including 60% on imports from China and 10-20% on other countries. This move could lead to retaliatory actions, particularly from China, potentially raising prices in the U.S. and increasing global trade tensions. Trump may also cut immigration and resume building the southern border wall. His policies could impact global economies, including India's.

Climate Policy Rollbacks:

Trump plans to halt climate initiatives like the Inflation Reduction Act and might withdraw from the Paris Agreement. With reduced environmental regulations, the U.S. could see increased fossil fuel exploration. This shift undermines global climate goals, making it harder to address climate change.

U.S. Foreign Policy Under Trump:

- Israel and Middle East: Trump is likely to support Israel's military actions in Gaza and Lebanon and may impose stricter sanctions on Iran. However, he may stop short of endorsing direct attacks on Iran's nuclear facilities, preferring economic and covert measures.
- **Europe and Ukraine**: European allies are worried. Trump may scale back U.S. support for Ukraine, leaving Europe to handle Russia alone. A potential peace deal with Russia would weaken Ukraine and shift European security dynamics.
- Asia and China: Trump's primary target remains China. He is likely to strengthen the Quad alliance (U.S., India, Japan, and Australia) to counter China's influence in the Indo-Pacific. There could also be an attempt to loosen the Russia-China partnership, though Russia may retain its alignment with China.

Impact on India:

India may see benefits in its relationship with the U.S. under Trump:

- **U.S.-India Relations**: Trump and PM Modi share a friendly and transactional approach, suggesting potential for mutually beneficial deals. Trump is also less likely to press India on human rights issues.
- **Defense and Technology**: Defense ties will likely strengthen, as both countries continue to collaborate on technology and security.

Challenges for India:

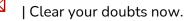
Trump's economic policies could disrupt the global economy, impacting India's economic growth. Immigration policies may tighten, potentially affecting Indian workers in the U.S. and increasing scrutiny on illegal immigration.

Overall Outlook:

India may experience a positive relationship with the U.S. under Trump's leadership, yet it should brace for global economic and geopolitical uncertainties. With Trump's unpredictable approach, the next four years could be a challenging ride for many countries.

Key Takeaways

- 1. Economic Shifts and Trade Tensions: Trump plans high tariffs, especially targeting China, which could provoke trade retaliations and raise U.S. prices, potentially destabilizing global trade and impacting economies like India.
- 2. **Climate Policy Reversal**: Trump intends to withdraw from climate initiatives, including the Paris Agreement, undermining international climate goals and allowing for increased fossil fuel exploration in the U.S.



- 3. **Immigration Crackdown**: Proposed immigration reforms may include resuming border wall construction and deporting undocumented immigrants, which could affect Indian workers and students in the U.S.
- 4. **Support for Israel and Middle East Dynamics**: Trump is expected to back Israel strongly, potentially increasing military actions in Gaza and Lebanon. Economic sanctions on Iran may also intensify, with less likelihood of direct conflict.
- 5. **European Allies and Ukraine Concerns**: Trump's possible reduced support for Ukraine may weaken NATO's position, leaving Europe vulnerable. His approach could shift European reliance on U.S. security and alter the balance of power with Russia.
- 6. **China and Indo-Pacific Focus**: China remains a primary target, with Trump likely to bolster the Quad (U.S., India, Japan, Australia) to counter China's regional influence. This aligns with India's strategic interests in the Indo-Pacific.
- 7. **India-U.S. Relations**: Trump's personal rapport with PM Modi and his transactional approach could benefit U.S.-India relations, especially in defense and technology. Human rights pressures on India are expected to lessen under Trump's leadership.
- 8. **Potential Global Instability**: Trump's radical economic policies, combined with a hardline stance on immigration, climate, and foreign policy, may lead to increased global economic and geopolitical unpredictability, impacting countries worldwide, including India.

8th November 2024

Have Ozempic's 'weight conquering' qualities transformed treatment of diabetes and obesity?: TH Science

Science Tech

Easy Explanation

Ozempic and Wegovy, both based on a drug called semaglutide, have become widely popular for helping with weight loss and diabetes management. Originally developed to help people with type 2 diabetes, these drugs have also shown promising weight-loss results, which made them popular even with celebrities. Semaglutide works by mimicking a hormone that slows digestion, reduces appetite, and helps the body release more insulin.

In India, only the oral version called Rybelsus is available, as the injectables Ozempic and Wegovy are yet to be approved. Many doctors in India are prescribing Rybelsus for diabetes management, especially for patients struggling with obesity. However, there are eligibility requirements, and the drug isn't suitable for everyone, especially those just looking to lose a few kilograms.

While the drug has shown success, it does come with some common side effects like nausea and stomach discomfort, which can lead some patients to stop taking it. The cost is also a major barrier in India, as the drug is quite expensive. A black market for semaglutide has emerged, which is risky due to the need for medical supervision with this medication.

Looking ahead, semaglutide could be useful in treating other health issues like heart failure and Alzheimer's. For those waiting for the injectables in India, they may need to wait a few more months, as local approvals are still pending.



Key Takeaways

- 1. **Popularity and Benefits**: Ozempic (semaglutide) is popular for managing diabetes and significant weight loss, drawing attention globally, including from celebrities.
- 2. **India's Availability**: Only the oral form, Rybelsus, is available in India. The injectable versions (Ozempic and Wegovy) have not yet been approved.
- 3. **Prescribing Caution**: Semaglutide is mainly prescribed for diabetic patients with obesity and cardiovascular risks; it's not a general weight-loss drug.
- 4. **Side Effects**: Common side effects include nausea and stomach issues, leading some patients to stop using it.
- 5. **High Cost and Limited Access**: Rybelsus is expensive, costing about ₹10,000 a month, making it inaccessible for many. A black market for the drug is emerging, posing risks of self-medication.
- 6. **Future Potential**: Semaglutide could have future uses in treating conditions like heart failure, Alzheimer's, and cancer.
- 7. Awaited Injectable Approvals: The injectable versions of semaglutide might be approved in India in the future, with other companies like Eli Lilly also preparing to enter the market.

All eyes on Baku and the climate finance goal: TH Editorial

Environment

Easy Explanation

The New Collective Quantified Goal (NCQG) is a key agenda at the upcoming COP29 climate conference in Baku, Azerbaijan. The NCQG is focused on setting clear financial targets and plans for supporting developing countries in their climate actions, as these countries often face the greatest impacts of climate change but lack adequate resources. However, disagreements between developed and developing countries pose challenges.

Developing countries insist that climate finance should come mainly from developed countries, with a balance between funding for adaptation (adjusting to climate impacts) and mitigation (reducing emissions). They prefer funding through grants rather than loans to avoid additional debt. Developed countries, however, suggest expanding the list of contributors to include wealthier developing countries, like China and certain oil-rich nations, and propose more innovative and flexible financing methods.

The \$100 billion annual pledge by developed countries to support climate action has fallen short in impact, with criticisms around inadequate funding and an over-reliance on loans. Additionally, there are concerns about private investment being counted as climate finance, as it may prioritize profit over real climate needs.

With these issues unresolved, the success of COP29 depends on whether these countries can bridge the divide. The goal is to create a fair and effective climate finance framework that respects both the responsibility of developed countries and the urgent needs of developing countries.

Key Takeaways

1. **NCQG Focus at COP29**: The New Collective Quantified Goal (NCQG) is central to COP29, focusing on establishing financial targets to help developing countries with climate change actions.



- 2. **Developed vs. Developing Countries**: Developing countries seek predictable, grant-based funding mainly from developed countries, while developed nations want more contributors and flexible funding.
- 3. **\$100 Billion Pledge Issues**: The long-promised \$100 billion annual pledge has been criticized for insufficient impact and over-reliance on loans, which increase debt for vulnerable nations.
- 4. **Concerns on Expanding Contributors**: Developed countries propose expanding the contributors to include wealthier developing nations, like China, which developing countries view as unfair and contradictory to historical responsibilities.
- 5. **Private Investment Risks**: Counting private investments as climate finance risks diluting the accountability of developed countries, as these investments may prioritize profit over climate needs.
- 6. **Climate Finance Definition and Additionality**: The updated definition of climate finance lacks an emphasis on "new and additional" funds, raising concerns about the transparency and accountability of funding sources.
- 7. **Building Trust and Fairness**: The success of COP29 and the NCQG depends on whether the process can bridge the trust gap between developed and developing countries, ensuring fair, needs-based climate support.

India, Pakistan and modifying the Indus Waters Treaty: TH Editorial

International Relations

Easy Explanation

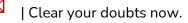
India recently issued a formal notice to Pakistan seeking a review of the Indus Waters Treaty (IWT) signed in 1960. This treaty governs the use of the Indus River and its tributaries between India (upper riparian) and Pakistan (lower riparian). India argues that increasing domestic water needs, climate impacts, and energy demands require changes to the treaty. The review also mentions the impact of cross-border terrorism in Jammu and Kashmir on water usage.

India and Pakistan have long had differing views on the IWT. India sees the treaty as allowing optimal use of the water resources, while Pakistan sees it as ensuring uninterrupted water flow. The treaty divides the Indus River Basin into eastern rivers (India's control) and western rivers (Pakistan's control), but this split hampers integrated water management. The lack of cooperation between the countries has led to minimal water resource coordination.

The treaty does not explicitly mention environmental obligations, but customary international law suggests that both countries must prevent significant harm in water projects. Joint engineering projects and cooperative approaches could help address climate change impacts and resource variability, but a full treaty renegotiation may be challenging due to mutual distrust.

Key Takeaways

- 1. **India's Call for Review**: India wants to review the Indus Waters Treaty (IWT) to address changing water needs, climate impacts, and clean energy development.
- 2. India-Pakistan Divergent Views: India (upper riparian) focuses on optimal use of water, while Pakistan (lower riparian) emphasizes uninterrupted flow.
- 3. **Treaty Structure and Challenges**: The treaty divides the rivers, limiting integrated water management and cooperation. This structure hinders efforts to adapt to modern needs.



- 4. **Environmental Concerns**: Although the treaty lacks specific environmental obligations, international law suggests both countries must prevent transboundary harm.
- 5. **Potential Solutions**: Cooperative projects or a Memorandum of Understanding could help address issues without fully renegotiating the treaty, given the historical distrust.

Can the state acquire all private property?: TH Text&Context

Sociology

Easy Explanation

The Supreme Court recently delivered a significant ruling on the scope of government power to use private resources for the public good. This ruling addresses Article 39(b) of the Constitution, which mandates that "ownership and control of material resources of the community" be distributed to serve the common good. The nine-judge bench ruled, by a majority of 8:1, that not every private resource can be categorized as a "material resource of the community." This ruling overturns an interpretation from 1977 that allowed broad governmental control over private resources.

Constitutional Background

- 1. Directive Principles of State Policy (DPSP): Part IV of the Constitution lays out DPSPs, guidelines aimed at promoting social and economic justice. While these are not legally enforceable, they guide the state in policymaking.
- 2. Article **39(b)**: This specific provision mandates that material resources are distributed to benefit the community. The recent ruling interprets which resources qualify as "material resources of the community" and to what extent the government can claim or redistribute these resources.
- 3. **Right to Property**: Originally a Fundamental Right under Articles 19(1)(f) and 31, the right to property was reduced to a constitutional right in 1978, under Article 300A. Since then, the government can acquire private property for public purposes but must provide adequate compensation.

Key Points from Previous Cases

- 1. **1977 Ranganatha Reddy Case**: A seven-judge Supreme Court bench upheld Karnataka's law nationalizing private bus transport. Justice V.R. Krishna Iyer, in a separate opinion, interpreted "material resources" broadly, suggesting it encompassed all national wealth and resources that could fulfill material needs. This view was foundational in future cases.
- 2. Sanjeev Coke Manufacturing Co. v. Bharat Coking Coal Ltd. (1982): Relying on the broad interpretation by Justice Iyer, the Court upheld the nationalization of coke oven plants, expanding the government's power to nationalize resources.
- 3. **Property Owners' Association Case**: In this recent case, the seven-judge bench referred the interpretation of Article 39(b) to the nine-judge bench, which led to the current ruling that places limits on the government's ability to claim private resources as community resources.

Current Ruling Highlights

1. **Qualified Definition of "Material Resources"**: The Supreme Court held that for a resource to be considered a "material resource of the community," it must meet certain criteria. It must be "material" in value, of "the community," and have a significant impact on community welfare.



Resources like forests, mines, and water bodies that have a broader ecological or social impact may fall within this scope.

- 2. **Rejecting the 1977 Interpretation**: The majority judgment rejected Justice Iyer's broad interpretation, calling it a "rigid economic ideology" that no longer aligns with India's liberalized economy. The Court clarified that India's economic policies have shifted from socialism to a market-oriented model, where private ownership is respected, and government intervention is more limited.
- 3. **Scope of Government Distribution Power**: The Court clarified that "distribution" in Article 39(b) can mean both governmental acquisition and redistribution to private players, as long as it serves the common good. This flexibility allows the government to balance community benefits with economic growth.
- 4. **Minority Opinion**: Justice Dhulia, the lone dissenting voice, upheld the broader interpretation of Article 39(b), suggesting that it should be left to the legislature to decide how resources are distributed for the common good.

Implications of the Judgment

- 1. **Protecting Private Property**: This ruling emphasizes that private property rights are respected within India's liberalized economy. It provides a safeguard for small and marginalized landowners, especially those with small farms or forest lands, from forced acquisitions by the government.
- 2. **Sustainable Resource Use**: By emphasizing certain resources as public trust resources, the ruling supports sustainable use of natural resources. The public trust doctrine ensures that critical natural resources, like water and forests, are preserved for future generations.
- 3. Addressing Economic Inequality: While the judgment upholds property rights, it also highlights the importance of equitable distribution of essential resources. It balances private ownership with the need for social justice, ensuring that community resources are not concentrated in a few private hands.
- 4. **Balancing Market Liberalization with Public Good**: The judgment reflects India's shift toward a market-oriented economy, where private enterprise and public welfare can coexist. It provides a framework for the government to encourage economic growth while safeguarding critical resources.
- 5. **Guidelines for Future Resource Classification**: The ruling sets out a framework for what can be classified as a "material resource." Factors like scarcity, ecological impact, and public utility will help in assessing which resources are critical for the community and should be protected.

Future Considerations

- 1. **Evolving Economic Model**: As India continues to evolve its economic policies, this judgment provides a reference point, ensuring that community interests remain protected, even as market liberalization progresses.
- 2. **Legislative Action**: The Court's ruling encourages the government to frame laws and policies that maintain this balance. It underscores the legislature's role in defining and protecting community resources while promoting private enterprise.
- 3. **Long-Term Environmental Sustainability**: By limiting the overreach of private interests in critical resources, the ruling underscores the importance of sustainable development. It aligns with the constitutional duty to protect natural resources for future generations.

Key Takeaways

- 1. **Resource Qualification**: Only specific resources with public significance, such as forests and water bodies, can be classified as "material resources of the community" for common good use.
- 2. **Rejecting Broad Interpretation**: The ruling rejects the earlier expansive view, aligning with India's current liberalized economy and respect for private property rights.
- 3. **Flexible Distribution Definition**: The term "distribution" allows both government ownership and private involvement as long as it benefits the public.
- 4. **Protecting Small Landowners**: Small farm and forest lands owned by marginalized groups are protected from forced government acquisition.
- 5. **Sustainable Resource Management**: The ruling emphasizes the need for sustainable and equitable use of community resources, ensuring they are preserved for future generations.

In essence, the Supreme Court's decision carefully balances individual property rights, sustainable development, and the equitable distribution of essential community resources. This shift toward a liberalized economic model reflects the growing importance of private ownership while ensuring the public good remains a priority.

Are CSR contributions to agriculture properly tracked?: TH Text&Context

Economy

Easy Explanation

India became the first country to mandate Corporate Social Responsibility (CSR) in 2013 through Section 135 of the Companies Act. From 2014 to 2023, companies contributed approximately ₹1.84 lakh crore to various social causes under CSR obligations. Agriculture, which employs nearly half of India's population and contributes over 16% to the GDP, is an area where CSR funds can significantly impact challenges such as stagnant farmer incomes, climate threats, and natural resource degradation.

How CSR Can Benefit Agriculture

With 47% of India's population relying on agriculture for their livelihood, there is growing interest among corporates to allocate CSR funds towards climate action and sustainability in the sector. Companies have already funded initiatives such as:

- Grain Banks: Storage facilities for harvested grains to prevent wastage and ensure food security.
- **Farmer Schools**: Training centers where farmers learn sustainable and modern agricultural techniques.
- Water Conservation Projects: Efforts to improve water resources and irrigation efficiency.
- **Energy-efficient Irrigation**: Using technology for sustainable water use, essential for crop production.

The Key Challenge in CSR for Agriculture

One of the main barriers to maximizing CSR's impact on agriculture is the lack of a precise tracking and reporting mechanism. Currently, agriculture-related CSR initiatives are spread across multiple sectors in the Companies Act's Schedule VII, like gender equality, environmental sustainability, animal welfare, and poverty alleviation. This categorization means agriculture-related spending is mixed with funds for unrelated activities, making it hard to assess the actual impact on agriculture specifically.

Proposed Solutions for Improved Impact

- 1. **Separate Agricultural Reporting**: By creating a distinct category for agriculture within CSR reporting, funds can be better targeted, and companies can be more transparent about their contributions to the agricultural sector.
- 2. **Sustainability-driven Goals**: Directing CSR funds toward specific sustainability challenges within agricultural ecosystems can create measurable changes, especially in areas like soil health, water management, and climate resilience.

This targeted approach to CSR in agriculture would support India's efforts toward sustainable growth, enhance sectoral impact assessments, and help address critical agricultural sustainability issues.

Key Takeaways

- 1. **Significant Contribution**: CSR funds from 2014-2023 amount to ₹1.84 lakh crore, showcasing the potential for corporate funds to address India's agricultural challenges.
- 2. **Scope for Agriculture**: CSR can support initiatives in water conservation, energy-efficient irrigation, farmer education, and sustainable farming practices.
- 3. **Reporting Challenges**: Lack of a distinct category for agriculture-related CSR hampers accurate tracking and evaluation of its impact on agriculture.
- 4. **Proposed Solution**: Designating agriculture as a distinct CSR sector could improve transparency, optimize fund allocation, and enable better impact measurement.
- 5. **Potential for Transformation**: With better-targeted funds, CSR can drive sustainable growth in Indian agriculture, benefiting both farmers and the environment.

RIPPLES OF VICTORY: IE Editorial

International Relations

Explanation

As Donald Trump returns for his second term as U.S. President, his economic policies, centered on an "America First" agenda, are expected to intensify. Trump's focus has been on reducing trade deficits and reshaping global trade dynamics by imposing high tariffs on imports, especially from the EU, China, and South Korea. This approach is largely motivated by a belief that globalization has harmed U.S. interests, allowing other countries to benefit at America's expense.

Trump's economic nationalism has already influenced international dynamics. For example, Germany's government faced turmoil partly due to uncertainty around U.S. support for Ukraine. The expectation of high tariffs under Trump could increase U.S. domestic inflation, pushing the Federal Reserve to maintain high interest rates. Trump's policy might lead to a trade war, potentially disrupting global supply chains. On the upside, his stance on reducing dependence on international oil could indirectly benefit fuel prices worldwide. Additionally, his proposal to streamline green card access for international students may open more opportunities for Indians studying in the U.S.

Key Takeaways

- 1. America First Policy Intensifies: Trump's second term focuses on reducing trade deficits through high import tariffs, especially targeting the EU, China, and South Korea.
- 2. **Global Order Shift**: A more insular approach from the U.S. is likely to disrupt global trade dynamics, affecting both allies and rivals.

- 4. **Trade War Risks**: Tariffs might spark a trade war, leading to disruptions in global supply chains and heightened economic tensions.
- 5. **Potential Benefits for India**: Lower oil prices could be a medium-term benefit, and easier green card access for Indian students studying in the U.S. might help more Indians settle in America.

COP FOR CONSENSUS: IE Editorial

Environment

Explanation

The Global South has become a central focus for COP29, as it includes many regions most severely impacted by climate change. However, cooperation rather than confrontation between the Global North and South is essential. The Global South now needs over \$1 trillion annually for climate action, vastly exceeding the original \$100 billion promised in 2009. This funding has often arrived late and largely as loans, adding to the debt burdens of developing countries already facing high borrowing costs.

The recent UN draft proposes that countries with high greenhouse gas (GHG) emissions and financial capability contribute more. However, major economies like China and India are concerned, as these demands might hinder their growth. To attract more private investment, the Global South could offer higher returns through tax breaks and innovative revenue-sharing, while climate finance could serve as a safety net for renewable projects, reducing investor risk. A spirit of cooperation could make COP29 a pivotal moment for climate justice.

Key Takeaways

- 1. **Escalating Needs**: The Global South requires over \$1 trillion yearly for climate adaptation and mitigation, far above the original \$100 billion target.
- 2. **Challenges in Accessing Funds**: Much of the climate financing is loan-based, worsening debt pressures in developing nations and making climate finance inaccessible for many high-risk areas.
- 3. **Funding Equity**: Developed countries and high-emission economies like China and India face pressure to contribute more, though concerns persist about compromising growth.
- 4. **Incentivizing Private Investment**: Offering higher returns and innovative mechanisms like tax breaks could attract foreign capital into the Global South's green projects.
- 5. **Utilizing Climate Finance as Backstop**: Using international climate funds to underwrite projects could ease lender fears, particularly for renewable energy investments in emerging economies.
- 6. **Collaboration at COP29**: Fostering goodwill and reciprocity between the Global North and South could make COP29 a landmark event for meaningful climate action.

Solar alliance stocktake: IE Explained

Environment

Explanation

The International Solar Alliance (ISA), launched by India and France at the 2015 Paris climate conference, was envisioned to accelerate solar energy adoption in developing nations. Though it now includes over 110 member countries, ISA's impact on solar deployment has been minimal. Unlike project developers,



ISA's role is to support solar adoption by tackling obstacles like financial and regulatory barriers, yet it has made limited progress with only one project in Cuba nearing operation.

ISA has faced challenges, especially as most solar investments are concentrated in developed nations and major economies like China and India. Smaller countries, especially in Africa, struggle with regulatory frameworks and lack local developers, deterring foreign investors. ISA has been working to create regulatory frameworks and train local talent but has faced setbacks due to limited resources and coordination challenges within India. Given its headquarters in Delhi and significant Indian funding, ISA's success is tied to India's leadership aspirations for the Global South.

Key Takeaways

- 1. **Slow Progress**: Despite its ambitious goals, ISA has only one solar project nearing operation (in Cuba) due to challenges in attracting and facilitating solar investments in developing countries.
- 2. **High Barriers for Smaller Nations**: Most solar investments are concentrated in developed countries and China, while smaller developing nations lack regulatory stability and local developers to attract foreign investments.
- 3. **Capacity Building**: ISA has focused on creating regulatory structures, drafting power purchase agreements, and establishing training centers (STAR) to build local expertise and support solar energy projects.
- 4. **Imbalanced Solar Deployment**: While solar energy has seen rapid global growth, only a few countries, primarily China, dominate new installations. Regions like Africa, with significant energy needs, have minimal solar energy adoption.
- 5. **India's Strategic Role**: ISA is closely tied to India's diplomatic goals and leadership in the Global South, reflecting India's commitment to promoting solar energy access in underserved regions.
- 6. **Challenges in Governance**: ISA's limited funding, understaffing, and strained relations with India's Ministry of New and Renewable Energy have hindered its effectiveness in advancing solar adoption among member nations.

Why Uttar Pradesh has introduced new rules for appointing its police chief: IE Explained

Polity

Explanation

Uttar Pradesh has introduced new rules for appointing its Director General of Police (DGP) to streamline the selection process and minimize central government involvement. These rules come after the Supreme Court issued contempt notices to eight states, including UP, for appointing temporary DGPs, which goes against a landmark 2006 Supreme Court ruling in the Prakash Singh case that aimed to reduce political interference in police leadership.

Under the new rules, a selection committee, including retired judges, state officials, and a representative from the Union Public Service Commission (UPSC), will appoint UP's DGP. This system eliminates the previous practice of sending a list of eligible candidates to the UPSC, effectively reducing the Centre's role in the process. However, the rules may not fully comply with the Supreme Court's directions, as they are based on the outdated Indian Police Act of 1861 rather than a newly enacted Police Act.

Key Takeaways

- 1. New DGP Appointment Rules: UP's new rules require a selection committee to choose the DGP, including state officials and a UPSC nominee, but eliminate the step of sending candidate lists to the UPSC for vetting.
- 2. **Supreme Court's Directions**: The 2006 Prakash Singh case directed states to adopt transparent, fixed-term DGP appointments to reduce political interference. The DGP should have a minimum tenure of two years and be appointed based on a selection process involving the UPSC.
- 3. **Temporary DGPs**: The Supreme Court has previously ruled against the practice of appointing temporary or Acting DGPs, emphasizing a fixed appointment process to ensure leadership stability.
- 4. **Compliance Issues**: While UP's rules align with some SC guidelines (like the two-year minimum tenure), they fall short of the requirement to create a new Police Act, as they only amend the existing Indian Police Act of 1861.
- 5. **Potential Legal Conflict**: The new rules might conflict with SC judgments from 2018 and 2019, which state that laws or rules opposing SC's police reform directions must be paused until further review.
- 6. **Broader Context**: Several states have enacted their own Police Acts since 2006, but not all have fully complied with the SC's intent to depoliticize police appointments.

9th November 2024

The BRICS journey — gaining heft while in transition: TH Editorial

International Relations

Easy Explanation

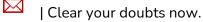
The 2024 BRICS Summit, held in Kazan, Russia, brought together leaders from five main countries— Brazil, Russia, India, China, and South Africa—with an emphasis on strengthening the group's role as a voice for developing countries worldwide. This year's summit was particularly notable for its focus on expanding membership and supporting the needs of poorer nations, also known as the Global South, in economic and political arenas.

Expansion and the 'Global Majority':

The BRICS group, originally formed by emerging economies, has gradually transformed into a broader coalition representing the Global South. This year, BRICS invited 13 new "partner states" from various regions, including countries in Africa, Southeast Asia, Latin America, and Eurasia. This shift is a strategic move to bring more countries into the fold, which could help BRICS have a stronger say on global issues. By expanding, BRICS aims to stand for a larger portion of the world's population and resources, presenting itself as a more powerful force on the world stage.

Economic Justice and Global Fairness:

BRICS is increasingly pushing for fairer treatment of developing countries, many of which often lack access to financial support or infrastructure. This includes reforms in global institutions like the United Nations and the International Monetary Fund (IMF) to allow developing nations more influence. BRICS also opposes economic sanctions imposed by powerful countries, especially if these sanctions are one-sided and hurt the economies of developing nations. Such stances show that BRICS wants a fairer global system, especially for poorer countries that usually struggle to get a voice in global policy.



Response to Global Conflicts:

BRICS addressed various ongoing global conflicts, such as the Israel-Palestine issue, where the group called for an immediate ceasefire and expressed support for an independent Palestinian state. On the Ukraine conflict, BRICS opted for a more neutral approach, urging peace but avoiding direct criticism of Russia—a move that illustrates the different perspectives within BRICS itself on how to handle such issues.

Economic Self-Reliance and Financial Collaboration:

This year's summit also discussed ways to reduce dependence on the US dollar in trade among BRICS nations, proposing instead the use of their local currencies. The goal is to make BRICS economies more independent and stable, especially against fluctuations in the dollar. There was also hope that Saudi Arabia, one of the new partner states, would inject capital into the BRICS-led New Development Bank, but this did not materialize yet. The summit showed BRICS's ongoing efforts to build a stable financial network for its members.

Strengthening Social and Cultural Bonds:

BRICS leaders emphasized strengthening connections beyond just politics and economics. By increasing cultural exchanges through programs in sports, arts, civil society, and business, BRICS aims to deepen unity and understanding among its members. This approach is intended to build long-term connections that go beyond strategic or economic needs, creating a sense of community within BRICS.

India's Strategic Moves and Diplomatic Benefits:

For India, BRICS holds great importance, alongside its participation in other international groups like the G-20, Quad, and BIMSTEC. Through BRICS, India can strengthen its ties with Russia and effectively push for the needs of developing countries. During the summit, India's Prime Minister Modi met with China's President Xi Jinping for the first time in several years, leading to discussions on border management, a positive step for improving India-China relations. For India, BRICS represents a way to balance its relationships with both Eastern and Western nations, giving it a unique position on the global stage.

Key Takeaways

- 1. **BRICS Expansion**: The summit expanded BRICS's membership by adding 13 new partner states, including countries from Africa, Latin America, Southeast Asia, and Eurasia. This expansion aims to give BRICS a larger share of global influence and to strengthen its representation of the Global South.
- 2. **Global South Representation**: BRICS's new goal is to act as a platform for developing nations, pushing for a fairer distribution of power and resources on the global stage. This includes advocating for reforms in institutions like the UN and IMF to give developing countries more influence.
- 3. **Stance on Global Conflicts**: BRICS took a strong stand on the Israel-Palestine conflict, calling for a ceasefire and a two-state solution. However, it took a more neutral stance on the Ukraine conflict, calling for peace while refraining from criticizing Russia, highlighting the group's diplomatic balancing act.
- 4. **Reducing Dollar Dependency**: BRICS is promoting the use of local currencies in trade to reduce dependence on the US dollar. This move is aimed at giving BRICS economies more stability, particularly against fluctuations in the dollar's value.
- 5. **People-to-People Exchanges**: The summit encouraged more cultural and social exchanges, such as in sports and arts, to build stronger connections among BRICS members beyond political or economic cooperation.



- 6. **India's Role and Benefits**: BRICS helps India balance its relationships with both Eastern and Western powers. The summit allowed India to strengthen ties with Russia, improve relations with China, and push for the interests of developing countries, enhancing its strategic position globally.
- 7. **BRICS as a 'Bridge'**: BRICS serves as a bridge between the Global North and South, offering a space where developing nations can collaborate independently of Western influence. India, in particular, finds itself in a favorable position, able to act as a mediator and align itself with multiple interests on the world stage.

In sum, BRICS is becoming a more influential group that represents a larger portion of the global population and aims to advocate for fairness and equity in international relations, with India playing a critical role in its strategic evolution.

Staying cool, but with clean tech, global collaborations: TH Editorials

Environment

Easy Explanation:

The Quad nations (Australia, India, Japan, and the U.S.) are stepping up efforts to make cooling systems more energy-efficient and accessible, especially as global temperatures rise. In a warming world, cooling is no longer a luxury; it's essential for people's health and safety, especially in countries vulnerable to extreme heat. In 2024, they issued the Wilmington Declaration, committing to sustainable energy and efficient cooling. This is part of broader moves by India and the U.S. to expand clean energy, including high-efficiency cooling devices like air conditioners and fans.

The urgency of efficient cooling solutions is connected to climate goals. The Montreal Protocol and its Kigali Amendment already guide global efforts to phase out harmful refrigerants like hydrofluorocarbons (HFCs), which contribute to global warming. The Kigali Amendment's phase-down of HFCs combined with energy-efficient technologies could cut greenhouse gas emissions significantly, helping slow climate change. However, in some countries, inefficient cooling systems and outdated refrigerants still dominate, worsening energy and climate issues. There's a risk that these countries, without updated standards, could end up as dumping grounds for inefficient appliances.

India, as one of the most heat-exposed nations, faces high risks from extreme temperatures, and cooling is essential for millions of people. In 2024, India saw temperatures exceeding 50°C in some areas. By 2050, India may have the world's highest demand for cooling, with over a billion air conditioners in use. To address these challenges, India has set ambitious goals through the India Cooling Action Plan (ICAP), aiming to cut cooling demand by 20%-25% by 2030 and shift to refrigerants with lower global warming potential (GWP). A national cooling mission would unify efforts, bringing together government ministries and resources.

At COP28 in Dubai, many countries committed to lowering cooling emissions, aiming for a 68% reduction by 2050. This Global Cooling Pledge, though not legally binding, could help millions access affordable cooling and potentially save billions in energy costs. COP29 is expected to expand on these efforts, encouraging more countries and partnerships to increase cooling commitments and ensure sustainable energy solutions.

Key Takeaways

1. Quad's Wilmington Declaration on Cooling

The Quad nations announced a commitment to develop high-efficiency cooling solutions to address rising global temperatures, with a special focus on vulnerable regions.

2. India's Role and Investments

India, leading the Quad's cooling initiatives, pledged significant investments in clean energy and cooling infrastructure across the Indo-Pacific, emphasizing the need for local manufacturing of efficient cooling devices.

3. Climate-Driven Need for Cooling

Rising temperatures have made cooling a necessity, especially in hot regions like India, which could see an annual increase in air conditioner sales. By 2050, India may have the world's highest cooling demand.

4. Importance of Montreal Protocol and Kigali Amendment

The Kigali Amendment expanded the Montreal Protocol's focus to phase down HFCs, which are potent greenhouse gases in cooling systems, aiming to reduce warming by up to 0.52°C by 2100.

5. Challenges with Inefficient Cooling Systems

Many countries lack integrated energy standards for cooling, leading to potential dumping of inefficient appliances. Efficient cooling systems with climate-friendly refrigerants are needed to mitigate climate impacts.

6. India Cooling Action Plan (ICAP)

India's ICAP targets a 20%-25% reduction in cooling demand by 2030, along with a switch to low-GWP refrigerants. This plan makes India a proactive leader in climate-friendly cooling.

7. Call for a National Cooling Mission

A national mission would organize cross-sectoral efforts in India, aligning ministries, resources, and initiatives to meet the country's cooling needs effectively.

8. COP28 and COP29 Global Commitments

At COP28, 63 countries committed to reducing cooling emissions by 68% by 2050 under the Global Cooling Pledge. COP29 aims to expand these commitments, increasing global collaboration on sustainable cooling solutions.

9. Affordable Cooling for Developing Regions

Ensuring that energy-efficient cooling technologies are affordable and accessible, particularly in developing countries, is crucial to meeting the rising cooling demand without overwhelming power grids or leaving vulnerable populations behind.

10. Global Cooling Pledge Goals

The Global Cooling Pledge aims to provide cooling to 3.5 billion people by 2050 and save \$17 trillion in energy costs, but accelerated action is essential to make this goal a reality.

CAUGHT IN THE FARM CROSS FIRE: TH Punjab

Environment

Easy Explanation

Every year in Punjab's Sangrur district, farmers burn leftover paddy stubble after harvest, covering the air in thick smoke. Jarnail Singh, a farmer in Punnawal village, explains that it's far cheaper to burn the stubble than to deal with costly, time-consuming alternatives like cutting, gathering, or selling the residue. This widespread stubble burning adds to North India's air pollution crisis, particularly affecting Delhi, where air quality plummets to hazardous levels. Although the government has attempted to curb this pollution by offering subsidies for machinery that handles stubble, these solutions have only had



limited success. Farmers like Jarnail find these options too expensive, especially with short planting windows between paddy and wheat seasons.

This crisis has its roots in the Green Revolution of the 1960s, which encouraged farmers in Punjab to switch from traditional crops to high-yield paddy and wheat to improve food security. To save groundwater, the 2009 Punjab Preservation of Subsoil Water Act further restricted the planting window, leaving farmers with less time to manage leftover stubble before the next sowing season. Despite government subsidies for machines that manage crop residue, burning remains the quickest, cheapest option for many small farmers.

Neighboring Haryana has tackled the issue more effectively by incentivizing farmers to sell their stubble to contractors for biofuel production. In Kaithal district, for example, private companies buy the stubble, which is used to produce energy. But in Punjab, there's little support for alternative crops like sugarcane that consume less water than paddy, forcing farmers to stick with water-intensive paddy, which leads to even more stubble burning.

Efforts to diversify crops have stalled because other crops don't provide the same stable income as paddy, which is purchased by the government at a guaranteed price. Without sustainable alternatives and adequate financial support, farmers find themselves stuck in a cycle of burning stubble, polluting the air, and depending on paddy farming due to the lack of profitable alternatives.

Key Takeaways

1. Annual Stubble Burning and Its Impact on Air Quality

Farmers in Punjab's Sangrur district, like many across North India, burn leftover paddy stubble to clear fields, causing severe air pollution that worsens Delhi's winter air quality. Despite government bans, burning remains the most affordable option for many farmers.

2. Economic and Logistical Challenges in Stubble Management

Alternatives like using machinery to manage crop residue are costly and time-consuming, especially in the narrow window between paddy harvest and wheat sowing. Machinery like super-seeders and balers require significant investment and maintenance costs, making burning a cheaper, quicker option.

3. Government Interventions and Their Limited Effectiveness

Since 2018, the central government has offered subsidies for crop residue management (CRM) machinery, but uptake remains limited due to high upfront costs and maintenance. Punjab's request for direct financial incentives of ₹2,500 per acre remains unfulfilled, leaving many farmers with limited support.

4. Historical Shift from Diverse Crops to Water-Intensive Paddy

The Green Revolution in the 1960s shifted Punjab's agriculture to paddy and wheat, leading to increased stubble generation. The 2009 Punjab Preservation of Subsoil Water Act further delayed the paddy planting season to conserve groundwater, which reduced the window for managing stubble, making burning more common.

5. Haryana's Effective Stubble Management Model

Haryana has shown greater success in reducing stubble burning by incentivizing farmers to sell their crop residue to biofuel companies. In Kaithal district, contractors purchase stubble to produce energy, supported by government incentives that encourage farmers to sell rather than burn their stubble.

6. Health and Environmental Impacts of Stubble Burning

Stubble burning contributes to hazardous PM2.5 levels, with Delhi experiencing pollution levels

ten times higher than WHO's recommended safe limit. These fine particles penetrate the bloodstream, posing severe health risks like stroke, cancer, and respiratory disease.

7. Need for Sustainable Crop Diversification

Experts suggest promoting less water-intensive crops like sugarcane to reduce stubble production and save groundwater. However, without secure government support or reliable market prices, farmers hesitate to switch crops. Past attempts, like the failed sugarcane initiative, left farmers with unpaid dues and limited crop options.

8. Punjab's Stalled Crop Diversification Efforts

Despite a growing water crisis, Punjab farmers continue to grow paddy due to the government's Minimum Support Price (MSP) policy, which provides income security. Lack of MSP for alternative crops like sugarcane discourages diversification, perpetuating dependence on paddy farming.

9. Political and Social Barriers to Enforcing Stubble Burning Bans

Enforcement of stubble burning bans is challenging in Punjab, where farmer unions wield significant influence. Though the Supreme Court has mandated penalties, farmer protests often result in the withdrawal of punitive actions, further limiting the effectiveness of such measures.

$10.\,\text{Long-Term}$ Solutions: Incentives Over Penalties

Farmers and experts agree that financial incentives could make non-burning alternatives viable. A balanced approach combining machinery subsidies, direct financial incentives, and investment in biofuel plants may offer a sustainable way forward, but requires stronger government commitment and infrastructure.

11. Current Status and Immediate Need for Action

As Punjab and neighboring states continue facing severe air pollution, immediate action is needed. Expanded incentives, enforced penalties, and alternative income sources through crop diversification are essential to break the cycle of stubble burning and ensure sustainable farming practices.

SC's test of a 'minority institution': IE Explained

Polity

Easy Explanation:

The Supreme Court recently examined whether Aligarh Muslim University (AMU) can be classified as a Minority Educational Institution (MEI). This status gives special rights under the Constitution to manage and administer its own affairs, including certain exemptions from government regulations. The court's 4-3 majority laid out a "holistic test" to determine whether an institution truly holds a "minority character." While the Supreme Court's ruling provides a framework, the factual determination of AMU's status will still be reviewed by a smaller bench.

Historically, AMU's classification has been contested. In 1967, a ruling stated AMU wasn't founded by the Muslim minority, as it was created through a central law, and thus couldn't qualify for MEI status. In response, the government amended the AMU Act in 1981 to affirm that it was indeed founded by the Muslim community. However, in 2005, a reservation policy for Muslims by AMU was struck down by the Allahabad High Court, challenging the university's minority status again.

The Supreme Court established that minority institutions have the right to administer their own affairs, admit students from other communities, and teach secular subjects without affecting their minority character. The court also outlined two main criteria to test an institution's minority character: **Establishment** and **Administration**. The institution's origins, intentions, funding, and community involvement are key factors in determining its minority status.



- 1. **Historical Rulings and Amendments**: The Supreme Court's 1967 ruling denied AMU's minority status. The 1981 amendment aimed to secure it as a minority institution.
- 2. **2019 Supreme Court Reference**: The matter of AMU's minority status was referred to a sevenjudge bench for more detailed examination.
- 3. **New Criteria for Minority Character**: The Supreme Court provided a test, examining the founding purpose and administration to determine if it benefits a minority community.
- 4. **Institutional Autonomy for MEIs**: MEIs can reserve seats, manage day-to-day administration, and focus on secular education without losing minority character.
- 5. **Factual Determination for AMU Pending**: The detailed test allows AMU a potential path to minority status but leaves the final factual ruling to a smaller bench.

What happens to Donald Trump's legal cases now that he will be President?: IE Explained

International Relations

Easy Explanation:

Donald Trump has won the U.S. presidential election despite facing four criminal cases — two federal and two state. Federal cases include the January 6 Capitol attack and mishandling classified documents, while state cases involve hush money payments and alleged election interference in Georgia. His election win has raised questions about the status of these cases, as his new role gives him certain powers, particularly over the federal cases.

As President, Trump could influence the federal cases either by pardoning himself or by having the Department of Justice (DoJ) dismiss the cases. Although no President has self-pardoned before, he could try, possibly triggering legal debates. For the federal cases, the DoJ could argue that prosecuting a sitting President impairs his constitutional duties, which might halt these cases.

For state cases, his power is more limited. However, proceedings could be delayed or paused, especially in the Manhattan case where he was convicted earlier this year. Trump's legal team is expected to request a postponement, arguing that court proceedings would interfere with his presidential duties. Legal experts suggest that it would be nearly impossible to sentence a sitting President to prison, making significant delays in these cases likely.

Key Takeaways:

- 1. **Federal vs. State Cases**: Trump faces two federal (January 6 and classified documents) and two state (hush money and Georgia election interference) cases. Federal cases are under his direct influence as President, while state cases are likely to face delays.
- 2. **Self-Pardon Possibility**: The U.S. Constitution allows a President to grant pardons for federal crimes. Although unprecedented, Trump could attempt to pardon himself, but this might lead to a legal challenge.
- 3. **Department of Justice's Role**: Trump may dismiss federal cases by firing Special Counsel Jack Smith, invoking a DoJ policy against prosecuting a sitting President, which could protect him from federal prosecution.
- 4. **State-Level Proceedings**: State cases, particularly in Manhattan, could be postponed due to presidential transition demands. The judge might grant additional delays, as scholars argue that imprisoning a sitting President would be unconstitutional.

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5. **Legal Outcome Projection**: Experts believe Trump is likely to avoid conviction in all four cases as long as he remains President, given the legal protections his role provides.

A FORCE FOR GOOD: IE Editorial by PM Narendra Modi

Ethics

Easy Explanation:

It's been a month since the world lost Shri Ratan Tata, and his absence is deeply felt by everyone from city dwellers to rural villagers, industrial leaders to everyday workers. To the youth, he symbolized dreams worth chasing, showing that success can go hand in hand with humility and compassion. For others, he represented India's finest values: integrity, excellence, and service.

Under his leadership, the Tata Group reached new heights, gaining worldwide respect. But more than his success, he was known for supporting and mentoring others. He was a key figure in India's startup ecosystem, backing young entrepreneurs with potential, and creating a culture of innovation that will influence India for years.

Ratan Tata's love for all living beings was profound, extending beyond human welfare to animal care. His patriotism shone during crises, like his quick decision to reopen the Taj Hotel after the 26/11 Mumbai attacks, symbolizing resilience against terrorism.

Personally, he was a close advisor and friend, often writing letters about governance, congratulating on achievements, and supporting initiatives like the Swachh Bharat Mission. He championed causes such as cancer care, believing in affordable healthcare for all.

Ratan Tata's legacy is a vision for a society where business can drive positive change, every person's potential matters, and progress is measured by collective well-being. His influence lives on in the lives he touched, making India a more compassionate and progressive country.

Key Takeaways:

- 1. **Nationwide and Global Impact**: Shri Ratan Tata's absence is felt across society, from business leaders to environmentalists, across India and internationally.
- 2. An Icon of Integrity and Leadership: For many, Ratan Tata was the ideal of Indian enterprise, embodying integrity, humility, and excellence through his work with Tata Group, which achieved worldwide respect.
- 3. **Support for Young Entrepreneurs**: He significantly impacted India's startup ecosystem, mentoring and investing in young entrepreneurs, fostering innovation, and encouraging bold ideas.
- 4. **Commitment to Philanthropy and Animal Welfare**: Known for his compassion beyond business, Tata deeply supported animal welfare, reflecting his values of caring for the vulnerable.
- 5. **Patriotic Leadership in Times of Crisis**: His actions following the 26/11 attacks in Mumbai showed his resilience and unity, reopening the Taj Hotel as a symbol of India's strength.
- 6. **Personal Connection with National Development**: His partnership with government initiatives like Swachh Bharat and healthcare projects showed his commitment to India's progress.
- 7. Legacy of Compassionate Business and Social Progress: Ratan Tata envisioned a society where businesses are forces for good, every individual has value, and the well-being of all is the true measure of progress. His vision continues to inspire and shape India's future.

Unshackle the rupee: IE Opinion



Economy

Easy Explanation:

Recent discussions on the stability of the Indian rupee against the U.S. dollar generally portray it as a good thing, but there's a deeper issue. The Reserve Bank of India (RBI) has always managed some level of fluctuation in the rupee's exchange rate. However, since 2022, RBI's intervention has been unprecedented, with a deliberate effort to keep the rupee tightly aligned with the dollar. Rather than allowing the rupee to rise or fall naturally, the RBI has actively bought or sold dollars, effectively fixing the rupee's value. This shift has stirred concern because the rupee's stability hasn't come naturally through market dynamics but instead through controlled measures.

Economists argue that for a developed economy, prices — including currency — should reflect supply and demand, not be state-controlled. When markets dictate prices, they reflect real economic conditions, helping consumers and businesses make informed decisions. Artificial price control, as seen in India before 1991, distorts this information, leading to shortages, as seen in the restricted access to imports during the pre-liberalization era. This policy shift also risks economic complications like those faced by nations like Argentina and Turkey when they tried similar currency pegs.

The prior flexible exchange rate policy, which allowed the rupee to appreciate or depreciate with economic cycles, was beneficial. For instance, in boom times, a stronger rupee prevented overheating, while a weaker rupee in downturns made Indian goods cheaper abroad, boosting exports. The current policy prevents such natural adjustments, risking export competitiveness and the "Make in India" initiative by making Indian products more expensive for global buyers.

Adding to this, the lack of clear communication from the RBI leaves the market uncertain about the policy's duration and specifics. This ambiguity confuses private players, who now face the challenge of predicting RBI's actions in response to market shifts. For India's economy to grow sustainably, the exchange rate must reflect real market dynamics. Distorting this system solely to keep the rupee stable could have long-term consequences.

Key Takeaways:

1. Rupee's Stability and RBI's Role

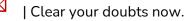
Recent rupee stability has been due to unprecedented RBI intervention rather than natural market forces, with the RBI buying or selling dollars to control its value.

- 2. Free-Market Principle and Currency Pricing For sustainable growth, currency prices should reflect supply-demand dynamics, just like other goods and services, rather than being fixed by the state.
- 3. **Historical Lessons and Risks** History shows fixed currency rates can lead to economic trouble, as seen in India pre-1991 and in nations like Argentina and Turkey. Pegging the rupee to the dollar may bring similar risks.

4. Benefits of Flexible Exchange Rate A flexible rate helped stabilize the economy across growth and downturn cycles. In the current setup, rupee stability may harm exports by making Indian goods pricier, affecting initiatives like "Make in India."

5. Lack of Transparency in RBI's Policy

RBI's unclear communication on its currency policy creates market confusion. For a high-income goal, India's exchange rate should be driven by market forces, providing clear economic signals.



10th November 2024

How will Trump treat illegal Indians?- TH FAQ

International Relations

Easy Explanation:

Recently, the U.S. Department of Homeland Security (DHS) carried out a high-profile deportation of Indian nationals who were in the country unlawfully. This action is part of a broader effort to curb illegal immigration into the U.S., especially via routes through Mexico and Canada. Many Indians attempting to enter the U.S. without proper documentation often travel through visa-free Latin American countries, reaching the U.S.-Mexico border where they rely on human traffickers for illegal entry. Indian states like Punjab and Gujarat have seen a significant number of citizens attempting to cross the border unlawfully, resulting in arrests and even fatalities during dangerous crossings.

Legally, the U.S. allows specific categories of immigrants through employment-based and family-based visa programs. Under employment-based categories, highly skilled professionals, certain skilled and unskilled workers, and investors with significant financial backing may qualify. During his previous term, President Trump's administration made it more challenging for Indian professionals by increasing H1B visa denials and favoring policies that prioritize American workers. Although his anti-immigration stance primarily focuses on Latin American immigrants, the enforcement policies could also affect Indians attempting to enter or remain unlawfully.

Trump has promised tough immigration policies if returned to office, including possibly deploying the National Guard to deport illegal residents. His stance is potentially at odds with U.S. tech industry leaders who rely on skilled international talent, including from India. His approach could face challenges as he attempts to balance immigration policies with economic and business interests tied to the Indian market.

Key Takeaways:

1. U.S. Deportations of Indian Nationals

DHS recently deported over 1,100 Indian nationals to deter illegal immigration. Many deportees attempted to enter through Mexico or Canada, often via visa-free Latin American nations.

2. High-Risk Immigration Routes

Some Indian migrants travel through Latin America to reach the U.S.-Mexico border, often using human traffickers. This approach has seen increased arrests, particularly among individuals from Punjab and Gujarat.

3. Legal Immigration Paths

The U.S. offers employment-based and family-based visas. Legal paths include highly skilled professionals, investors, and certain special immigrants. Each year, about 140,000 employment-based visas are issued.

4. Trump's Anti-Immigration Policies

In his previous term, Trump increased H1B visa rejections, favoring "Hire American" policies. His approach could affect Indian professionals if similar policies are reinstated.

5. Future Immigration Policies under Trump

Trump has proposed deploying the National Guard for deportations and hinted at using the 1798 Alien Enemies Act. These policies may impact the Indian community despite his main focus on Latin American immigration.

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6. Economic vs. Immigration Policy Tensions

Trump's policies may clash with U.S. tech leaders who rely on Indian talent. Balancing economic ties with India and stringent immigration policies could present challenges for his administration.

What are the costs of population decline?: TH FAQ

Sociology

Easy Explanation:

Andhra Pradesh and Tamil Nadu's Chief Ministers have recently voiced concerns about declining birth rates in their states, which have led to an aging population. Historically, India promoted family planning to control its population, but in recent years, the southern states, along with a few smaller northern states, have seen such success that their birth rates have dropped considerably. States like Tamil Nadu and Kerala now have low fertility rates (around 1.4 to 1.5), while states like Bihar and Uttar Pradesh have much higher rates, leading to younger populations there.

This shift has economic and political consequences. Economically, the increasing number of elderly people in states like Kerala and Tamil Nadu means these states are moving past their "demographic dividend," the period when a large, young workforce drives growth. Health costs are expected to increase as the elderly population grows, and proposals to increase fertility rates could impact women's participation in the workforce, reducing overall economic productivity.

Politically, the 2026 delimitation will likely lead to states with slower population growth, like Tamil Nadu, losing seats in Parliament to states with faster-growing populations, like Uttar Pradesh. To counteract the aging trend, some propose policies to support family life, like maternity and paternity leave, childcare, and gender equity, which could encourage birth rates without forcing women to have more children. Additionally, extending the working lifespan and attracting migrants could help southern states manage this demographic shift.

Key Takeaways:

1. Current Demographic Trends

Southern states like Tamil Nadu and Kerala have seen declining fertility rates, leading to an aging population, while states like Bihar and Uttar Pradesh still have high birth rates and younger populations.

2. Economic Impact of Aging Populations

An older population means higher healthcare costs and fewer young workers to support the economy, leading southern states to miss out on the benefits of a younger workforce.

3. Financial Strain on Southern States

Southern states with aging populations have higher out-of-pocket healthcare expenses, especially for conditions like cardiovascular disease, highlighting the economic burden of aging.

4. Political Impact and Future Delimitation

The upcoming 2026 delimitation will likely result in increased representation for high-growth states like Uttar Pradesh, while slower-growth states like Tamil Nadu may lose seats in Parliament.

5. Proposed Solutions

Southern leaders suggest pro-natalist policies to increase birth rates, but experts recommend family-supportive policies (e.g., parental leave, childcare) and improving gender equity to sustainably manage population levels.



6. Extended Workforce and Migration as Alternatives

Increasing the working lifespan and encouraging economic migration to southern states could alleviate some demographic pressures without forcing population growth.

Inactivated COVID-19 vaccine CoronaVac associated with TTP: TH Science

Science Tech

Easy Explanation:

A study has found a possible link between CoronaVac, an inactivated COVID-19 vaccine from Sinovac, and a rare blood condition called thrombotic thrombocytopenic purpura (TTP). TTP is an immune disorder that can cause blood clots and low platelet levels. The study highlights two cases of TTP in women who developed the condition shortly after getting the CoronaVac vaccine, showing symptoms like weakness, fever, and blood abnormalities. Both patients were treated successfully with plasma exchange and steroids.

The study also examined TTP cases in the Nanjing area and noticed a rise in cases since COVID-19 vaccines began being administered, suggesting a potential connection. While TTP remains rare, occurring in about one case per million, the data indicates an increase in incidence that could be related to the vaccine. Researchers propose that the vaccine may trigger an autoimmune response against an enzyme called ADAMTS13, which could lead to TTP. However, this remains a hypothesis, and there is no confirmed causal link.

Key Takeaways:

1. Study Overview

The study, published in *Frontiers of Medicine*, identifies a potential association between the CoronaVac COVID-19 vaccine and immune thrombotic thrombocytopenic purpura (TTP), a rare blood condition.

2. Case Studies

Two female patients developed TTP symptoms shortly after receiving their second dose of CoronaVac. Symptoms included blood abnormalities, low platelets, and organ issues, with both responding to plasma exchange and steroids.

3. TTP Incidence Trends

TTP cases in the Nanjing area rose between 2019 and 2022, particularly after COVID-19 vaccines were introduced, though TTP remains rare (approximately one case per million).

4. Possible Mechanism

Researchers suggest that COVID-19 vaccines might trigger an autoimmune reaction against ADAMTS13, an enzyme crucial for blood clotting, potentially leading to TTP.

5. No Established Causal Link

While a link is proposed, there is no confirmed direct cause-and-effect relationship between the CoronaVac vaccine and TTP. Further research is needed to confirm these findings.

India will fail to meet 2025 TB 'elimination' target: TH Science

Science tech

Easy Explanation:

In 2018, Prime Minister Narendra Modi set an ambitious goal for India: to eliminate tuberculosis (TB) by 2025, five years ahead of the global goal set by the United Nations Sustainable Development Goals (SDGs) for 2030. Eliminating TB means drastically reducing both TB deaths and new cases. According to the World Health Organization (WHO), to meet the 2025 milestone, TB deaths should be reduced by 75% and new cases (incidence rate) by 50% compared to 2015 levels.

However, recent reports show that India is far from achieving these targets. The India TB Report 2024 reveals that while TB cases and deaths have decreased since 2015, the reductions are nowhere near the required levels. India's TB incidence rate (new cases per 100,000 people) dropped from 237 in 2015 to 195 in 2023, and the death rate went from 28 per 100,000 people to 22. Despite these improvements, the pace is too slow to meet even the intermediate 2025 milestones, let alone the goal of eliminating TB by 2025.

India is also falling short of the 2020 milestones, which aimed for a 35% reduction in TB deaths and a 20% reduction in TB cases compared to 2015. With only a 24% reduction in deaths and an 18% reduction in incidence by 2023, India still has a long way to go. The government recently highlighted a 17.7% decline in TB incidence from 2015 to 2023, twice the global average rate. However, this progress is insufficient to meet elimination targets.

Key Takeaways:

1. Goal and Target:

India aimed to eliminate TB by 2025, five years ahead of the global 2030 SDG target, which calls for a 90% reduction in TB deaths and 80% reduction in incidence from 2015 levels.

2. WHO 2025 Milestones:

To align with the WHO's End TB Strategy, India would need to reduce TB deaths by 75% and incidence by 50% compared to 2015. This means bringing TB deaths down from 28 per 100,000 in 2015 to 7 by 2025 and TB incidence from 237 to 118.5 per 100,000 people.

3. Current Status (2024 Reports):

The India TB Report 2024 and WHO's Global TB Report 2024 show only an 18% reduction in TB incidence and a 24% reduction in deaths since 2015, falling short of the targets. India's TB incidence rate was 195 per 100,000 in 2023, and the mortality rate was 22 per 100,000.

Missed 2020 Milestones:
 For the 2020 milestone, WHO recommended a 35% reduction in deaths and a 20% reduction in

incidence, but India has only achieved 24% and 18%, respectively, even three years past the target date.

5. National Strategic Plan (2017-2025) Goals Unmet:

India's 2017 National Strategic Plan aimed for a TB incidence rate of 77 per 100,000 and 6 deaths per 100,000 by 2023, but these benchmarks remain unmet.

6. Government's Perspective on Progress:

Despite the shortfall, the government recently highlighted a 17.7% decrease in TB incidence from 2015 to 2023, which is over double the global average reduction of 8.3%, as per WHO data.

11th November 2024

Mpox clade la has evolved to jump from humans-to-humans: new study: TH Science

Science

Easy Explanation:



After smallpox was eradicated in 1980, scientists turned their attention to other poxviruses, especially mpox (formerly known as monkeypox). They closely monitored outbreaks in West and Central Africa. Recently, the World Health Organization (WHO) has classified mpox as a public health emergency due to the significant rise in cases and human-to-human transmission. Scientists identified four main types (clades) of mpox virus: Ia, Ib, IIa, and IIb. The recent 2022 outbreak was largely driven by clade IIb, while clade Ib recently caused infections in central Africa.

The concern now is that clade Ia, previously associated only with limited animal-to-human infections, seems to have evolved to spread from human to human. This was detected through genetic mutations in the virus that show patterns similar to those caused by human immune proteins known as APOBEC. APOBEC proteins try to weaken viruses by altering their DNA, often by changing cytosine to thymine, thus introducing mutations. A study predicted that clade IIb had been spreading in humans since 2016 due to APOBEC's effects.

This development may not change current vaccination plans but raises concern since different clades respond differently to antiviral treatments. With limited vaccine supplies, African countries are focusing on targeted vaccinations to curb the spread.

Key Takeaways:

- 1. WHO's Classification of Mpox as an Emergency Mpox is declared a public health emergency due to rising cases and human-to-human transmission, sparking international concern and vaccine support.
- Types of Mpox Virus (Clades)
 Four clades of mpox virus (Ia, Ib, IIa, IIb) are identified, with clade IIb causing the 2022 outbreak, and clade Ib spreading in central Africa.

 Encomponent of Linear Transmission in Clade Ia
- Emergence of Human-to-Human Transmission in Clade Ia Clade Ia, once limited to animal-to-human infections, now shows genetic signs of human-tohuman spread.
- 4. Role of APOBEC Proteins in Viral Mutation APOBEC proteins in human cells introduce DNA changes in viruses, contributing to mutations and indicating human origin of the virus.
- Concerns for Treatment Variability
 Different mpox clades respond differently to antiviral drugs, raising treatment challenges. Africa relies on limited vaccines to control the spread.

States and the Centre's fetter of 'net borrowing ceiling': TH Editorial

Polity

Easy Explanation:

In 2023, the Indian central government imposed a "Net Borrowing Ceiling" (NBC) on Kerala, limiting its ability to borrow funds to 3% of its projected Gross State Domestic Product (GSDP) for the fiscal year 2023-24. This ceiling applies to various borrowing sources, including loans from markets and public accounts, and covers certain loans by state-owned enterprises to prevent states from bypassing this restriction. Kerala has found it difficult to meet expenses and invest in welfare and development due to this cap, sparking a political and legal debate over state fiscal autonomy. Kerala has approached the Supreme Court, claiming that the NBC limits the state's constitutional right to borrow under Article 293.



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Article 293, part of the Indian Constitution, details the borrowing powers of state governments, allowing them to borrow within India on the security of their Consolidated Fund. However, if a state owes the central government money, it requires the Centre's consent for additional loans, which may come with conditions. This issue now goes to a Constitutional Bench of the Supreme Court, with implications for state fiscal autonomy and federalism.

The court case and Kerala's challenge question whether the Centre's NBC undermines cooperative federalism and if it restricts states' ability to manage finances effectively. Suggestions for revisiting Article 293 include creating guidelines for fair and transparent borrowing terms and possibly forming a commission similar to the Finance Commission to oversee loan approvals. This would aim to support cooperative federalism by balancing the Centre's fiscal goals with states' autonomy in financial management.

Key Takeaways:

1. NBC Imposed on Kerala

In 2023, the Centre set a borrowing cap for Kerala at 3% of its GSDP, impacting state finances and development efforts, sparking political and legal issues over state rights.

2. Article 293 and Borrowing Powers

Article 293 outlines state borrowing rights but requires Centre's consent if a state owes the central government, granting the Centre control over borrowing terms.

3. Historical Context

Article 293 originates from the Government of India Act, 1935, initially designed to limit central interference. Its inclusion without certain protections in the Constitution is now under scrutiny.

4. Need for Revision

Experts argue for guidelines ensuring transparent and fair borrowing decisions, and a commission similar to the Finance Commission to mediate loan approvals.

5. Supreme Court Case and Fiscal Autonomy

Kerala's case raises questions on fiscal decentralization and cooperative federalism, emphasizing balanced fiscal powers to prevent overly restrictive or arbitrary borrowing controls.

National minority: TH Editorial

Polity

Easy Explanation:

In India, religious and linguistic minorities have special rights to protect their educational institutions, but determining an institution's "minority character" is often debated. Recently, a seven-judge Constitution Bench in the Supreme Court, with a 4:3 majority, outlined the criteria or "indicia" to identify such institutions. This case is particularly relevant to Aligarh Muslim University (AMU), which was founded by Sir Syed Ahmad Khan in 1875 to promote education among Muslims and later received university status through legislation in 1920. The AMU's character as a minority institution has been questioned over the years, with a 1967 Supreme Court decision stating it was not a minority institution since it was created by law, not directly by the Muslim community. In 1981, amendments attempted to affirm its minority status, which is now contested by the central government.

Chief Justice D.Y. Chandrachud clarified that the fact that a university was given status through a law does not erase its minority character if it was originally established by a minority group for its benefit. He highlighted that factors like the founder's intent, purpose, and administrative structure are crucial for



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determining an institution's minority status. Justice Dipankar Datta, dissenting, held a different view, claiming AMU is not a minority institution.

If AMU is stripped of its minority status, it could become subject to quotas for Scheduled Castes, Scheduled Tribes, and Other Backward Classes. This situation raises questions about whether a university of national importance should retain its unique cultural identity and character or adapt to inclusive reservation policies. Some argue that removing AMU's minority status disregards its historical and cultural legacy.

Key Takeaways:

- 1. **Supreme Court Ruling on Minority Status** A seven-judge bench, by a 4:3 majority, outlined the criteria to identify a minority institution, impacting AMU's status.
- AMU's Unique Foundation and Character AMU, established by Sir Syed Ahmad Khan in 1875, was recognized as a university by law in 1920 but founded for Muslim students, reflecting a distinctive educational mission.
- 1981 Amendment and Legal Debate Amendments to the AMU Act in 1981 attempted to strengthen its minority character, a point now contested by the central government.
- 4. **Criteria for Minority Status** The judgment clarified that founding intent, purpose, and governance structure define minority status, not merely the existence of legislative recognition.
- Potential Reservation Impact
 Losing its minority tag could subject AMU to reservation policies, sparking debate on preserving the university's historical and cultural legacy while ensuring inclusivity.

Calling out exploitative labour dynamics on platforms: TH Editorial

Economy

Easy Explanation:

Recently, in a significant move, women gig workers across India organized a digital strike on Deepavali to protest exploitative labor practices. This strike, called by the Gig and Platform Services Workers Union (GIPSWU), India's first union for women gig workers, highlighted the severe working conditions faced by workers on digital platforms. These workers argue that the discounts offered by platform companies often come at the cost of fair wages, while the rapid growth of these platforms is fueled by exploiting gig workers and relying on investments without a sustainable profit model. This strike, termed a "Black Diwali," gained notable media attention and support from gig workers and other groups.

Women gig workers, often working in jobs traditionally assigned to women, face further exploitation through "auto-assigned" jobs that affect their job security and income based on ratings. Many members of GIPSWU include single mothers or survivors of domestic violence who seek employment on these platforms due to limited alternatives, making them vulnerable to low wages and exploitative conditions. While platforms promote flexible working hours and financial independence, women gig workers face unrealistic targets, added costs, and lack of security benefits, which undermine their financial independence.

The state has been criticized for allowing these companies to operate unchecked, and the absence of strong labor and privacy laws exacerbates issues for workers. This situation highlights how traditional



and digital patriarchies combine to economically exploit women, contradicting government campaigns aimed at women's empowerment. GIPSWU aims to continue building momentum for more sustainable policies, knowing that this grassroots movement could serve as an example for gig workers worldwide.

Key Takeaways:

1. Historic Digital Strike

Women gig workers in India led a digital strike on Deepavali, protesting exploitative practices and rallying for fair treatment.

- 2. **Exploitation for Platform Profits** Platform companies grow rapidly by underpaying workers while offering discounts, fueling expansion without ensuring worker welfare.
- Challenges in Job Security
 Many women workers face job insecurity tied to ratings and acceptance of "auto-assigned" jobs,
 leading to further exploitation.
- 4. False Promises of Flexibility

Platforms advertise flexible hours but often push workers to meet tough targets and cover costs, undermining the promised autonomy.

5. Push for Policy Change

GIPSWU aims to create sustainable changes, showing the power of grassroots organizing to inspire gig workers and advocate for fair policies worldwide.

Distant neighbours: TH editorial

International Relations

Easy Explanation:

The intense rivalry between India and Pakistan in cricket continues to face obstacles, with political tensions affecting the sport. Recently, India officially informed the International Cricket Council (ICC) that it would not be able to travel to Pakistan for the 2025 Champions Trophy, planned for February and March next year. This decision was anticipated due to the longstanding political issues between the two countries. India hasn't toured Pakistan since 2008, restricting their cricket interactions to ICC events held at neutral venues or in India.

Pakistan had hoped India's participation in the ICC World Cup in Ahmedabad in 2023 would pave the way for India to return the gesture by playing in Pakistan. There were even talks of India playing only in Lahore while staying in India. However, as in the 2023 Asia Cup, where India played its matches in Sri Lanka to avoid traveling to Pakistan, India now suggests holding its Champions Trophy matches in the UAE. With Amit Shah's son, Jay Shah, in the ICC chair as the BCCI Secretary, politics may have influenced this decision, although avoiding Pakistan tours has been India's stance since the Congress-led government era in 2014 after the 2008 Mumbai attacks.

Pakistan is disappointed by this decision, though a split tournament between Pakistan and the UAE remains an option. Despite improved security in Pakistan since the 2009 attack on the Sri Lankan team, India remains cautious. This ongoing freeze has kept top players, like Virat Kohli, from playing a Test match against Pakistan, a statistic unlikely to change anytime soon.

Key Takeaways:

- 1. India Withdraws from Pakistan Tour India officially told the ICC it won't travel to Pakistan for the 2025 Champions Trophy due to political issues.
- Long-standing Political Tensions
 India hasn't played in Pakistan since 2008, limiting matches to ICC events at neutral venues or in India.
- 3. **Proposal for UAE Venue** India may prefer to play its Champions Trophy games in the UAE, as seen in the 2023 Asia Cup.
- 4. Security Concerns in Pakistan Despite improved security since 2009, India remains cautious about playing in Pakistan.
- 5. **Missed Cricket Rivalries** Due to these restrictions, top Indian players haven't competed in a Test against Pakistan, a trend likely to continue.

On improving wind energy generation: TH Text&Context

Environment

Easy Explanation:

Tamil Nadu has long been at the forefront of wind energy in India, with wind turbines first installed in the state back in the 1980s. Many of these early turbines are now outdated, with limited capacity compared to modern turbines. To improve the efficiency and output of these older installations, the Tamil Nadu government introduced a policy in 2024 called the "Tamil Nadu Repowering, Refurbishment, and Life Extension Policy for Wind Power Projects." The goal is to either repower (completely replace) or refurbish (upgrade parts of) older wind turbines to generate more electricity.

However, wind energy producers in Tamil Nadu have opposed this policy, taking the matter to the Madras High Court, which granted a temporary halt on implementing the policy. These producers argue that while repowering is essential, the current policy lacks incentives and does not address practical challenges. Key concerns include high costs, land and space requirements, outdated infrastructure, and the lack of banking facilities (a system allowing them to store surplus energy for future use). Wind energy producers are asking for a policy that truly supports and encourages wind energy generation, rather than imposing restrictions that make repowering difficult and financially challenging.

Why Repowering is Important and How It Works

Repowering is a way to boost energy output by replacing older, smaller turbines with newer, highercapacity ones. For instance, newer turbines can generate more power because they are taller and more efficient, reaching stronger winds at higher altitudes. The National Institute of Wind Energy estimates that Tamil Nadu alone could add 7,000 MW of capacity by repowering old turbines.

However, installing new, larger turbines often requires more land and space between each turbine. Additionally, these upgrades need robust transmission infrastructure to manage the increased energy output. In some high-potential wind zones in Tamil Nadu, existing infrastructure is outdated, unable to support additional power, causing delays and inefficiencies in energy distribution.

Challenges Facing Wind Producers in Repowering

- 1. Land and Space Needs: New turbines are often taller and have higher capacity than older models. This requires more land and specific spacing between turbines for optimal efficiency, which can be costly and complicated in densely developed wind areas.
- 2. Lack of Energy Banking: Tamil Nadu's recent policy doesn't allow newer turbines to use banking facilities, which impacts financial stability for wind producers. Banking would let them store surplus energy during high-wind periods for later use, helping to balance costs and revenues.
- 3. **Financial Viability:** The policy does not provide financial support or incentives to help producers cover the high costs of upgrading infrastructure and replacing turbines. Without subsidies or incentives, repowering may not be profitable for many wind energy producers.
- 4. **Infrastructure Upgrades Needed:** Outdated energy transmission facilities cannot always handle the increased power output from new turbines, leading to bottlenecks. Upgrading infrastructure, like substations and power lines, is essential but has been delayed due to various factors.

Why Repowering is Important for Tamil Nadu's Energy Future

Despite these challenges, repowering could significantly increase Tamil Nadu's wind energy output, contributing more to India's renewable energy targets. If the state can address these concerns and support wind producers, it could increase wind energy production during peak seasons by up to 25%. This would make Tamil Nadu a model for sustainable energy production, showing how older infrastructure can be revitalized for modern renewable energy needs.

Key Takeaways:

- Tamil Nadu has a strong history in wind energy, but many turbines are outdated and less efficient.
- The government's new policy aims to encourage repowering, but wind energy producers have opposed it, citing issues that make repowering financially and practically challenging.
- Challenges include the need for more land and infrastructure upgrades, lack of banking facilities, and inadequate financial incentives.
- If effectively supported, repowering could increase Tamil Nadu's wind energy output significantly, contributing more to India's renewable energy goals.

The work of care: IE Editorial

Sociology

Easy Explanation:

Diwali in Delhi is increasingly about navigating the challenges of pollution, leading some people to seek temporary relief or "pollution holidays" outside the city. Meanwhile, many who stay behind find themselves caring for sick family members or encountering stories of kindness in hospitals, with strangers offering help and health professionals doing their best.

Amidst this, there's a reflection on "care" as a deeper part of our lives. Celebrating caring acts—helping others emotionally or physically—is as vital as consumer spending around festivals. Recently, the UN highlighted the importance of care work, which is often unpaid and mostly done by women. Although essential, care work rarely receives adequate recognition or compensation, despite its substantial contribution to the economy and society.

Our society and economy tend to emphasize consumerism and competition. But an economy focused on care would provide better support for those involved in caregiving, like ASHA and Anganwadi workers.



Additionally, it would promote policies such as adequate social pensions, quality childcare, and incentives for businesses that support care work.

There's a need for a societal shift in how we value care. Renowned scholar Nel Noddings emphasized that caregiving teaches us empathy and could inspire us to care about broader issues like social justice. True care isn't just about transactions; it's about relationships. While policies banning firecrackers may try to reduce pollution, a deeper change would come from fostering an intrinsic value for the common good.

This vision calls for men to be more involved in caregiving and for a curriculum that encourages empathy in schools. This isn't just about economic growth but about nurturing a society driven by love, compassion, and connections—one where small, meaningful acts of care make a big difference.

Key Takeaways:

- Diwali in Delhi brings attention to pollution and a need for better caregiving structures.
- The UN recently marked the importance of care work, highlighting its economic and social value, especially for women.
- An economy focused on care would improve support for caregivers and policies like pensions and childcare.
- A societal shift is needed to value care work more genuinely, moving beyond consumerism and transactional relationships.
- Men should be encouraged to participate more in caregiving, fostering empathy and compassion from a young age.

Fixing a leaky PDS: IE Ideas

Sociology

Easy Explanation:

The article discusses the limitations and inefficiencies of India's Public Distribution System (PDS), which provides subsidized or free food grains to 57% of the population. The authors argue that while food subsidies aim to support the poor, a significant portion of food grains (about 28%) does not reach the intended beneficiaries due to leakages and inefficiencies in the system, resulting in a massive financial loss for the government.

They suggest that subsidies should be more targeted, providing free food only to the most impoverished (those below the extreme poverty line) while others pay a portion of the cost. This approach could save funds that can be redirected toward other important areas like agricultural development and infrastructure. Additionally, they highlight a need for more nutritional support, particularly for children, who continue to face malnutrition issues. The authors propose transforming some ration shops into "nutrition hubs" to offer a variety of nutritious foods like pulses, eggs, and fruits, which could be accessed using digital food coupons.

Key Takeaways:

Current Food Subsidy System:

- India's PDS currently covers about 57% of the population under schemes like Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY), providing free food grains.
- The authors question the broad scope of the subsidy, suggesting that only the most impoverished should receive free food, while others could pay a small portion.

• Issues with Leakages in PDS:

- About 28% of the food grains distributed through PDS do not reach beneficiaries due to "leakages" or losses in the system.
- This leakage leads to an estimated annual loss of ₹69,108 crore for the government.
- Although improvements like Point-of-Sale (PoS) machines have reduced leakages, they remain significant, highlighting the need for better monitoring and efficiency.

• Suggested Reforms to the PDS:

- **Targeted Subsidies:** Limit free food distribution to the extremely poor (e.g., Antyodaya category) and introduce minimal charges for those above the extreme poverty line to save resources.
- **Direct Cash Transfers:** Consider transferring cash directly to beneficiary accounts to reduce leakages.
- Digital Food Coupons for Nutritional Variety: Create "nutrition hubs" at some ration shops to offer a range of nutritious foods such as pulses, eggs, and fruits. Beneficiaries can redeem digital food coupons here for a balanced diet.
- Addressing Nutritional Security:
 - **Malnutrition Statistics:** Despite the food subsidy, malnutrition among children under five remains high (35.5% stunted, 19.3% wasted, and 32.1% underweight).
 - **Focus on Diverse Diets:** The PDS should not just provide rice and wheat but expand to include diverse foods that meet nutritional needs.

Private property and the 'common good': IE Explained

Polity

Easy Explanation:

The Supreme Court's recent decision in the case *Property Owners Association v. State of Maharashtra* clarified key aspects of the Constitution related to property rights and the government's power to manage resources for the community. This case involved a Maharashtra law that allowed the state to acquire certain old private buildings in Mumbai for public housing. The court examined two main points:

- Status of Article 31C: Article 31C was added to support state policies that promote social equality. It was partially struck down in past cases, raising questions about whether it still exists. The Supreme Court clarified that the core part of Article 31C remains valid. This part ensures that laws created to support policies under Article 39(b) (like community resource distribution) cannot be challenged as unconstitutional.
- 2. Interpretation of Article 39(b): Article 39(b) allows the government to manage "material resources of the community" for the common good. The court debated whether this included all private property. The majority held that not all private property should automatically fall under this definition. Instead, they set criteria to decide when private property can be considered a community resource. These criteria consider the type, scarcity, impact, and social importance of the resource.

Justice Dhulia dissented, arguing that private property, in general, should be available for the state's redistribution policies to reduce inequality. The court's decision reflects a balance between respecting private ownership and the need for resources that benefit the public.

Key Takeaways:

• Background of Case:

- Supreme Court reviewed a Maharashtra law for acquiring private properties in poor condition to build public housing.
- Main issues: Validity of Article 31C and the scope of "material resources" in Article 39(b).
- Article 31C:
 - **Purpose**: Protects laws aimed at fulfilling certain social goals from being challenged as unconstitutional.
 - **Current Status**: Despite earlier amendments being struck down, the essential part of Article 31C (supporting Article 39(b) and (c) policies) remains in force.
 - **Court's Decision**: The original part of Article 31C (protecting laws tied to Articles 39(b) and (c)) is valid.
- Article 39(b):
 - Interpretation of "Material Resources of the Community": Initially interpreted broadly to include all types of property, both public and private.
 - **Court's Ruling**: Not all private property qualifies. Only those that meet certain criteria can be deemed community resources.
 - Four Criteria for Classification:
 - 1. Nature of the Resource: Its specific characteristics and use.
 - 2. Community Impact: How it affects public welfare.
 - 3. Scarcity: Availability and limited access.
 - 4. Social Consequences: Effects of concentration in private hands.
 - Majority vs. Dissent: Majority limits Article 39(b) scope; dissent views all private resources as potentially for public use.
- Implications of Decision:
 - Reflects a balanced approach, acknowledging private property rights while allowing public access when justified.
 - Sets a precedent for future cases involving state acquisition and public welfare policies.

WHY INDIA HAS LAUNCHED PROJECT TO MONITOR ANIMAL HEALTH: IE Explained

Science

Easy Explanation:

The Indian government recently launched a new project, *Animal Health Security Strengthening in India for Pandemic Preparedness and Response*, to help the country better handle animal health threats that could lead to future pandemics. Supported by a fund established by G20 countries in 2022, the project aims to prevent diseases from spreading from animals to humans, thus protecting public health, nutrition, and livelihoods. India, with a large population of livestock and poultry, needs to focus on animal health as many infectious diseases in humans come from animals.

The project, which will receive \$25 million from the Pandemic Fund, will be carried out with help from the Asian Development Bank, the World Bank, and the Food and Agriculture Organisation. Key goals include boosting laboratory and vaccine facilities, improving surveillance, enhancing training, strengthening data systems, and filling institutional capacity gaps at national and regional levels.

Key Takeaways:

- Project Overview:
 - Name: Animal Health Security Strengthening in India for Pandemic Preparedness and Response

- Launched by: Union Minister Rajiv Ranjan Singh
- Funded by: Pandemic Fund (G20 initiative), with \$25 million granted to India.
- Implementing Partners: Asian Development Bank, World Bank, and Food and Agriculture Organisation.
- Timeline: Expected completion by August 2026.

• Purpose of the Project:

- To improve India's ability to prevent, detect, and respond to animal health threats that may lead to future pandemics.
- To reduce the risk of zoonotic diseases (those that spread from animals to humans), which can impact health, food security, and livelihoods.

• Why It's Needed:

- Majority of recent global health emergencies have been zoonotic (originating from animals), including COVID-19.
- Two-thirds of infectious diseases in humans come from animals, highlighting the need for strong animal health security.
- India's large livestock and poultry populations require proactive management to prevent disease outbreaks.

Expected Outcomes:

- **Laboratory and Vaccine Infrastructure**: Expand laboratory systems and increase vaccine production capabilities.
- Surveillance and Early Warning: Strengthen systems for disease monitoring and early detection.
- **Human Resource Development**: Improve training and skills for personnel involved in animal health.
- **Data Systems and Risk Management**: Enhance data systems for analytics, risk assessment, and communication.
- **Institutional Capacity Building**: Address gaps in institutional capabilities at both national and regional levels for a more coordinated response.

Elephant deaths in Bandhavgarh: when a fungus attack turns millets into poison: IE Explained

Environment

Easy Explanation:

A recent report confirmed that three elephants died in Madhya Pradesh's Bandhavgarh Tiger Reserve after eating kodo millet infected by a toxic fungus. This millet, commonly grown in India, can become harmful when infected with fungi that release toxins like cyclopiazonic acid, which is dangerous to animals and humans. The fungus tends to infect kodo millet under specific conditions, especially when there is moisture during harvest. Toxic kodo millet can cause severe health issues, affecting the nervous and cardiovascular systems, and in some cases, may lead to death. For example, historical cases have shown similar poisoning in animals and even humans, although recovery is often possible for people if treated promptly.

Detecting this fungal infection in millet is difficult without chemical tests, and researchers are exploring methods to prevent such infections, including using natural agents to limit fungal growth, practicing good harvesting and storage methods, and avoiding moisture exposure to the harvested grains.

Key Takeaways:

• Kodo Millet Basics:

- Origin: Indigenous to India and grown in several Indian states.
- Properties: Hardy, drought-tolerant, gluten-free, and rich in nutrients.

• Toxicity and Fungal Infection:

- Fungal Risk: Prone to fungal infection, especially from cyclopiazonic acid-producing fungi.
- Conditions: Fungal growth is encouraged by moisture during the maturing and harvesting stages.

• Impact of Toxic Kodo Millet:

- Animal Health: Affects nervous and cardiovascular systems, can cause vomiting, tremors, and even death in severe cases.
- Historical Cases: Notable cases from the 1920s and 1930s documented similar symptoms in humans and animals.
- Detection and Prevention:
 - Detection Methods: Chemical trace analysis, chromatographic methods, lateral flow assays, and biosensors.
 - Prevention Strategies: Use of biocontrol agents to minimize fungal growth, good agricultural practices, post-harvest sorting and airtight storage, and avoiding moisture exposure.
- Preventative Actions for Farmers:
 - Post-Harvest Care: Avoid rain exposure and discontinue moistening during threshing.
 - Infection Control: Remove infected grains to prevent disease spread and follow storage best practices.

12th November 2024

THE WOMEN WHO LEAD US: IE Editorial

Sociology

Easy Explanation:

The question of women's representation in politics has become crucial worldwide. A democracy can't be complete without women actively participating in governance. In recent years, women in India have moved beyond symbolic roles and have become influential in shaping policies, like the Sukanya Samriddhi Yojana and Beti Bachao Beti Padhao, which support women's empowerment and economic growth. India's heritage celebrates equality, as seen in concepts like *Ardhanarishwar*, and modern India was among the first nations to grant equal voting rights to women.

Today, women in India not only represent their gender but also contribute meaningfully to decisionmaking. When women lead, they bring unique perspectives, especially on issues of gender equality. True empowerment means giving women real authority and space in decision-making, not just tokens or freebies. The recent Nari Shakti Vandan Adhiniyam Bill aims to enhance women's role in politics, ensuring that women can take on leadership roles and shape a more inclusive and democratic future.

Key Takeaways:

• Significance of Women's Representation:

- Women's roles in leadership impact policies, especially on gender equality.
- India's Progress in Women-Centric Policies:
 - Policies like Sukanya Samriddhi Yojana and Beti Bachao Beti Padhao empower women.
 - These programs focus on skill-building, employability, and financial independence for women.
- India's Cultural Heritage and Gender Equality:
 - Concept of Ardhanarishwar highlights gender balance in Indian culture.
 - Pioneering efforts in women's voting rights and contributions to the Constitution reflect India's early commitment to gender equality.
- Role of Women in Policy and Decision-Making:
 - Women's leadership influences policy priorities and solution types.
 - Their participation closes gaps in representation and supports diverse, inclusive policymaking.
- Empowerment Beyond Freebies:
 - True empowerment involves authority, participation, and representation in decision-making.
 - The Nari Shakti Vandan Adhiniyam Bill marks progress toward giving women real power in governance, enhancing democratic engagement.

Why Delhi must reach out to Jakarta: IE Ideas

International Relations

Easy Explanation:

India and Indonesia share a deep historical and cultural connection, but India has not prioritized its relationship with its eastern neighbor in recent decades. Recently, Indonesia experienced a significant leadership change with Prabowo Subianto taking over as President, supported by Joko Widodo's son as Vice President. Prabowo's first visit to China, despite recent tensions with Chinese intrusions in Indonesian waters, highlights Indonesia's strategic balancing act. India needs to strengthen its relationship with Indonesia to prevent it from falling under China's influence, much like other regional countries.

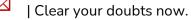
Indonesia's past is marked by a unique mix of alliances, with leaders navigating through anti-colonial struggles, Cold War politics, and economic challenges. While leaders like Sukarno promoted non-alignment alongside India, subsequent regimes saw shifts in alliances, especially with the United States. Prabowo's family is deeply embedded in Indonesian politics, with his father serving under both Sukarno and Suharto, while Prabowo himself held influential military positions during Suharto's era.

Today, Indonesia's economy, rich in resources like coal, palm oil, and minerals crucial for electric vehicle batteries, aligns with India's growing manufacturing sector. Strengthening ties can provide economic benefits, while historical and cultural links, like the *Arjuna Wijaya* statue in Jakarta, remind both nations of shared heritage. For India, engaging with Indonesia, ASEAN's largest country, is essential to ensure that its influence grows in the region and counters China's expanding presence.

Key Takeaways:

• India-Indonesia Relationship:

- Despite historical and cultural ties, India has under-prioritized Indonesia, creating opportunities for Chinese influence.
- Strengthening diplomatic and economic relations can prevent Indonesia from aligning too closely with China.



• Leadership Change in Indonesia:

- Prabowo Subianto, from a prominent political family, recently became President.
- His ties with China and a cautious relationship with the U.S. highlight Indonesia's strategic balancing.

• Historical Connections:

- Biju Patnaik's rescue mission during Indonesia's independence struggle showed India's support.
- Shared anti-colonial stances, like those at the Bandung Conference, established early solidarity between India and Indonesia.

• Economic Complementarity:

- Indonesia's exports (coal, palm oil, nickel) complement India's manufacturing needs.
- Collaboration between Indian services and Indonesian industries can reduce costs and enhance trade ties.

• Cultural Links:

- The Arjuna Wijaya statue in Jakarta symbolizes deep civilizational connections between India and Indonesia.
- Strengthening these connections supports both cultural diplomacy and regional influence.

• Strategic Importance of Engagement:

- Engaging Indonesia actively is crucial for India's broader strategy to counter China's influence in the region.
- As ASEAN's largest nation, Indonesia's partnership can bolster regional stability and enhance India's role in Southeast Asia.

Canada shuts visa fast track: options for Indian students: IE Explained

International Relations

Easy Explanation:

Canada has decided to close its fast-track Student Direct Stream (SDS) program for international students from countries including India, China, and Pakistan. The SDS program offered quicker visa processing for students meeting certain requirements, like paying a year's tuition upfront and having a financial security certificate. With the SDS route closing, Indian students can still apply for Canadian student visas through the regular application process, which is now more flexible and accessible. In this process, students don't need to pay a full year's tuition in advance and can show lower financial support, making it easier for many to apply.

Students still need to meet requirements like English language proficiency, but they have more options and flexibility with their scores. Canada remains committed to welcoming students, with a goal of issuing 305,000 study visas annually until 2027. A strong academic background and a clear study plan remain essential to securing a visa, even through the regular route.

Key Takeaways:

- SDS Program Closure:
 - Canada's SDS program for students from 14 countries, including India, ends on November
 9.
 - This closure affects fast-track visa processing, requiring students to use the regular visa application route.
- Regular Visa Route:

- The non-SDS visa route is now more flexible:
 - Students only need to pay six months of tuition upfront instead of a full year.
 - Proof of financial support is lower, making it more affordable.
- English Language Proficiency:
 - The SDS required specific IELTS/PTE scores.
 - In the regular process, students have flexibility; even slightly lower scores may be accepted if other qualifications are strong.
- Financial and Academic Requirements:
 - While less upfront payment is needed, students must show they can support themselves financially (approx. Rs 5-6 lakh).
 - Visa approval depends on a strong academic profile and a clear study plan.
- Canada's Immigration Policies:
 - Canada aims to issue 305,000 study visas annually until 2027.
 - A strong Letter of Acceptance from a reputable college strengthens the visa application.

This change makes studying in Canada more accessible for students who may have found the SDS program's financial requirements too high, though a strong profile remains essential for visa success.

LIGNOSAT: THE WORLD'S FIRST SATELLITE MADE OF WOOD: IE Explained

Science

Easy Explanation:

Japan has launched the world's first wooden satellite, named LignoSat, using a SpaceX rocket from the Kennedy Space Center in the U.S. This satellite, created by Kyoto University and Sumitomo Forestry, is designed to test if wood can withstand the harsh conditions of space. LignoSat will orbit Earth from the International Space Station (ISS) and then burn up upon reentry after six months, releasing only water vapor and carbon dioxide rather than the harmful byproducts of metal satellites.

LignoSat's structure is made from magnolia wood, chosen for its strength and resistance to cracking. This wood was crafted using traditional Japanese techniques without screws or glue. Researchers believe that if successful, wood could be used as an environmentally friendly material for space structures, possibly even in future habitats on the Moon or Mars.

Key Takeaways:

- LignoSat Launch:
 - World's first wooden satellite, LignoSat, launched by Japan's Kyoto University and Sumitomo Forestry.
 - Intended to test wood's durability as a space material and explore eco-friendly alternatives for space structures.
- Satellite Design:
 - LignoSat weighs 900 grams, about the size of a coffee mug, made from traditional Japanese carpentry with no screws or glue.
 - It has been crafted from magnolia wood, chosen for its strength, resistance to cracking, and lightweight properties.
- Environmental Benefits:
 - Wooden satellites burn up in Earth's atmosphere without releasing harmful substances, unlike metal satellites that release aluminum oxides.
 - o Burns to produce water vapor and carbon dioxide, offering a cleaner alternative.



- If wood proves to be durable in space, it could be used for constructing sustainable habitats on the Moon, Mars, and other destinations.
- Wood as a renewable resource could support long-term space habitats and reduce dependence on Earth-based materials.

This innovative approach in space technology could pave the way for more sustainable space exploration in the future.

The LAC agreement, the détentes and the questions: TH Editorial

International Relations

Easy Explanation:

In a recent unexpected development, India and China signaled a desire to improve their strained relationship. This shift was marked by a meeting between Prime Minister Narendra Modi and Chinese President Xi Jinping during the BRICS Summit held in Kazan, followed by a symbolic exchange of sweets between soldiers from both nations along the Line of Actual Control (LAC) — the contested border region where tensions have run high since 2020. This détente is seen as an attempt to move beyond recent border clashes and potentially re-establish more peaceful relations.

Despite these positive gestures, many unresolved issues persist. For example, while there is some progress in disengaging troops at conflict points like Depsang and Demchok, both countries still need to agree on troop de-escalation and a clear plan for disengaging forces across other regions. Although the government has hinted at "new patrolling arrangements," it hasn't fully explained what this entails or whether it changes previous border agreements. Reports suggest that China may have gained more access in areas like Yangtse in Arunachal Pradesh, which has raised questions among security analysts.

The tensions that initially flared up in 2020 were unprecedented, with soldiers engaging in brutal handto-hand combat at places like Galwan Valley, leading to casualties on both sides. Although India initially denied any territory loss, the creation of "buffer zones" now suggests that a full return to pre-2020 status is unlikely without major renegotiations. The lack of transparency around these buffer zones and the nature of Chinese troop positions has led to concerns about how these arrangements may affect India's long-term security along the LAC.

Experts have proposed several theories to explain China's sudden escalation in 2020. One explanation points to China's longstanding goal, as stated by President Xi, to assert control over what it claims as "every inch" of its territory, which has led to aggressive stances across regions, including Taiwan, the South China Sea, and the Himalayas. Another theory is that China wanted to remind India of its geopolitical leverage along the shared 3,500 km border, especially as India strengthens its alliances, such as with the United States, in maritime areas. Increased infrastructure development by India near the border, like the construction of roads and airstrips, may have further fueled China's actions. Additionally, some suggest that India's political moves in 2019 to change the status of Jammu and Kashmir — including the assertion to reclaim Aksai Chin — might have triggered China's forceful response.

Recently, several significant steps have been taken within India that may have influenced the timing of this détente. These include preparations for elections in Jammu and Kashmir, ongoing discussions on granting Ladakh more autonomy, and a renewed diplomatic approach toward Pakistan through the Shanghai Cooperation Organization (SCO). These moves, coupled with China's own strategic goals, could indicate a broader push toward regional stability.



For India, restoring peace with China is vital, but it also requires a more transparent approach from the government. Clear communication with the public about the status of border negotiations, troop arrangements, and long-term security plans would help foster trust and understanding, especially given the highly sensitive nature of this border dispute and its impact on national security. In a democracy like India, engaging citizens in these crucial matters is not only beneficial but essential to ensure broad support for such a complex and impactful foreign policy issue.

Key Takeaways:

- India-China Relations Improvement:
 - India and China recently indicated a détente, with high-level meetings and symbolic gestures like soldiers exchanging sweets.
- Unresolved Issues:
 - Troop de-escalation and verification on the ground are needed; new patrolling arrangements remain unclear.
 - Buffer zones created post-2020 tensions may prevent a full return to the prior status at the LAC.
- Potential Reasons for 2020 Border Tensions:
 - Scholars suggest that China's actions might be related to its broad territorial claims, India's partnership with the U.S., and India's infrastructure development near the LAC.
 - India's 2019 political changes in Jammu and Kashmir, including a statement to reclaim Aksai Chin, might have also influenced China's response.

• Importance of Transparency:

 India's government is encouraged to be transparent about its border strategy, given the public sensitivity and long-term consequences of these issues.

Giving shape to India's carbon credit mechanism: TH Editorial

Environment

Easy Explanation:

The upcoming Conference of Parties-29 (COP-29) in Baku will focus heavily on climate finance, especially around carbon credits — a system where countries and companies can buy credits to offset their carbon emissions. For India, this is a key area of discussion, as the country recently updated its climate goals (Nationally Determined Contributions or NDCs) and has set up a domestic carbon credit market to meet these targets. India's new carbon market aims to align its economic and climate goals, but the challenge lies in designing a system that is effective, credible, and fair. India can learn from other countries' experiences with carbon markets to create a framework that works well in the long term.

Challenges:

- Integrity of Carbon Credits: The credibility of a carbon market depends on the quality of the carbon credits issued. Globally, there have been issues where companies exaggerated the positive impacts of their projects, particularly in the voluntary carbon market (VCM). This has led to greenwashing — making false claims of environmental benefits. India's Green Credit Program (GCP) faces similar risks, so strict measures are needed to ensure projects genuinely reduce emissions rather than just maintain the status quo.
 - **Ensuring Credibility:** India must have clear protocols to verify and authenticate carbon credits to avoid greenwashing. One idea is to create a national registry to track all carbon credits, preventing double-counting or misuse.

- Independent Verification: Third-party verifiers could be involved to check the actual impact of carbon reduction projects. By following the standards of global entities like the International Emissions Trading Association (IETA) and Gold Standard, India can enhance trust in its carbon market and attract investors.
- 2. Aligning with Global Standards: To participate in international carbon markets, India's system must align with Article 6 of the Paris Agreement, which outlines the rules for international carbon trading. Article 6 allows countries to meet their climate goals through emissions reductions achieved in other countries (called Internationally Transferred Mitigation Outcomes, or ITMOs). However, it requires strict measures to prevent double-counting, where the same reduction is counted by both the buyer and seller country.
 - **Preventing Double Counting:** India must adopt transparent systems to track emissions reductions and carbon credit transfers accurately. This ensures that credits reflect real environmental benefits.
 - **Environmental Integrity:** India's carbon market must adhere to high governance standards, as outlined by the World Bank's report on Article 6 mechanisms, to maintain strong environmental integrity. This includes ensuring that low-quality carbon credits don't enter the system, which would dilute the effectiveness of global climate commitments.
- 3. **Focus on Transparency and Disclosure:** Transparency is essential to the success of any carbon market. India's carbon market must have a system where all project details, including the methods for reducing emissions, verification reports, and benchmarks, are publicly available on an accessible platform.
 - **Public Disclosure of Project Details:** Making details about each project's carbon reduction strategies and third-party verification reports public ensures accountability.
 - Regular Audits and Oversight: Independent audits conducted by bodies approved by the Bureau of Energy Efficiency (BEE) can help verify that projects meet sustainability criteria. Real-time tracking of credit transactions can further boost accountability.

India's carbon market is still in its early stages, so strict rules and alignment with international standards are critical. By focusing on transparency and integrity, India's carbon credit system can develop into a mature market that supports climate finance and sustainable development.

Key Takeaways:

- Purpose of COP-29 Discussions:
 - Focus on climate finance, particularly carbon credits.
 - India's aim is to align its climate goals with economic objectives through a domestic carbon market.
- Integrity of Carbon Credits:
 - \circ $\;$ Ensure carbon credits are genuine and not exaggerated.
 - \circ $\,$ Create a national registry to track carbon credits and avoid double-counting.
 - Use independent verifiers to assess project impact and additionality.

• Alignment with Global Standards:

- India must align with Article 6 of the Paris Agreement.
- $_{\odot}$ $\,$ Establish systems to prevent double-counting of emissions reductions.
- \circ $\;$ Follow high governance standards to avoid low-quality carbon credits in the market.
- Importance of Transparency:
 - Publicly disclose project details and verification reports for accountability.
 - Conduct regular audits through BEE-approved bodies.
 - Implement real-time tracking of transactions for a reliable carbon market.
- Long-term Goals:



- Build a credible and transparent carbon market.
- Support sustainable development and contribute effectively to global climate goals.

The underbelly of Europe's digital euro: TH Text&Context

Economy

Easy Explanation:

The European Central Bank (ECB) has been working on introducing a digital currency called the "digital euro." This currency would be issued directly by the ECB and aims to provide an alternative to existing digital payment methods like credit cards, bank transfers, and even cryptocurrencies. People could use the digital euro to make payments directly from a digital wallet on their smartphone or computer, eliminating the need for intermediaries like banks or payment processors. This system is intended to make transactions more efficient, accessible, and even anonymous.

Unlike other digital payment methods, the digital euro would function like cash in digital form, where people don't need to rely on banks or private payment providers. This shift is seen as a way for the EU to strengthen its sovereignty over payments and avoid dependency on foreign companies, mainly from the U.S., that currently dominate digital payment systems.

The ECB emphasizes that the digital euro could make financial transactions cheaper and quicker, including small payments (micropayments) that are usually costly with traditional systems. Additionally, the digital euro could offer offline payment options while ensuring some degree of privacy. However, some people are concerned that this might increase surveillance on consumer spending, although the ECB claims the currency is designed to protect privacy.

In short, the ECB's digital euro is part of a larger strategy to improve the EU's financial independence, make payments more efficient, and provide a state-backed digital currency alternative to private-sector options.

Key Takeaways:

Purpose and Overview

- **Objective:** The ECB's digital euro aims to be a government-backed digital currency alternative to traditional cashless payments.
- **Direct Issuance:** Unlike other digital payment methods, the digital euro is directly issued and managed by the ECB, not private banks or companies.

Differences from Other Digital Payments

- **No Intermediaries:** Allows payments directly between users without involving banks or payment providers.
- **Digital Cash Equivalent:** Functions similarly to cash but in digital form, with transactions possible even offline.
- **Enhanced Privacy:** Designed to offer a level of anonymity similar to cash transactions, although this depends on specific technical implementation.

Economic and Strategic Implications

- **Euro Sovereignty:** Strengthens Europe's financial independence by reducing reliance on foreignowned payment providers, primarily U.S. firms.
- **Competitiveness:** Expected to bolster the euro's role in the global digital economy, making it a widely accepted digital currency for transactions both within and outside the EU.

Technical Features and Advantages

- **Supports Micropayments:** A cost-effective way to make small payments, often costly with current bank systems.
- **Offline Payments Possible:** Ensures flexibility by allowing payments even without internet access, maintaining usability in various scenarios.

Political and Economic Goals

- **EU's Digital Competitiveness:** Aims to secure Europe's position in the digital economy by offering a state-controlled payment option.
- **Global Positioning of the Euro:** The ECB intends for the digital euro to compete globally, potentially challenging non-European payment platforms and expanding the euro's reach in international trade.

Considerations and Challenges

- **Privacy vs. Surveillance:** While designed for privacy, concerns remain over potential consumer data tracking.
- **Citizen Impact:** ECB's focus is on economic strategy rather than solely simplifying life for consumers, emphasizing the broader implications for EU economic sovereignty over consumer benefits.

13th November 2024

Debating the 'healthy longevity initiative': TH Editorial

Science

Easy Explanation:

The World Bank recently released a report titled *Unlocking the Power of Healthy Longevity*, which addresses the health challenges posed by an aging population, particularly in low- and middle-income countries (LMICs) like India. This demographic shift means that non-communicable diseases (NCDs) such as heart disease, diabetes, and cancer are becoming leading causes of death. These diseases are straining healthcare systems, as more people will need ongoing treatment and long-term care.

The report suggests that if LMICs can improve health measures significantly, millions of deaths could be prevented each year by 2050. This is achievable by promoting "healthy longevity" — a concept that involves keeping people healthy and active as they age. However, achieving this in countries like India is challenging due to factors such as inadequate healthcare access, costly treatments, and a lack of awareness about early detection of NCDs.

In India, an aging population and rising cases of NCDs are creating significant social and economic challenges. Many elderly people face high healthcare costs and are often left impoverished by medical



expenses. While schemes like Ayushman Bharat aim to provide health insurance to vulnerable populations, there are issues with funding, eligibility, and corruption, which limit the scheme's effectiveness. Additionally, private hospitals often inflate treatment prices, making healthcare unaffordable for many.

Preventing and managing NCDs in India requires policy reforms, better healthcare infrastructure, and public awareness about healthy lifestyles. Promoting healthier diets, physical activity, and reducing tobacco and alcohol use could help, but implementing these changes remains a challenge.

Key Takeaways:

World Bank Report and Healthy Longevity

- World Bank's Vision: The report Unlocking the Power of Healthy Longevity focuses on addressing aging and non-communicable diseases (NCDs) to improve health globally, especially in LMICs.
- Healthy Longevity Goals: Aims to reduce avoidable deaths and maintain better physical and mental health in older adults.

Challenges in India's Healthcare System

- **Rising Elderly Population:** India's elderly population is growing rapidly, leading to a high prevalence of NCDs such as heart disease and diabetes.
- Healthcare Gaps: Inadequate healthcare access, high costs, and reliance on private hospitals with inflated pricing burden families financially.

Burden of Non-Communicable Diseases (NCDs)

- Leading Causes of Death: NCDs now account for a majority of deaths in India, with cardiovascular diseases, cancer, respiratory issues, and diabetes as the main contributors.
- Contributing Factors: Sedentary lifestyles, unhealthy diets, tobacco, and alcohol use increase NCD risks.

Impact of Social Security and Insurance Schemes

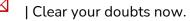
- **Ayushman Bharat Scheme:** Provides health insurance to the bottom 40% of households, but suffers from funding issues, complex eligibility, and reported corruption.
- Limited Impact: Despite insurance schemes, many people still face high out-of-pocket expenses due to system inefficiencies.

Challenges in Lifestyle and Preventive Measures

- **Unhealthy Lifestyles:** Diets high in refined grains and sugars, low physical activity, and obesity contribute to the rise of NCDs.
- **Need for Behavioral Changes:** Efforts like promoting physical activity, healthier diets, and reducing tobacco use are necessary for long-term health benefits.

Policy and Regulatory Recommendations

• **Supreme Court's Role:** The Court has directed the government to regulate hospital pricing to make healthcare more affordable.



• **Taxation on Unhealthy Products:** Increasing taxes on unhealthy foods and tobacco could help reduce NCD prevalence.

Stop the free fall: TH Editorial

International Relations

Easy Explanation:

The recent diplomatic tensions between India and Canada have created significant challenges for people connected to both countries. This rift began when Canada publicly suggested that Indian officials were involved in the 2023 murder of Hardeep Singh Nijjar, a Khalistan activist. The situation worsened with additional allegations from the U.S. about threats against another activist, Gurpatwant Singh Pannun. The tension escalated when a consular camp organized by the Indian mission at a temple in Brampton, Canada, was disrupted by Khalistan activists. Following this, clashes broke out when a Hindu group held a protest, leading both Indian Prime Minister Narendra Modi and Canadian Prime Minister Justin Trudeau to condemn the violence.

The row affects approximately 1.9 million people of Indian origin living in Canada, many of whom have strong family and cultural ties to India. India and Canada have generally maintained good economic relations, with trade valued at around \$19 billion, but this diplomatic strain has halted discussions on a potential trade agreement. Visa restrictions imposed by both countries may impact travel and education opportunities, particularly for Indian students, given Canada's recent policies limiting immigration. To preserve people-to-people connections and avoid further disruptions, both governments need to protect diplomatic operations and promote peaceful engagement within their diverse communities.

Key Takeaways:

- **Diplomatic Tensions Begin** Canada's public statement on India's involvement in Khalistan activist Nijjar's murder has strained India-Canada relations.
- Escalation of Violence

A consular camp at a Brampton temple was disrupted by Khalistan activists, followed by a violent protest from a Hindu group, leading to strong condemnations from both leaders.

Impact on Indian Diaspora
 With 1.9 million people of Indian origin in Canada, the diplomatic row affects a large community that relies on consular services and maintains ties with India.

• Economic Relations at Risk India-Canada trade, valued at \$19 billion, is affected as trade negotiations stall. Continued disruptions could impact the flow of goods, services, and visa issuance.

- Student and Immigration Restrictions Canada's new visa policies may impact Indian students and immigrants, adding to the strain in bilateral ties.
- Importance of Maintaining Peaceful Engagement
 - To avoid further rifts, both countries must protect their diplomats and ensure that diaspora politics does not fuel communal divides or disrupt essential services.

A less global world: IE Editorial

International Relations

| Clear your doubts now.

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An unrealised gender dividend: IE Ideas

Sociology

Easy Explanation:

Despite rising education levels and delayed marriage, young Indian women's participation in wage-based work hasn't significantly increased. Traditionally, restrictive social norms were blamed for this trend, suggesting that societal attitudes hinder women's employment. However, data from the India Human Development Survey (IHDS) reveals that social norms and gender roles are shifting in India, with families increasingly supporting women's aspirations.



The IHDS shows that from 2011 to 2024, the percentage of young women with higher education has risen sharply, and many now have a say in marriage decisions. More women feel comfortable traveling alone, joining self-help groups, and even engaging in local politics. But in terms of job opportunities, this progress hasn't translated into higher participation in wage labor. While many women express a desire to work, jobs that match their skills and preferences remain limited.

Women's work under MGNREGA (a government employment scheme) shows that when given equal pay, women actively seek employment, even in physically demanding roles. This indicates that the lack of jobs—not merely social norms—is a significant barrier. The report suggests that India must now focus on creating suitable job opportunities to help women contribute to the economy.

Key Takeaways:

- Shifts in Education and Marriage
 - Education for women has increased, with over 50% completing high school and 26% holding college degrees by 2022-24.
 - The age of marriage has also shifted, with fewer young women married, dropping from 76% in 2011-12 to 66% in 2022-24.
- Increased Autonomy in Personal Decisions
 - More women have input in marriage choices (52% in 2022 vs. 42% in 2012) and meet their future spouses before marriage (42% in 2022 vs. 30% in 2011).
- Shifts in Gender Norms and Independence
 - Preferences for sons have declined, with only 12% favoring sons over daughters by 2022, down from 23% in 2012.
 - Women's comfort with independent travel has improved, with 54% feeling comfortable traveling short distances alone in 2022.
- Economic Participation: Wage Work Stagnation
 - Participation in wage labor among women aged 20-29 dropped from 18% in 2012 to 14% in 2022.
 - Women continue to work in family farms, and more women than men now work under MGNREGA for equal pay.
- Desire for Suitable Employment
 - 80% of women would like to work if suitable jobs were available, and 72% feel their families would support them in doing so.
- Call for Action
 - While personal, social, and political empowerment areas have improved, access to employment remains limited, highlighting the need for policies that create job opportunities for women in India.

AN ANCIENT OCEAN ON MARS: NEW STUDY PROVIDES FURTHER EVIDENCE: IE Explained

Science

Easy Explanation:

Scientists have found more proof that Mars once had an ocean billions of years ago, thanks to data from China's Zhurong rover, which landed on Mars in 2021. This rover and other orbiting spacecraft, like China's Tianwen-1 Orbiter and NASA's Mars Reconnaissance Orbiter, have detected signs of an ancient coastline on Mars. The findings come from an area called Utopia Planitia, a large plain in Mars' northern region.



The data suggests that Mars' ocean existed about 3.68 billion years ago, with features like mud volcanoes, channels, and troughs on the surface, showing signs of both shallow and deeper waters. Interestingly, the ocean seems to have frozen quickly, indicating that Mars might already have been cooling and losing its atmosphere back then. Scientists believe that this ocean dried up around 3.42 billion years ago.

These findings are significant because they add to the long-debated idea that Mars once had a vast ocean, suggesting that the planet could have supported life billions of years ago.

Key Takeaways:

- Mars' Ancient Ocean Evidence
 - Data from China's Zhurong rover and orbiters suggest that Mars once had an ocean billions of years ago.
- Location of Findings
 - The ocean evidence was found in Utopia Planitia, a plain in Mars' northern hemisphere, where the rover detected features like channels and mud volcanoes.
- Timing of Ocean Existence
 - The ocean likely existed around 3.68 billion years ago and froze over in a short geological period.
- Disappearance of Ocean
 - Mars' ocean may have disappeared around 3.42 billion years ago as the planet became colder and lost its atmosphere.
- Significance of Findings
 - These findings support the theory of a Martian ocean and offer insights into how Mars may have transformed from a wet to a dry planet over time.

COP29 is underway, here's what is on table in annual climate conference: IE Explaiend

Environment

Easy Explanation:

The United Nations Climate Change Conference (COP29) began in Baku, Azerbaijan, bringing together nearly 200 countries and various experts. The primary goal of COP29 is to work on ways to reduce global warming and focus on climate finance to help developing nations handle climate challenges.

The COP conferences, held yearly since 1995 (except for 2020 due to COVID-19), are part of the UN Framework Convention on Climate Change (UNFCCC), a global agreement created in 1992 to combat climate change. Over the years, COP conferences have achieved significant milestones, like the Kyoto Protocol in 1997, which asked developed countries to cut their emissions, and the Paris Agreement in 2015, aiming to limit global warming to below 2°C. Recent conferences have also focused on funding, including the Loss and Damage fund established in COP28 to support countries affected by climate disasters.

Despite these efforts, COP conferences have been criticized for not achieving sufficient emission reductions to meet global temperature targets. Emissions are still rising, and wealthier countries have not fulfilled their commitment to provide \$100 billion annually to help developing nations.

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This year, COP29 will focus heavily on climate finance, specifically discussing a new target amount that developed countries must mobilize yearly from 2025. However, there is ongoing disagreement over how much should be raised and who should contribute.

Key Takeaways:

- COP Overview
 - COP (Conference of Parties) is an annual UN meeting on climate change, created under the UNFCCC to bring together nations for climate action.
 - COP29, held in Baku, aims to address global warming and climate finance for developing countries.

• Key Achievements of Past COPs

- Kyoto Protocol (COP3, 1997): Required developed nations to reduce emissions.
- Paris Agreement (COP21, 2015): Set global goals to limit warming below 2°C.
- Glasgow Pact (COP26, 2021): Committed to reducing coal use and fossil fuel subsidies.
- Loss and Damage Fund (COP28, 2023): Established financial support for nations affected by climate disasters.
- Criticisms of COP
 - Emission Reductions: COP has not achieved the necessary emissions cuts to meet 1.5°C or 2°C targets; global emissions are still rising.
 - Climate Finance: Wealthier countries have not met their \$100 billion yearly pledge to help developing nations address climate change.
- Focus of COP29
 - *Climate Finance (NCQG)*: Negotiations are ongoing for a new target for financial support starting in 2025, expected to exceed the previous \$100 billion commitment.
 - *Challenges*: Countries disagree on the amount, contributors, and specific elements of the climate finance fund.

14th November 2024

Trump's imminent trade war, and what India must watch for: IE Explained

Easy Explanation:

With Robert Lighthizer, a protectionist trade strategist, expected to return as the U.S. Trade Representative under President Trump's administration, new trade tariffs may soon be introduced. Lighthizer previously led trade policies that imposed tariffs on many countries, including China, and weakened the World Trade Organization (WTO) by blocking its dispute settlement functions. Lighthizer argues that while free trade boosts corporate profits, it can harm local jobs and communities. He believes the WTO undermines America's right to protect its industries, so he advocates tariffs as a tool to shield American industries.

Experts note that Trump's tariffs are not just about trade; they're also aimed at countering China's rising dominance in technology. China's annual trade surplus is large and growing, which could make it harder for the U.S. to pressure China as it did with Japan in past decades.

For India, rising tariffs may mean pressure from the U.S. on issues like intellectual property and labor standards. During Trump's first term, India lost its Generalized System of Preferences (GSP) status, which gave some Indian exports duty-free access to the U.S. market. If new tariffs are imposed, India could



retaliate, as it did previously by raising tariffs on American goods. On the other hand, tariffs on China could open opportunities for Indian exporters in sectors where India holds an edge.

Key Takeaways:

- Robert Lighthizer's Return
 - Known for his protectionist policies, Lighthizer may lead U.S. trade strategy again under Trump, advocating new tariffs on imports.
- Lighthizer's Trade Beliefs
 - He argues free trade has hurt American jobs and believes in using tariffs to protect U.S. industries. He views the WTO as limiting U.S. sovereignty and helped block its dispute functions in 2019.
- Impact on China
 - Trump's tariffs focus on limiting China's rise in high-tech industries. Unlike Japan in the past, China may be less susceptible to U.S. pressure due to its large trade surplus and independence in security matters.
- India's Position
 - With a trade deficit with the U.S. of \$50 billion, India may face new tariffs, especially in sectors like pharmaceuticals, textiles, and IT services.
 - India might respond with tariff increases, as it did in response to Trump's steel and aluminum tariffs. Higher tariffs on Chinese goods could also create market openings for Indian exporters.
- Past Trade Actions Against India
 - During Trump's first term, India lost its duty-free export benefits under the Generalized System of Preferences (GSP), impacting Indian exports to the U.S.

SC on 'bulldozer justice': IE Explained

Easy Explanation:

The Supreme Court (SC) has issued guidelines to ensure fairness and due process when demolishing properties. This action stems from concerns about demolitions being used as punishment against people suspected of crimes. The guidelines aim to prevent arbitrary demolitions and to protect the rights of property owners.

Key guidelines include giving property owners advance notice and a chance to contest the demolition. Authorities must also allow time after issuing the final demolition order for owners to remove the property themselves or to seek a court order if they disagree. The SC emphasized that only courts have the authority to decide punishments, not state authorities. The guidelines also underscore the right to shelter, which is part of the constitutional right to life, and ensure that innocent family members aren't unfairly affected by a demolition.

Key Takeaways

- Case Background
 - The SC guidelines respond to cases where demolitions were used against people accused of crimes. Concerns were raised about using demolition as punishment without a fair trial.
- Guidelines for Demolition Process
 - Notice Period: A 15-day notice must be given to allow the owner to respond.
 - **Hearing and Final Order**: Authorities must hold a hearing, and the final order must include reasons why demolition is necessary.

- **Post-Order Time**: After the final order, a 15-day grace period allows the owner to remove the property or seek a court stay before demolition.
- SC's Reasoning for Guidelines
 - **Separation of Powers**: Only the judiciary has the authority to decide punishments, not state officials.
 - **Public Trust and Accountability**: Officials must be held accountable if they act unfairly or arbitrarily.
 - **Right to Shelter**: The right to shelter is protected under the right to life. Innocent family members should not be deprived of their homes.
- Tests for Fairness
 - If only one structure is demolished while similar ones nearby are untouched, it could imply punishment rather than a need to remove illegal structures.

A green transition for India: IE Editorial

Environment

As the COP29 climate summit unfolds amidst global challenges, India faces the task of decarbonizing its economy without slowing growth. The key is to develop a clean, resilient, and inclusive energy system. Here are seven essential shifts India should consider to achieve this transformation effectively:

- 1. **Decentralized Energy Systems**: Move from large central power plants to more distributed renewable sources, like solar rooftops. This can empower communities, though cost challenges remain for lower-income groups. Innovative community-driven solar solutions may help.
- 2. **Operational, Not Capital Costs**: Energy should be priced based on use, not ownership. This means instead of everyone buying solar panels, utilities could install and charge consumers based on their actual consumption.
- 3. **Climate-Resilient Investments**: Rather than short-term financial returns, prioritize investments in climate-proof infrastructure. This protects against climate shocks and ensures stability for communities and businesses.
- 4. **Global Supply Chain Integration**: Instead of protectionism, India should focus on positioning itself within global clean energy supply chains. This approach supports security through international cooperation, avoiding isolating policies.
- 5. **Digital and Decarbonization Sync**: Leverage digital advances alongside renewable energy growth. Integrating smart technology with energy can make distribution efficient, resilient, and tailored to consumer needs.
- 6. **Circular Economy**: Move away from wasteful models. Recycling and repurposing materials, especially from solar panels and other electronics, can reduce environmental impact and support sustainable growth.
- 7. **People-Centric Financing**: Redirect financing towards end-users to support their shift to greener options, such as electric vehicles or solar rooftops. This change in focus can drive widespread adoption at the consumer level.

This decade is pivotal for India's energy transition. These shifts can transform how India approaches energy, combining economic growth with environmental stewardship and putting people at the core of these policies.

Key Takeaways

Decentralized Energy Systems

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• Affordable options needed for lower-income households.

• Operational Over Capital Costs

- Focus on pay-per-use models for energy services.
- Example: Utilities offering solar or cooling services rather than consumer ownership.

Climate-Resilient Investments

- Build infrastructure to withstand climate risks.
- Prioritize long-term savings through resilience over short-term profits.

• Global Supply Chain Integration

- $_{\odot}$ Join global supply chains in clean energy, rather than relying on protectionist policies.
- \circ $\;$ Focus on sectors like solar PV and green hydrogen.
- Digital & Decarbonization Sync
 - Integrate smart tech with renewable energy (e.g., smart meters).
 - Optimizes energy use and strengthens grid resilience.
- Circular Economy
 - Emphasize recycling and repurposing critical minerals and resources.
 - \circ $\;$ Addresses waste and supports environmental sustainability.
- People-Centric Financing
 - Shift financing focus to individual consumers for green products.
 - Enable adoption of solar panels, EVs, and other sustainable choices at the consumer level.

Domestic Systemically Important Banks: Why are these banks 'too big to fail'?: IE Economy

Economy

Easy Explanation

India's Reserve Bank (RBI) has identified three banks—State Bank of India (SBI), HDFC Bank, and ICICI Bank—as Domestic Systemically Important Banks (D-SIBs) for 2024. This means that these banks are considered "Too Big To Fail" due to their size and impact on the economy. If these banks face issues, the whole economy could be disrupted, so they are under stricter guidelines and capital requirements to ensure their stability.

What are D-SIBs?

D-SIBs are banks whose failure could cause major problems in the financial system due to their size, reach, and influence. As these banks are crucial for the economy, they must meet extra safety measures to prevent potential crises.

Capital Requirements

Depending on how large and influential they are, these banks have to hold extra capital. This capital acts as a buffer in case of economic difficulties. For example, SBI has the highest requirement (0.80% of its risk-weighted assets), while ICICI Bank has a lower requirement (0.20%).

• Why Create D-SIBs?

Due to their role in the economy, the failure of these banks could disrupt banking services, impact people's savings, and hurt the economy. By designating them as D-SIBs, the RBI ensures these banks hold enough reserves and follow strict guidelines to minimize risks.

How D-SIBs are Selected

The RBI selects D-SIBs by assessing their size and influence on the economy. Banks whose assets are more than 2% of India's GDP are typically evaluated. Once assessed, banks are categorized



into buckets based on their systemic importance, with higher capital requirements for those in higher buckets.

Key Takeaways

- D-SIBs Defined
 - D-SIBs are "Too Big To Fail" banks that, if they fail, could impact the economy and financial stability.
 - \circ The **RBI** requires these banks to have extra capital as a safeguard.
- Current D-SIBs
 - **Banks**: SBI, HDFC Bank, and ICICI Bank.
 - **Bucket Rankings**: SBI is in the highest bucket (4), HDFC Bank in bucket 3, and ICICI Bank in bucket 1.
- Capital Requirements
 - **SBI**: 0.80% of risk-weighted assets.
 - **HDFC Bank**: 0.40%.
 - ICICI Bank: 0.20%.
 - These requirements provide a cushion to handle potential financial issues.
- Selection Process
 - Only large banks, with assets beyond **2% of GDP**, are evaluated.
 - Criteria include size, reach, and economic impact.
- Purpose of D-SIBs
 - To prevent disruptions to essential banking services.
 - Ensures financial stability and public trust by requiring D-SIBs to hold more capital.

This classification is part of RBI's strategy to secure the economy by ensuring that critical banks are stable and resilient.

Surprise spike: TH Editorial

Economy

Easy Explanation

India's inflation rate, which measures how fast prices are rising, has been increasing again, particularly in September and October. In August, inflation was relatively low at 3.65%, but by October, it surged to 6.2%, the highest level since last August. This rise was mainly driven by the sharp increase in food prices, with vegetables like tomatoes seeing huge spikes, and a global rise in edible oil prices adding to the pressure. The Reserve Bank of India (RBI) had anticipated some inflation but not to this extent.

Food prices were especially high, with a 10.9% increase, the highest since July last year. Urban areas felt it even more with an 11.1% increase in food prices. Vegetable prices, in particular, soared by 42.2%, the largest jump in almost five years, mainly because of tomatoes. While the Finance Ministry had hoped that the inflation spike was limited to certain food items and wouldn't spread to other goods, recent data shows that prices for personal care items are also rising.

The Reserve Bank of India and policymakers had been considering potential interest rate cuts if inflation eased, but this spike makes that unlikely in the short term. This is especially challenging as it coincides with slowing economic growth and weakening demand in cities, which could discourage private investments. Policymakers may need to consider tax cuts or better food supply management to address this complex issue of rising inflation and falling consumption.



Key Takeaways

- Rising Inflation
 - **September and October** saw inflation spike, reaching 6.2% in October, the highest since August 2023.
 - **Main Drivers**: Food prices, especially vegetables like tomatoes and edible oils, saw sharp increases.
- Food Prices Surge
 - **Overall Food Inflation**: Increased by 10.9%, with urban areas experiencing an even higher rate at 11.1%.
 - Vegetables: Prices rose by 42.2%, driven by high tomato prices.
 - **Global Factors**: Higher global edible oil prices also contributed to rising inflation.
- Core Inflation Remains Low
 - **Core Inflation** (excluding food and energy): Remained lower than overall inflation but is now showing slight increases, such as an 11% rise in personal care items.
- Economic Impact
 - **Rate Cut Prospects**: Hopes for an interest rate cut in December are now unlikely due to persistent inflation.
 - **Investment Concerns**: Slowing economic growth and lower demand in urban areas could dampen private investment.
- Policy Implications
 - **Government Action**: Policymakers may need to consider tools like tax cuts or improved food supply management to address the dual challenges of high inflation and low consumption.

The CKM syndrome as the price of modernity: TH Editorial

Science

Easy Explanation

Cardiovascular Kidney Metabolic (CKM) syndrome is an interconnected health issue that involves the heart, kidneys, and metabolic system. This condition often begins subtly, with signs like weight gain, which can lead to serious health risks including obesity and high blood pressure, ultimately increasing the risk of early death. Even in states like Tamil Nadu, known for a strong public health system, non-communicable diseases (NCDs) like diabetes, heart disease, and high blood pressure are rising, posing a significant health threat.

Health costs linked to CKM syndrome are substantial, with Tamil Nadu spending vast amounts on health insurance for treatments like coronary procedures and dialysis. This trend of rising costs reflects the growing number of people affected by these diseases. The American Heart Association suggests a better approach would be integrated clinics where multiple specialists work together, focusing on patients' overall health instead of treating each condition separately.

To improve health outcomes early, Tamil Nadu provides nutritional support to pregnant women to help prevent future health issues in children. For a healthier diet, the state could partially replace rice (high in sugar content) with more nutritious millets in public food distribution. Furthermore, lowering sodium intake by using low-sodium salt can reduce high blood pressure, but it needs caution for certain health conditions.



Modern lifestyles with long working hours and night shifts, often linked to globalisation, add to health problems by increasing stress levels and unhealthy eating habits. Regular rest is essential for health and productivity, but overworking without proper rest can lead to weight gain and related health issues. This World Diabetes Day is a reminder that health policies should not only focus on economic growth but also on promoting longer, healthier lives.

Key Takeaways

• CKM Syndrome and Health Risks

- CKM syndrome combines issues of the heart, kidneys, and metabolism, increasing the risk of early death.
- Begins with weight gain and often escalates to obesity, high blood pressure, and other serious conditions.
- Health Costs and CKM
 - Tamil Nadu spends heavily on treatments for heart and kidney conditions, reflecting the rising impact of CKM syndrome.
 - The economic burden of CKM-related diseases threatens public health budgets and overall economic growth.
- Integrated Healthcare
 - The American Heart Association recommends integrated care for CKM, with teams of specialists working together to treat the whole patient.
 - This approach could prevent fragmented care, reduce medical costs, and improve patient health outcomes.
- Preventive Measures in Tamil Nadu
 - Programs like the Muthu Lakshmi Reddy scheme provide nutritional support to pregnant women, aiming to reduce future health risks in children.
 - Schools could implement weight screenings for early detection of high-risk individuals.
- Dietary Shifts
 - Replacing some rice with millets in the public distribution system (PDS) could improve nutritional intake and combat obesity.
 - Low-sodium salt could help lower blood pressure but must be used cautiously in certain health conditions.
- Impact of Globalisation on Health
 - Modern work lifestyles, often with long hours and night shifts, increase stress and promote unhealthy eating habits.
 - A balanced approach to work and rest is essential to improve long-term health and productivity.
 - World Diabetes Day Reminder
 - Economic growth should go hand-in-hand with public health policies that promote longer, healthier lives.

15th November 2024

The discovery of insulin and the 'Flame of Hope': TH Science

Easy Explanation

The human body uses hormones as chemical messengers, produced in tiny amounts by endocrine glands, to regulate various functions. Among these, the pancreas stands out as both an endocrine and exocrine



organ. It produces insulin, a vital hormone for managing blood sugar levels. The discovery of insulin revolutionized medicine, offering a treatment for Type 1 diabetes, a condition where the immune system attacks the insulin-producing cells in the pancreas.

Before the discovery of insulin, diabetes was a mysterious and often fatal disease. Key milestones include the identification of pancreatic cells (islets of Langerhans) by Paul Langerhans in 1869 and the establishment of the pancreas' role in blood sugar regulation by German scientists in 1889. However, it was in the early 1920s that Frederick Banting and Charles Best isolated insulin, with biochemist James Collip refining it for safe human use.

The first successful insulin injection in 1922 marked a medical breakthrough, leading to a Nobel Prize for Banting and John Macleod in 1923. Despite initial disputes over credit, the discovery has saved countless lives. Over time, advances like recombinant DNA technology enabled mass production of insulin, making it widely available.

The "Flame of Hope," lit in honor of Banting's discovery, symbolizes ongoing efforts to find a definitive cure for diabetes. While insulin is not a cure, it has transformed diabetes into a manageable condition, allowing millions to live healthier lives.

Key Takeaways

- Hormones and the Pancreas
 - Hormones are chemical messengers regulating body functions, produced in tiny amounts.
 - The pancreas has a dual role: producing insulin to manage blood sugar and aiding digestion.
- Type 1 Diabetes (T1DM)
 - An autoimmune condition where the body attacks insulin-producing cells, causing high blood sugar.
 - Affects 9 million people globally, often children and young adults. Causes include genetics and environmental factors.
- Discovery of Insulin
 - In 1921, Frederick Banting and Charles Best isolated insulin at the University of Toronto.
 - James Collip refined insulin for safe use, leading to its first successful injection in 1922.
 - The discovery earned a Nobel Prize in 1923 for Banting and Macleod, with disputes over credit.
- Advancements in Insulin Production
 - Recombinant DNA technology in the 1980s allowed mass production of insulin using bacteria.
 - Insulin is now affordable and widely available, saving millions of lives.
- Flame of Hope
 - Lit in 1989 to honor Banting's discovery, symbolizing ongoing efforts to find a cure for diabetes.
 - Represents hope for a future where diabetes is no longer a global health challenge.

Pharmacists issue caution over online platform for drug delivery: TH Science

Science

Easy Explanation

A recent initiative to deliver medicines through a food delivery platform in Bengaluru has raised concerns about patient safety. Pharmacists and doctors are particularly worried about issues such as quality control, misuse of prescription drugs, and the role of qualified pharmacists. Chemists argue that medicines are not just commodities like groceries and require proper checks by trained professionals.

Current laws like the *Drugs and Cosmetics Act*, 1940 mandate that medicines should only be dispensed by qualified pharmacists after verifying prescriptions. There are concerns that online pharmacies may bypass these rules, potentially leading to errors in dosage or the distribution of fake medicines.

Doctors have raised similar issues, adding that random quality checks by drug regulators are more difficult with online platforms, increasing the risk of spurious drugs entering the market. Critics also worry about the displacement of workers employed in physical pharmacies.

However, online pharmacies do have some benefits, such as making medicines more affordable and providing access to drugs that may not be locally available. Advocates suggest adopting a system like the United Kingdom's, where patients upload prescriptions to a central database, and once used, the prescription becomes invalid to prevent misuse.

Key Takeaways

- Concerns About Online Medicine Delivery
 - Pharmacists and doctors are concerned about patient safety, quality control, and adherence to laws.
 - Online platforms may lack checks by qualified pharmacists, increasing risks of incorrect dosage or fake medicines.
- Legal and Regulatory Issues
 - The *Drugs and Cosmetics Act, 1940* requires pharmacists to dispense medicines after verifying prescriptions.
 - Random quality checks by regulators are harder with online pharmacies, raising concerns about spurious drugs.
- Impact on Jobs and Prescription Drug Use
 - Shift to online delivery may displace workers employed in traditional pharmacies.
 - Potential misuse of prescription drugs without proper consultation or monitoring.
- Benefits of Online Pharmacies
 - Medicines could become cheaper due to direct distribution from manufacturers.
 - Patients can access hard-to-find drugs, improving availability.
- Proposed Solutions
 - Implement a system like in the UK, where prescriptions are uploaded to a central database and become invalid once used.
 - Clear policy guidelines are needed to regulate online pharmacies while ensuring patient safety and quality control.

Razing impunity: TH Editorial

Polity

Easy Explanation

Demolishing property as a punishment for alleged offenses goes against the rule of law and fairness. Recently, bulldozers have been used symbolically for punitive actions, particularly during communal



tensions. The Supreme Court of India has now stepped in to curb this misuse by introducing clear guidelines to ensure due process is followed before any demolition occurs. These measures aim to stop authorities from demolishing homes linked to accused individuals without proper legal procedures.

The Court emphasized that such actions not only harm the accused but also unfairly affect their families. It ruled that demolitions linked to communal tensions are a breach of the rule of law and violate the principle that only the judiciary can decide punishments. To prevent misuse, the Court laid out a step-by-step process for demolitions, ensuring transparency and accountability. This includes mandatory notice, hearings, and public documentation. Importantly, officials can now be held responsible for violations.

While necessary demolitions for public safety—like those involving encroachments on waterbodies or railway lines—are exempt, politically or communally motivated actions are strictly prohibited. Authorities must now follow these guidelines strictly, leaving no room for misuse.

Key Takeaways

• Demolitions as Punishment

- Using demolitions as a punishment violates the rule of law and unfairly targets the accused and their families.
- These actions have often followed communal tensions and are seen as politically or communally motivated.
- Supreme Court Intervention
 - Clear guidelines have been introduced to ensure due process before any demolition.
 - The Court emphasized the judiciary's role in penal decisions, protecting the principle of separation of powers.
- New Guidelines
 - **Mandatory Notice**: A 15-day notice must be served with details of the violations and reasons for demolition.
 - **Hearing & Documentation**: Personal hearings, signed inspection reports, and reasoned orders are required.
 - **Transparency**: All notices and replies must be uploaded on a designated digital portal within three months.
 - Accountability: Officials are now accountable for violations, preventing backdated or false notices.
- Exemptions
 - Necessary demolitions in public spaces, such as waterbodies or railway lines, are exempt from these rules.
- Impact
 - The guidelines aim to stop politically or communally targeted demolitions and ensure fairness in the process.
 - Local authorities must comply strictly, leaving little room for misuse.

Birsa Munda lives on: IE Editorial by President Murmu

Easy Explanation

Bhagwan Birsa Munda, a revered figure in India's tribal history, is celebrated for his short yet impactful life. Born in Ulihatu, Jharkhand, he lived only 25 years but led a significant resistance against British exploitation of tribal lands. Known as *Dharti Aba* (Father of the Earth), he organized the **Ulgulan** or Munda



Rebellion in the late 1890s to fight for tribal rights and cultural identity. His efforts were not just about rebellion but also about preserving tribal customs and justice.

Birsa Munda's contributions highlight the strong connection tribal communities have with India's cultural and social fabric. Despite being overlooked for years, his legacy has now been given recognition, especially with November 15 being celebrated as *Janjatiya Gaurav Divas*. This move underscores the importance of tribal freedom fighters in India's history.

The government has launched initiatives such as the *Dharti Aaba Janjatiya Gram Utkarsh Abhiyan* and the *PM-JANMAN* scheme to ensure better welfare for tribal communities. Tribal societies, with their emphasis on collective welfare and harmony with nature, offer valuable lessons for the modern world. Bhagwan Birsa Munda's ideals of freedom, justice, and dignity remain an inspiration for all Indians, especially the youth.

Key Takeaways

• Bhagwan Birsa Munda's Contributions

- Led the Ulgulan (Munda Rebellion) against British exploitation and for tribal rights.
- Advocated justice, cultural identity, and preservation of tribal customs.
- \circ $\;$ Known for his healing touch, which strengthened his bond with the community.
- Recognizing Tribal Legacy
 - November 15 is celebrated as *Janjatiya Gaurav Divas* to honor tribal freedom fighters.
 - Government initiatives aim to integrate tribal welfare into the national framework, including schemes like Dharti Aaba Janjatiya Gram Utkarsh Abhiyan and PM-JANMAN.
- Tribal Values and Lessons
 - Tribal societies prioritize collective welfare over individual ambitions and live in harmony with nature.
 - Their cultural ethos offers lessons for sustainable living and ecological conservation.
- Inspiration for All Indians
 - Bhagwan Birsa Munda's ideals of freedom, justice, and dignity inspire not only tribal youth but also people across India.
 - \circ $\;$ His legacy reflects the aspirations of modern youth striving for equality and identity.

This celebration of Birsa Munda's 150th birth anniversary honors his sacrifice and keeps alive his message of resilience and pride.

Severe Air Again: IE Editorial

Environment

Easy Explanation

Delhi experienced its first dip in temperature this winter on Wednesday, accompanied by a sharp deterioration in air quality. The Air Quality Index (AQI) reached the "severe" category for the first time this season, marking the most delayed onset of extreme pollution in a decade. Despite a decline in peak pollution levels, the city's **average pollution has increased**, with PM 2.5 levels at their highest in five years. This indicates that air pollution persists beyond the crop residue burning season, highlighting the need for long-term policies rather than seasonal measures.



Delhi's government has tried solutions like **smog towers, water sprinklers, cloud seeding, and drones**, but their effectiveness remains limited. Smog towers, for example, only impact their immediate surroundings, and emissions from these machines remain unaudited. Over-reliance on such measures has overshadowed the need for building robust institutional capacities to tackle air pollution comprehensively.

Farm fire incidents in Haryana and Punjab have declined, yet these states also record poor air quality. For instance, Chandigarh recently had the second-worst air quality in the country. Local responses, such as sprinkling water or fogging, offer minimal relief. A regional approach like **airshed pollution management**, which targets pollution hotspots across regions, is necessary. The **Commission for Air Quality Management (CAQM)**, which replaced the earlier Supreme Court-mandated body, needs to move beyond acting as a regulatory agency. It must lead efforts to link local and regional pollution control for effective, long-term solutions.

Key Takeaways

- Current Pollution Scenario in Delhi
 - Delhi's AQI hit the "severe" category for the first time this season, with PM 2.5 levels at a five-year high.
 - Persistent pollution beyond crop residue burning highlights the need for a year-round strategy.
- Limitations of Current Measures
 - Smog towers and water sprinklers show limited impact and lack proper audits.
 - Over-reliance on emergency or seasonal solutions like **cloud seeding** detracts from building long-term institutional capacities.
- Role of the CAQM
 - The **Commission for Air Quality Management** has yet to invest in data-driven, sciencebased solutions.
 - It must adopt regional approaches like **airshed pollution management** and coordinate between state and local agencies.
- Regional Pollution Beyond Delhi
 - Air quality issues persist in Haryana and Punjab despite fewer stubble-burning incidents.
 - Cities like Chandigarh are also experiencing severe pollution, requiring broader interventions.

India's market correction, China's sub-par stimulus salvo: IE Explained

Economy

Easy Explanation

India's stock market is experiencing a "correction," with the Nifty50 dropping 10% from its peak in September. This decline is influenced by foreign investors pulling out funds to invest in cheaper Chinese stocks following two stimulus packages announced by China. Domestic challenges, such as weak corporate earnings and rising inflation, have added to the pressure on Indian markets. Global factors like Trump's re-election and potential trade wars have also created uncertainty.

Key Takeaways

• What is a Market Correction?

A 10% decline from the peak, signaling reduced investor confidence.

- **Why is India's Market Falling?** Foreign investors are moving funds to China due to its economic stimulus packages and lower stock valuations.
- Challenges for India:
 - Weak Q2 FY25 earnings: Rising costs and lower profit margins.
 - High inflation: October inflation reached a 14-month high, ruling out RBI rate cuts soon.
- Global Factors at Play:
 - China's Stimulus: Two packages aimed at reviving its economy but lacking direct consumer spending boosts.
 - Trump's Re-election: Expected tariff hikes and trade wars may increase global economic uncertainty.
- Impact on India:

India faces stiff competition from China for investor funds and must address inflation and corporate profitability to stabilize its markets.

Climate change and trade: IE Explained

Environment

Easy Explanation

At the UN climate conference in Baku, India, China, and some other countries raised concerns about trade measures like the EU's Carbon Border Adjustment Mechanism (CBAM), delaying the conference's opening. CBAM taxes imported goods like steel and cement based on their carbon emissions during production. While its goal is to reduce global emissions and prevent industries from moving to countries with lax environmental laws, developing nations argue that it unfairly impacts their exports and violates international agreements like the Paris Accord.

The EU's CBAM is just one example of climate-related trade measures that could lead to increased protectionism and disrupt global trade. These measures could hurt developing countries while benefiting developed nations with stricter environmental regulations. Similar policies are being considered in other countries like the UK and Canada.

Global trade is also being reshaped by the dominance of China in renewable energy technologies and resources, concerns over supply chain security (especially after COVID-19), and the increasing frequency of natural disasters caused by climate change. This has led to trends like "nearshoring" or "reshoring," where countries move production closer to home to reduce risks.

Key Takeaways

1. What is CBAM?

- A European Union mechanism that taxes imported goods (like steel and cement) based on their carbon emissions during production.
- Aims to reduce "carbon leakage" (industries relocating to countries with weaker environmental laws).

2. Concerns of Developing Countries:

- \circ $\,$ CBAM increases trade costs, reducing competitiveness for countries like India and China.
- Violates international agreements, such as the Paris Accord, which protects developing nations from adverse economic impacts of climate measures.



• Ignores the "differentiation" principle in global climate policies, which treats developing countries differently from developed nations.

3. Global Trends Accelerated by Climate Policies:

- Other countries (e.g., UK, Canada) are considering similar climate-related trade measures.
- Renewable energy technologies and resources are concentrated in China, leading to concerns about supply chain dependencies.
- Post-pandemic distrust of global supply chains is pushing countries towards "nearshoring" (closer production) and "reshoring" (domestic production).

4. Unintended Effects of CBAM:

- While designed to reduce emissions, studies show CBAM's impact on global emissions might be minimal.
- Could trigger greater protectionism and disruptions in global trade, affecting industries in developing countries disproportionately.

5. Climate Change's Broader Impact on Trade:

- Natural disasters linked to climate change are disrupting global supply chains, leading countries to rethink globalized trade networks.
- Economic and strategic goals, under the guise of climate measures, are shaping new trade policies.

This underscores the need for international cooperation to balance climate action with equitable trade policies.

16th November 2024

<u>A jumbo crisis in Madhya Pradesh: TH Ground Zero</u>

Environment

Easy Explanation

On October 29, 10 wild elephants died after consuming toxic **Kodo millet** in Bandhavgarh Tiger Reserve (BTR), Madhya Pradesh. The incident began when forest officers noticed unusual behavior in a herd of 13 elephants. Despite immediate efforts involving forest staff, veterinarians, and makeshift arrangements, all affected elephants died over the next two days.

Kodo millet, a traditional crop now grown commercially, was found to be contaminated with a fungal toxin (**cyclopiazonic acid**) due to specific climatic conditions. The elephants had consumed nearly 8 acres of the infected crop. Investigations ruled out pesticides or poaching, confirming the millet as the cause.

This tragic event highlights gaps in wildlife management, from limited resources to manage the increasing elephant population to insufficient veterinary infrastructure. Human-animal conflict concerns have also escalated, with subsequent elephant attacks reported in the region.

The Madhya Pradesh government is considering better management practices, such as studying Kodo millet toxicity, using satellite collars to track herds, and sending officials to other states to learn best practices in elephant management. However, systemic issues like the lack of a separate elephant budget and insufficient training for handling elephants remain unaddressed.

Key Takeaways

1. The Incident:

- A herd of 13 elephants displayed unusual behavior; 10 elephants died after eating Kodo millet contaminated with a fungal toxin.
- The deaths occurred between October 29-31 in Bandhavgarh Tiger Reserve.

2. Cause of Death:

- Kodo millet toxicity was confirmed through forensic analysis, detecting high levels of cyclopiazonic acid caused by fungal infection.
- Specific climatic conditions—heavy rainfall and bright sun during harvest—created the fungal contamination.

3. Management Challenges:

- BTR lacks facilities to treat wild animals effectively. There is only one veterinarian, and resources like tranquilizers and enclosures are unavailable.
- Guards and forest staff have limited tools and training, making wildlife management difficult.

4. Impact on Human-Animal Conflict:

- Following the deaths, wild elephants attacked villagers, killing two and injuring one.
- Locals are worried about heightened human-animal conflict as surviving elephants search for their herd members.

5. Government Actions:

- Officials are exploring solutions, such as:
 - **Tracking elephants** using satellite collars and thermal imaging.
 - Learning best practices from states like Tamil Nadu and Karnataka.
 - Providing compensation to farmers whose Kodo millet was deemed unsafe.
- A high-level investigation and suspensions of senior officials highlight administrative lapses.

6. Community Sentiments:

- Villagers are silent, relying on the forest department for compensation.
- Officials and forest guards describe the incident as deeply traumatic, with patrolling teams spotting elephants seemingly searching for their lost herd.

This incident underscores the need for better wildlife management, proactive measures for human-animal conflict, and systemic research into environmental risks affecting both wildlife and communities.

BLUNT INSTRUMENT: TH Editorial

Internal Security

Easy Explanation

Manipur has been deeply troubled by ethnic conflict for the past 19 months, primarily between the Meitei and Kuki-Zomi communities. The state government has largely been ineffective, offering only hollow promises, internet bans, and blaming outsiders. The Centre's attempts to mediate haven't inspired confidence either. Recently, the Union Home Ministry reimposed the **Disturbed Area status under AFSPA** in six police stations in Manipur. While the area covered by AFSPA is small, its imposition risks worsening the already fragile trust in the state, given the region's long-standing opposition to the Act.

The conflict began with the Meitei demand for Scheduled Tribe (ST) status, which the Kuki-Zomi community opposed, leading to violence, displacement, and the loss of lives and livelihoods. Volunteers from both sides now patrol villages as "defence committees," and over 5,000 looted weapons remain unaccounted for. Law enforcement, including the police and armed forces, has struggled to coordinate



AFSPA has a contentious history in Manipur, first imposed in 1958 in Naga-dominated areas and later expanded to other regions. It grants sweeping powers to the armed forces, making it highly unpopular. Activist Irom Sharmila famously protested against AFSPA for 16 years, and multiple committees, including one led by Justice Jeevan Reddy, have recommended its repeal. In recent years, AFSPA has been withdrawn from parts of the Northeast due to declining militancy, but Manipur remains an exception.

The current situation in Manipur highlights administrative and political failures. Instead of resorting to heavy-handed measures like AFSPA, the Centre and state must address the underlying causes of the conflict and rebuild trust between communities.

Key Takeaways

1. Ethnic Conflict in Manipur:

- The violence is rooted in ethnic tensions, primarily between the Meitei and Kuki-Zomi communities, over issues like ST status.
- Over 5,000 weapons stolen during the conflict remain unaccounted for.
- Volunteers from both sides patrol villages, creating "defence committees," escalating tensions.
- 2. Reimposition of AFSPA:
 - The Armed Forces Special Powers Act (AFSPA) has been reimposed in six police station areas.
 - This decision risks worsening distrust among communities, given Manipur's history of opposing AFSPA.

3. History of AFSPA in Manipur:

- First imposed in 1958 in Naga areas, later expanded to Kuki-Zomi and Meitei regions.
- Grants sweeping powers to armed forces, leading to allegations of human rights abuses.
- Activist Irom Sharmila protested against it for 16 years; multiple committees have recommended its repeal.

4. Challenges with AFSPA:

- Despite the Centre rolling back AFSPA in parts of the Northeast due to declining militancy, Manipur remains an exception.
- The Act has failed to address the deeper political and social issues underlying the conflict.
- 5. Way Forward:
 - The Centre and state must focus on political dialogue and administrative reforms.
 - Heavy-handed measures like AFSPA should be avoided, and efforts should be directed toward rebuilding trust and addressing socio-economic disparities.

In 'life certificate' month, how Govt's Jeevan Pramaan has been faring: IE Explained

Polity

Easy Explanation

Every November, pensioners in India need to submit a "life certificate" to ensure the continuation of their pensions for another year. Traditionally, this required physically visiting pension-disbursing authorities like banks or post offices. However, since 2014, the government has introduced **Digital Life Certificates**



(DLCs) through the **Jeevan Pramaan** initiative, allowing pensioners to generate certificates online using Aadhaar-based biometric authentication.

This year's DLC campaign, which began on **November 1 and runs till November 30**, is organized by the Department of Pension and Pensioners' Welfare (DoPPW). The campaign includes **1,900 camps across 800 cities** to assist pensioners in generating their DLCs. For those who prefer traditional methods, the option to physically submit a certificate remains available.

Key Takeaways

1. What is a Digital Life Certificate (DLC)?

- A DLC is an online document verifying that a pensioner is alive, ensuring the continuation of their pension without requiring them to visit the pension office physically.
- Introduced under the Jeevan Pramaan initiative in 2014, it eliminates the need for manual submission.
- 2. How to Generate a DLC?
 - **Biometric Authentication:** Requires Aadhaar and a linked mobile number. Biometric devices or face authentication can be used.
 - **Options:** Pensioners can visit camps, use the Jeevan Pramaan app/website, or go to banks or post offices.
- 3. Campaign Updates:
 - The campaign is active in **800 cities and towns in India and at Indian missions abroad**.
 - By November 11, **48.10 lakh DLCs were generated**, with a significant increase in the use of face authentication (31% this year vs. 20% last year).
 - **Top states for DLC generation:** Maharashtra, Tamil Nadu, West Bengal, Uttar Pradesh, and Karnataka.

4. Key Statistics:

- India has **64.88 lakh central government pensioners**, including Defence, Railways, telecom, and postal retirees.
- Last year, **1.47 crore certificates** were generated, of which **45.46 lakh** were for central government pensioners.

5. Benefits of DLCs:

- Simplifies the process for pensioners, especially those in remote areas or with mobility issues.
- Reduces the need for frequent visits to pension offices, saving time and effort.
- Enables **digital empowerment** by leveraging technology for public service.
- 6. Biometric Trends:
 - Majority (63%) of pensioners opted for **fingerprint authentication**, followed by face authentication.

7. Future Impact:

• The adoption of digital technology in pension management highlights the government's push toward improving convenience for senior citizens.

This initiative significantly reduces the logistical and physical burden on pensioners while ensuring a secure and efficient pension disbursement process.

17th November 2024

Will Riyadh summit impact the Gaza war?: TH FAQ



Easy Explanation

Saudi Arabia hosted a summit of Arab and Islamic leaders to discuss the ongoing conflict in Gaza and Israel's military actions. The leaders condemned Israel's actions as "genocide" and called for an investigation into alleged war crimes. They reiterated their support for the establishment of a Palestinian state based on the 1967 borders with East Jerusalem as its capital, aligning with the Arab Peace Initiative of 2002. This summit signaled a collective Arab frustration with Israel's actions and sent a message to the U.S. and Israel that the Palestine issue remains central to achieving peace in West Asia.

Arab countries have previously moved toward normalizing ties with Israel, bypassing the Palestine issue, as seen with the 2020 Abraham Accords. However, Israel's recent military actions in Gaza have strained these ties. Saudi Arabia, which was close to finalizing normalization with Israel, has now stated it will not establish diplomatic relations without resolving the Palestine issue. This marks a shift in the regional dynamics, with Arab nations prioritizing the Palestine cause amidst widespread public support for it.

Despite strong rhetoric, Arab countries are unlikely to engage militarily with Israel, as seen from decades of peace following the 1973 Arab-Israeli war. However, their push for normalization with Israel has been significantly derailed, with nations like the UAE stating their support for a Palestinian state as a prerequisite for future cooperation.

Key Takeaways

- 1. Summit Condemnations:
 - Leaders condemned Israel's actions in Gaza as genocide and called for an independent investigation.
 - They emphasized the need for a Palestinian state based on 1967 borders with East Jerusalem as the capital.

2. Shifting Arab Stance:

- Arab nations, including Saudi Arabia, have cooled on normalization with Israel, citing the need to address Palestinian statehood first.
- The Saudi Crown Prince, Mohammed bin Salman (MBS), criticized Israel strongly, signaling deteriorating ties.

3. The Abraham Accords Context:

- The 2020 accords normalized ties between Israel and some Arab countries (UAE, Bahrain, Morocco, and Sudan) without addressing the Palestine issue.
- Post-October 7 Hamas attack, these agreements face challenges, with nations like the UAE reemphasizing Palestinian statehood.

4. Military Involvement Unlikely:

- Arab nations are not expected to engage in war with Israel, continuing a pattern of nonmilitary involvement since 1973.
- Instead, the focus is on diplomatic and political solutions, with a renewed push for Palestinian rights.

5. Geopolitical Shifts:

- Arab countries are also engaging in détente with Iran, temporarily easing regional rivalries.
- The Palestine issue remains central to Arab diplomacy, with public sentiment strongly supporting it.

| Clear your doubts now.

The summit reflects a recalibration of priorities among Arab nations in the face of growing regional and global pressures.

Optical biosensor rapidly detects monkeypox virus: TH Science

Science Tech

Easy Explanation

A new variant of the mpox virus (formerly monkeypox) has caused a significant health crisis, particularly in the Democratic Republic of the Congo, with a 5% fatality rate since 2023, primarily affecting children. Another variant, less fatal, has spread to over 100 countries since 2022. Diagnosing mpox can be difficult because its symptoms, such as fever, rashes, and lesions, resemble those of other viral infections, and current PCR tests are costly and time-consuming.

To address this, researchers from the University of California San Diego and Boston University have developed an **optical biosensor** that quickly identifies the mpox virus. This new device can diagnose mpox at the point of care in under two minutes, eliminating the need for laboratory processing.

The biosensor works by:

- 1. Using antibodies that attach to mpox virus proteins.
- 2. Applying these antibodies and virus samples to a silicon chip.
- 3. Shining red and blue light on the chip, creating interference patterns that change if the virus is present.
- 4. Detecting these changes using a color camera to count virus particles with high sensitivity.

This breakthrough promises a faster, cheaper, and more accessible diagnostic tool to curb the spread of mpox and prepare for potential pandemics.

Key Takeaways

- 1. Mpox Health Crisis:
 - A new variant has a 5% mortality rate in the Congo, affecting many children.
 - $_{\odot}$ $\,$ Another variant has spread to over 100 countries since 2022.

2. Challenges in Diagnosis:

- Mpox symptoms resemble other viral infections, making visual diagnosis unreliable.
- PCR tests, while accurate, are expensive and slow.

3. Optical Biosensor Innovation:

- \circ $\;$ The new biosensor detects mpox in under two minutes.
- It uses **monoclonal antibodies** to bind mpox proteins and creates light interference patterns on a silicon chip to identify the virus.

4. How It Works:

- Antibodies and virus particles form a complex.
- Silicon chips capture the complex and produce detectable light signals.
- A color camera reads these signals, allowing for rapid and accurate virus detection.
- 5. Impact:
 - Enables quick diagnosis at clinics, reducing dependency on lab-based PCR tests.
 - Could help curb mpox outbreaks and serve as a model for future pandemic preparedness.

This innovative tool is a step forward in managing infectious diseases with speed and efficiency.



Science

Easy Explanation:

Workplace violence against healthcare professionals, especially doctors, is an ongoing and worsening problem in India. Recent incidents, such as the stabbing of a doctor in Chennai and the brutal killing of a young doctor in Kolkata, have highlighted this grave issue. Surveys, including one by the Indian Medical Association (IMA), reveal alarming statistics: more than 75% of doctors have experienced workplace violence, and over 60% of these incidents involve women doctors facing both physical and verbal abuse.

Doctors in hospitals often deal with overcrowded wards, insufficient staff, and lack of security. This makes them vulnerable, especially during night shifts when they may work in high-risk areas like ICUs or emergency rooms. The absence of safe duty rooms or even basic amenities like nearby restrooms forces them into unsafe environments. Some doctors have resorted to carrying pepper spray or knives for personal safety.

The IMA survey found that violence often stems from systemic issues like poor communication, grievances over perceived care quality, and the presence of intoxicated individuals in hospitals. Younger doctors also feel that hospital administrations are indifferent to their safety concerns.

Corrective measures include better crowd control, limiting the number of bystanders around patients, and implementing strict visitor policies. While laws like Kerala's hospital protection act exist, their enforcement is inadequate, as evidenced by continued violence. Communication training for doctors is helpful but cannot address the core problems of overcrowding and underfunding. Immediate action is needed to improve safety and resources in healthcare settings.

Key Takeaways:

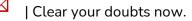
- 1. **Widespread Violence:** Over 75% of Indian doctors have experienced workplace violence, with many incidents going unreported.
- 2. **Systemic Issues:** Overcrowded hospitals, inadequate security, and understaffing contribute to the problem. Emergency rooms are particularly prone to violent incidents.
- 3. **Safety Concerns:** Many doctors, especially women, lack access to safe duty rooms or restrooms. Some have resorted to carrying self-defense tools like pepper spray.
- 4. **Legislative Gaps:** Laws like Kerala's hospital protection act exist but are poorly enforced. Tragic incidents like Dr. Vandana Das's murder highlight the limitations of such measures.
- 5. **Urgent Action Required:** Suggested solutions include stricter visitor policies, better hospital infrastructure, crowd control, and investment in staff safety measures. Laws must be backed by effective enforcement.

18th November 2024

Reaching out with AI: IE Ideas

Science

Easy Explanation:



Over the last decade, India has seen a significant transformation, especially in governance, thanks to the integration of technology and digital public infrastructure (DPI). Prime Minister Modi's initiatives have improved governance by reducing inefficiencies and directly delivering services to citizens. As Artificial Intelligence (AI) becomes a key driver of global innovation, its integration into governance—termed **GovAI**—holds immense potential for India.

India's rapid digitalization, fueled by over 90 crore Internet users (expected to rise to 120 crore by 2026), creates a massive ecosystem of data, startups, and opportunities for AI innovation. AI, powered by India's vast data repositories, can enable more efficient and effective governance. It has the potential to reimagine areas like public finance, healthcare, agriculture, disaster prediction, national security, and more.

India's leadership in digital public infrastructure, combined with AI, could inspire global innovations in governance. By fostering partnerships between the government, startups, and entrepreneurs, India can create inclusive and impactful AI applications that set an example for other countries.

Key Takeaways:

- 1. **India's Transformation:** In the past 10 years, India's governance improved significantly through technology, making services more efficient and transparent.
- 2. Role of Al in Governance (GovAl): Al can transform governance by making processes faster, more accurate, and scalable. It can help in areas like public finance, healthcare, disaster management, and agriculture.
- 3. Vast Data Repositories: With a growing number of Internet users, India generates vast amounts of data. This fuels AI models that can enhance governance.
- 4. **Global Leadership:** India's success with digital public infrastructure positions it to lead global innovations in AI-driven governance.
- 5. **Trusted Partnerships:** Collaborations between the government, startups, and innovators are crucial for building AI applications for governance, ensuring inclusivity and accessibility for all nations.

Why CO2 has contributed the most to global warming: IE Explained

Environment

Easy Explanation:

The Global Carbon Project has reported that carbon dioxide (CO2) emissions from burning fossil fuels will rise by 4.6% in 2024, the highest increase among major economies. Globally, fossil-based CO2 emissions are expected to reach a record 37.4 billion tonnes in 2024, an increase of 0.8% from the previous year. This puts the world on track for a 50% chance of exceeding 1.5°C global warming within six years.

Greenhouse gases (GHGs), such as CO2 and methane (CH4), trap heat in the Earth's atmosphere. They allow sunlight (shortwave radiation) to pass through but absorb heat (longwave infrared radiation) that is reflected back from the Earth's surface. This natural greenhouse effect keeps the planet warm enough for life to exist. However, the issue arises when human activities, like burning fossil fuels, increase the concentration of these gases, trapping more heat and intensifying global warming.

CO2 is the most significant contributor to climate change because it is the most abundant GHG and stays in the atmosphere for centuries, unlike methane or nitrous oxide, which have shorter lifespans. While methane and hydrofluorocarbons (HFCs) are more potent at trapping heat, their lower concentrations and shorter atmospheric durations mean their overall warming effect is less than CO2.



Key Takeaways:

- 1. **Record CO2 Emissions in 2024:** CO2 emissions from fossil fuels are projected to hit 37.4 billion tonnes, risking accelerated global warming.
- 2. What Are GHGs? Greenhouse gases like CO2, CH4, and water vapour trap heat in the atmosphere, maintaining Earth's livable temperature. However, excess GHGs amplify global warming.
- 3. Role of CO2 in Climate Change:
 - CO2 is the most impactful GHG because it is abundant and stays in the atmosphere for centuries.
 - While methane and HFCs are more potent, their shorter lifespans and lower concentrations limit their overall impact compared to CO2.
- 4. **Natural vs. Excess GHGs:** GHGs naturally support life by keeping the Earth warm. The problem arises with excessive concentrations due to human activities like burning fossil fuels.
- 5. **Urgency to Act:** The increase in emissions highlights the need for faster action to curb fossil fuel use and transition to sustainable energy to prevent crossing critical warming thresholds.

AFSPA in Imphal Valley: IE Explained

Internal Security

Easy Explanation:

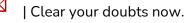
The Armed Forces Special Powers Act (AFSPA) has been reimposed in six police station areas of Manipur's Imphal Valley due to continued violence and insurgent activity. This comes after these areas were declared free of AFSPA last year, citing improved security. However, rising tensions, particularly between the Meitei and Kuki communities, have made the security situation volatile.

AFSPA is a controversial law that gives armed forces extensive powers, including using force and arresting individuals without a warrant in "disturbed areas." It was first implemented in Manipur in 1958 and has a history of alleged human rights abuses, including fake encounters and excesses by security forces.

The reimposition has sparked concerns about its effectiveness and potential fallout. While AFSPA provides armed forces with statutory protection, it also risks exacerbating tensions in a state already divided along ethnic lines. The success of the move will depend on how the government balances security actions with political solutions to address long-standing ethnic and political issues.

Key Takeaways:

- 1. Why AFSPA was Reimposed: The Centre cited insurgent violence and instability in six police station areas of Manipur, particularly near the Valley's fringes, as the reason for reimposing AFSPA.
- 2. What is AFSPA?:
 - Gives armed forces sweeping powers, including the use of force and arrests without warrants.
 - \circ $\;$ Provides legal immunity to security personnel for actions taken under the Act.
 - Declared in "disturbed areas" under Section 3 of the Act.
- 3. History of AFSPA in Manipur:
 - $_{\odot}$ $\,$ Imposed in 1958 during Naga and Mizo insurgencies.



- $_{\odot}$ $\,$ Extended to the entire state in 1979 due to Meitei insurgency.
- Controversial incidents, such as the Malom massacre and the alleged rape and killing of Thangjam Manorama, sparked widespread protests.
- Activist Irom Sharmila protested against AFSPA for 16 years, highlighting its human rights concerns.

4. Challenges with Reimposition:

- The Army seeks protection under AFSPA to act decisively amid ethnic divisions in the state administration.
- However, past abuses under AFSPA have strengthened insurgencies rather than quelling them.
- The law's imposition may strain relations with Meitei groups while placating hill tribes like the Kukis.

5. Impact and Way Forward:

- AFSPA may give the Army a freer hand to act, but reducing violence is only the first step to resolving the conflict.
- Trust-building measures, political dialogue, and addressing underlying ethnic tensions are essential.
- Tough action must be accompanied by efforts to bring warring factions to the negotiating table and dismantle the parallel power structures created by armed groups.

The success of the reimposition hinges on balancing strong security measures with inclusive political solutions.

WHY NEW ZEALAND LAWMAKERS STAGED 'HAKA 'AGAINST DIVISIVE BILL: IE Explained

Polity

Easy Explanation:

New Zealand's parliament was briefly suspended due to a protest led by Maori lawmakers performing a **haka**, a ceremonial dance, against a controversial bill. This bill, called the **Treaty Principles Bill**, aims to redefine the principles of the 1840 **Treaty of Waitangi**, a historic agreement between the British Crown and Maori chiefs. The treaty is seen as the foundation of New Zealand's identity, promising Maori rights in exchange for governance by the British Empire.

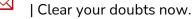
The **haka**, deeply rooted in Maori culture, is used to display strength, pride, and unity. It was performed here as a sign of protest against the bill, which critics believe undermines Maori rights. The bill proposes defining the treaty's principles through parliament instead of courts and expanding its scope to all New Zealanders. While the bill passed its first reading, it faces opposition from many, including members of the ruling coalition.

Key Takeaways:

- 1. What Happened:
 - Maori Party MPs protested in parliament by performing a haka against the Treaty Principles Bill.
 - Hana-Rawhiti Maipi-Clarke, a young Maori MP, led the protest and tore up the bill during the session.

2. What is a Haka?:

• A traditional Maori dance symbolizing cultural pride, unity, and strength.



• Widely recognized due to its use by New Zealand's rugby team, the **All Blacks**, before matches.

3. The Treaty of Waitangi:

- $_{\odot}$ $\,$ Signed in 1840 between the British Crown and Maori chiefs.
- Promised Maori tribes broad rights while ceding governance to the British.
- Its principles have been developed over decades to address colonial injustices and improve Maori relations.

4. Treaty Principles Bill:

- Introduced by the Act Party, the bill seeks to legally define the treaty's principles, arguing current interpretations are too broad.
- Proposes a referendum and aims to extend the treaty's application to all New Zealanders, sparking concerns of diluting Maori rights.

5. **Opposition to the Bill**:

- Critics say the bill threatens Maori rights and undermines the treaty's historical importance.
- The bill is unpopular even within the ruling coalition, with PM Christopher Luxon calling it "simplistic."
- Its chances of passing in later readings remain uncertain.

The Maori protest highlights the cultural and political significance of the Treaty of Waitangi, reinforcing its role in New Zealand's identity while raising concerns about potential threats to Indigenous rights.

Why the arrival of a Pakistani cargo ship in Bangladesh is a big deal: IE Explained

International Relations

Easy Explanation:

The Background

Recently, a Pakistani ship docked at **Chattogram Port** in Bangladesh, marking the first direct maritime contact between the two nations. This is seen as a potential shift in their historically strained relationship, overshadowed by the 1971 **Bangladesh Liberation War**.

During the war, Pakistan's military committed horrific atrocities in Bangladesh, killing millions, displacing many more, and perpetrating widespread violence. Pakistan has **never apologized** for these crimes, instead framing the war as an "Indian conspiracy" to break Pakistan. This narrative, fueled by Pakistan's military, has made reconciliation challenging.

Relations Under Sheikh Hasina

Bangladesh's relations with Pakistan were particularly poor under former Prime Minister **Sheikh Hasina**, who sought justice for the war crimes through trials and bans on pro-Pakistan groups like **Jamaat-e-Islami**.

- Hasina prosecuted **razakars** (collaborators with the Pakistani military), and some were executed, further straining ties.
- Hasina also strengthened ties with **India**, which supported Bangladesh's Liberation War. She had a personal bond with Indian leaders and cooperated with New Delhi on terrorism and economic growth.



What Changed After Hasina's Exit?

Three major factors influenced Bangladesh's changing stance:

1. Changing Generational Perspective:

Younger Bangladeshis, who didn't experience the 1971 war, are less emotionally attached to its legacy. Economic and social issues are more important to them than past conflicts.

 Resentment Toward India: Many Bangladeshis felt India was too involved in their country's affairs under Hasina. This led to a backlash, including the vandalism of the Indira Gandhi Cultural Centre in Dhaka.

3. Islamist Influence:

Groups like **Jamaat-e-Islami**, which opposed Bangladesh's creation and supported Pakistan in 1971, have gained prominence in the post-Hasina political environment.

Pakistan's New Approach

Pakistan sees an opportunity to rebuild ties with Bangladesh. Editorials and public opinion in Pakistan have called for a fresh start.

- Pakistan's interim Prime Minister, **Shehbaz Sharif**, met his Bangladeshi counterpart, **Muhammad Yunus**, and emphasized turning a "new page" in their relationship.
- Bangladesh's current interim government has shown a **positive response**, signaling a potential thaw in their frosty relations.

Key Takeaways:

- 1. Historical Tensions:
 - Bangladesh-Pakistan ties have been strained since the **1971 Liberation War**, marked by atrocities committed by Pakistan.
 - Pakistan has never apologized, framing the war as an Indian conspiracy.
- 2. Hasina's Stance:
 - As PM, Sheikh Hasina emphasized justice for war crimes and strengthened ties with **India**, further isolating Pakistan.
- 3. Shifts After Hasina:
 - Generational change, resentment toward India, and a growing Islamist narrative have shifted public sentiment in Bangladesh, opening space for renewed ties with Pakistan.
- 4. Pakistan's Outreach:
 - Pakistan is taking steps to rebuild ties, with supportive editorials and high-level meetings between leaders.

This evolving relationship suggests a complex interplay of history, politics, and changing public attitudes. Whether this shift is temporary or leads to deeper cooperation remains to be seen.

Growing epidemic: TH Editorial

Science

Easy Explanation:

The Growing Diabetes Crisis

Diabetes is on the rise globally, with cases skyrocketing from 200 million in 1990 to over 800 million in



2022. India's numbers are particularly alarming, with **212 million people diagnosed** compared to China's 148 million. Worse, **133 million Indians over 30 years old remain untreated**, meaning they are at high risk of complications.

The sharp increase is partly due to better diagnostic methods. Earlier, only fasting blood sugar levels were considered, but now **glycated hemoglobin (HbA1c)**, which shows long-term blood sugar levels, is also being used. This new method is especially important for identifying diabetes in regions like **South Asia**, where many cases were previously missed.

Key Factors Behind the Surge

1. Unhealthy Eating and Lifestyle:

Overeating high-calorie, carbohydrate-rich, and fatty foods, along with sedentary habits, are significant contributors to diabetes.

2. Role of Tobacco:

Tobacco use increases diabetes risk by 30%-40%.

- **Nicotine** harms insulin-producing cells, leading to insulin resistance and reduced glucose control.
- Quitting tobacco not only lowers diabetes risk but also reduces cardiovascular diseases and deaths among diabetics.

3. Gestational Diabetes:

Women who develop diabetes during pregnancy (gestational diabetes) are at higher risk of long-term diabetes, and their children are also more vulnerable.

Challenges in India

Despite having the highest number of diabetics globally, **133 million Indians remain undiagnosed**, highlighting a massive gap in health awareness and screening. Without rapid improvement in diagnosis and treatment, India risks missing the **2030 WHO goal**:

- Diagnose 80% of diabetes cases.
- Ensure 80% of those diagnosed manage their sugar levels effectively.

Key Takeaways:

- 1. **Rising Cases Globally**: Diabetes cases have quadrupled since 1990, with India leading in numbers.
- 2. **Better Diagnosis**: Including glycated hemoglobin (HbA1c) in screening methods has revealed a larger diabetic population, especially in South Asia.
- 3. **Tobacco's Impact**: Smoking significantly increases diabetes risk by harming insulin production and creating resistance. Avoiding tobacco helps prevent diabetes and related complications.
- 4. **Untreated Diabetes in India**: A significant portion of Indians with diabetes remains undiagnosed, emphasizing the need for improved health infrastructure and awareness campaigns.
- 5. **Gestational Diabetes**: Managing diabetes during pregnancy is critical to preventing long-term risks for both mothers and children.

India faces an urgent need to act, focusing on better screening, lifestyle changes, and tobacco control to combat this growing epidemic.

19th November 2024



How sustainable is India's path to net-zero with 45 years left?: TH Science

Environment

Easy Explanation:

Global Climate Action and India's Challenges

Climate change is a pressing global issue, and countries have committed to achieving **net-zero emissions** to limit global warming to **1.5°C** above pre-industrial levels. India, a developing country, has pledged to reach net-zero by **2070**. However, balancing economic growth, climate action, and resource constraints like land, water, and energy presents significant challenges.

The **2024 U.S. Presidential Election** is a critical event as it could impact global climate policies more than the **COP-29 summit**. This highlights the difficulty of achieving international cooperation when national interests differ.

Why Net-Zero?

The planet has already warmed **1.1°C** since 1880, and we're nearing the point of irreversible damage. To stay within the carbon budget, global emissions must drastically reduce from the current **40 billion tonnes of CO2 annually**. While many countries have announced net-zero targets, they also need to **sharply reduce emissions**, not just offset them.

Is Net-Zero Fair?

Developed nations caused the majority of historical emissions and are expected to lead the transition. However, their commitments often fall short, leaving developing countries, like **small island nations**, disproportionately affected. India has one of the world's lowest **per-capita emissions**, but its wealthiest 10% emit **20 times more** than the poorest 10%, revealing internal inequalities in climate impact and responsibility.

India's Unique Position

India faces dual challenges:

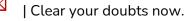
- 1. **Rising Energy Needs**: To provide a better quality of life to its massive population, energy demand may increase **9-10 times by 2070**.
- 2. Sustainability Trade-offs: Achieving renewable energy goals, like installing 5,500 GW of solar capacity, will strain land and water resources, risking food security and biodiversity.

The Risk of Unsustainable Growth

If India adopts western lifestyle standards, it could face severe challenges like groundwater depletion by the **2040s**, urban heat stress, and biodiversity loss. Instead, India needs a **sustainable consumption strategy** that balances development with climate goals.

Key Takeaways:

- 1. **Net-Zero is Crucial**: India aims for net-zero by **2070** to combat the climate crisis, but achieving this requires a balance between development and sustainability.
- 2. **Unequal Burden**: Developed nations have contributed most to climate change but often delay action. Developing countries like India bear disproportionate impacts.
- 3. Sustainable Pathways:
 - **Demand-Side Measures**: Use energy-efficient appliances, promote public transport, encourage local goods, and adopt alternative fuels.



- **Supply-Side Measures**: Expand **rooftop solar**, decentralize energy production, and increase **nuclear power** for low-carbon energy.
- 4. **India's Responsibility**: While external factors, like U.S. policies, affect global climate action, India must focus on what it can control to secure its future.

India's efforts will set an example for balancing growth with sustainability in a world racing against climate deadlines.

Manipur as a case for imposing Article 356: TH Editorial

Polity

Easy Explanation:

The ongoing violence in **Manipur** since May 2023 highlights a severe breakdown of constitutional order, raising the question of whether **Article 356**—which allows the President of India to impose President's Rule—should be invoked. This provision is meant to address situations where a state's government cannot function in line with constitutional principles.

Manipur's situation is unique and troubling:

- Unlike insurgencies in states like **Nagaland or Jammu & Kashmir**, Manipur's violence involves **ordinary citizens** being victims or resorting to violence for survival.
- Despite attempts by the **Supreme Court** and the **Union Government**, violence has continued unabated, with more than **250 deaths** and **1 lakh displaced**. Recent incidents, like the rape and murder of a mother and arson on November 9, underscore the gravity of the crisis.

The **Supreme Court** initially relied on assurances from the government to curb violence, but despite multiple hearings, the judiciary's response has been criticized as **slow and ineffective**.

What is Article 356?

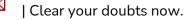
Article 356 empowers the President to impose **President's Rule** in a state if its governance fails to uphold constitutional principles. This can happen even without a Governor's report if the President is independently convinced of the need for action.

Dr. B.R. Ambedkar, during the Constitution's framing, acknowledged this as a necessary provision for "breakdown of constitutional machinery," though he emphasized cautious use. However, historical misuse of Article 356 has made it a contentious tool, often criticized for being politically motivated.

Why Manipur's Case is Unique:

- 1. **Scale of Violence**: Ordinary citizens are deeply impacted, with homes, temples, and churches destroyed. This isn't just insurgency but a societal collapse.
- 2. **Inadequate Action**: The government and judiciary have failed to restore peace, despite assurances and interventions.
- 3. **Ethnic Strife**: The conflict involves **sectarian violence** between Meitei and Kuki groups, making it harder to address without decisive intervention.

Why Invoke Article 356?



- **Restore Order**: President's Rule could allow direct intervention by the Central Government to bring back peace and stability.
- **Moral Responsibility**: The situation has deprived millions in Manipur of their fundamental rights, such as life, liberty, and dignity.
- **National Interest**: Ignoring the crisis undermines India's constitutional democracy and sets a dangerous precedent for addressing internal conflicts.

While Article 356 has been criticized for past misuse, in Manipur's case, its invocation could be viewed as a **necessary and justifiable measure** to end the ongoing crisis and ensure justice and rehabilitation for the affected population.

Key Takeaways:

- 1. **Manipur's Violence**: Over 250 deaths, 1 lakh displaced, and continued unrest since May 2023 reflect a severe governance failure.
- 2. Article 356's Role: Designed to handle constitutional breakdowns, it could restore stability in Manipur if invoked responsibly.
- 3. **Government and Judiciary**: Both have struggled to address the crisis effectively, leading to calls for decisive intervention by the President.
- 4. **Urgency of Action**: The prolonged suffering of Manipur's citizens demands immediate steps to restore peace and uphold constitutional values.

The situation in Manipur serves as a stark reminder of the challenges in maintaining order in a diverse democracy, emphasizing the need for swift and fair action to protect its people.

This time for Africa: TH Editorial

International Relations

Easy Explanation

Prime Minister Narendra Modi recently visited **Nigeria**, **Brazil**, and **Guyana**, focusing on strengthening India's ties with the **Global South**—a group of developing countries across Asia, Africa, and Latin America. These visits showcase India's commitment to fostering cooperation among nations facing similar challenges such as poverty, energy needs, and food security.

This was the first visit by an Indian PM to Nigeria in **16 years** (since 2007). Nigeria, Africa's largest economy and a **BRICS partner country**, shares historical and economic ties with India. PM Modi and Nigerian President **Bola Ahmed Tinubu** discussed ways to work together on **security threats** like **terrorism, separatism, piracy**, and **drug trafficking**.

PM Modi received **Nigeria's prestigious honor, "Grand Commander of the Order of the Niger"**, recognizing the long-standing friendship between the two nations. India and Nigeria also emphasized **economic ties**, with **200 Indian companies investing \$27 billion** in key sectors like **pharma, healthcare, agriculture**, and **energy**. India has supported Nigeria since its **1960 independence**, sending teachers and doctors. The **Indian diaspora** of **60,000 people** in Nigeria serves as a bridge, fostering cultural and economic links.

PM Modi's visits to Nigeria, Brazil, and Guyana reflect India's ambition to lead the **Global South**—nations that need collective solutions to issues like **climate change**, **energy security**, and **healthcare access**. India has launched initiatives like the **Voice of the Global South (VoGS)** conference to amplify these nations'



concerns in global forums like the **G-20**. However, critics argue India needs to follow through with consistent action to strengthen these partnerships.

India's last India-Africa Forum Summit was held in 2015, and experts argue it is overdue. New Delhi has promised to hold the next summit early next year, signaling stronger engagement with Africa.

Both India and Nigeria attended the **G-20 summit in Brazil**, where the **African Union** became a permanent member. This milestone underlines the growing recognition of Africa's importance in global decision-making. Nigeria's inclusion in **BRICS** and its participation in G-20 processes reflect its strategic role.

India's **Voice of the Global South** conference, although well-intentioned, has seen limited participation. Critics suggest allowing the host of the annual **G-20 summit** to lead the VoGS conference for better coordination. To build on its leadership in the Global South, India must match its words with action, ensuring sustained cooperation.

Key Takeaways

Nigeria Visit

- Historic Visit: PM Modi's visit was the first by an Indian Prime Minister since 2007.
- Strategic Partnership: Discussions focused on security challenges like terrorism, piracy, and drug trafficking.
- Economic Ties: India has invested \$27 billion in Nigeria across sectors like healthcare, energy, and agriculture.
- Cultural Bonds: Nigeria hosts a 60,000-strong Indian diaspora, the largest in West Africa.

India's Role in the Global South

- **Commitment to Cooperation**: India is amplifying Global South concerns, especially in **climate**, **energy**, and **health**.
- Voice of the Global South (VoGS): India's leadership of the conference needs more follow-through for meaningful impact.

India-Africa Relations

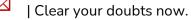
• Forum Summit: The India-Africa Forum Summit, last held in 2015, is overdue. New Delhi has promised to hold it in 2024.

G-20 and African Union

- African Union's Inclusion: The AU became a permanent member of the G-20, marking Africa's growing global influence.
- **Nigeria's Role**: Nigeria is a **BRICS partner country**, underscoring its economic and strategic importance.

Challenges Ahead

- **Consistency in Action**: Critics highlight the need for India to follow up on its commitments to the Global South.
- Leveraging VoGS: Better participation can be achieved by coordinating VoGS conferences with G-20 processes.





• **Stronger Presence Needed**: India must demonstrate leadership through sustained action and partnerships.

This engagement with the Global South, marked by PM Modi's travels, reflects India's growing influence but also the challenges of fulfilling its leadership role.

How can design help a building be more climate-resilient?: TH Text&Context

Environment

Easy Explanation

High-performance buildings (HPBs) represent a new way of constructing sustainable structures that focus on **energy efficiency**, **climate resilience**, and **resource conservation**. These buildings are designed to handle the challenges posed by climate change, urbanization, and limited natural resources, offering solutions for a sustainable future.

Key Features of HPBs

1. **Integrative Design**: This method ensures collaboration between architects, engineers, and building owners to meet measurable performance goals like maximizing natural daylight or minimizing energy use. Tools like **digital modeling** predict outcomes before construction, enabling better planning and cost efficiency.

Example: Passive design strategies use natural sunlight and materials that retain heat to reduce reliance on heating and cooling systems.

2. **Sustainable Materials**: HPBs use materials with **low embodied carbon** (low emissions during manufacturing) and high recycled content. Such materials are chosen for durability, energy efficiency, and improved indoor air quality, reducing exposure to harmful substances like **volatile organic compounds (VOCs)**.

Example: The Indian Institute of Human Settlements (IIHS) campus in Bengaluru employs lifecycle cost analysis to select sustainable materials for long-term benefits.

- 3. **Energy Efficiency**: Buildings consume a massive amount of energy during their lifespans. HPBs aim to reduce this through:
 - **Passive Strategies**: Using natural light and optimizing building orientation to reduce artificial energy needs.
 - Active Strategies: Installing energy-efficient systems like advanced HVAC, lighting, and automated energy monitoring tools.
- 4. Example: Infosys Hyderabad campus uses radiant cooling and daylighting systems to minimize energy use.
- 5. Water Conservation: HPBs address water scarcity by incorporating:
 - Efficient fixtures like low-flow faucets.
 - Rainwater harvesting for irrigation and sanitation.
 - On-site **wastewater treatment systems** that recycle greywater for irrigation and treat blackwater sustainably.
- 6. Example: Infosys campuses recycle 100% of wastewater, achieving "zero-discharge" status.
- 7. **Climate Resilience**: HPBs are built to handle extreme weather like floods or heatwaves. They use durable materials, renewable energy systems, and flood protection measures to ensure structural stability and survivability during crises.

Example: The Infosys Crescent building in Bengaluru uses advanced cooling systems, consuming significantly less energy than regular offices while maintaining high comfort levels.



8. **Performance Monitoring**: HPBs track real-time energy use, water consumption, and indoor air quality through advanced monitoring systems. This helps facility managers optimize operations and ensure the building performs as intended.

Example: IIHS Bengaluru campus employs AI-driven systems for efficient thermal regulation.

Key Takeaways

Key Practices in HPBs

- **Integrative Design**: Collaborative planning with measurable performance goals, supported by digital modeling for efficient outcomes.
- **Sustainable Materials**: Focus on low embodied carbon, high recycled content, and health-friendly materials like low-VOC products.
- **Energy Efficiency**: Use of passive strategies (natural light and heat retention) and active systems (advanced HVAC and automated controls) to reduce energy consumption.
- Water Conservation: Efficient fixtures, rainwater harvesting, and wastewater recycling systems to optimize water use.
- **Climate Resilience**: Strategies like durable materials, renewable energy backups, and flood protections ensure survivability during extreme weather.
- **Performance Monitoring**: Real-time tracking systems optimize building efficiency and validate sustainability goals.

Notable Examples

- Infosys Hyderabad Campus: India's first HPB with radiant cooling and automated energy systems.
- **IIHS Bengaluru Campus**: Uses lifecycle analysis for material selection and AI systems for thermal optimization.
- Infosys Crescent Building: Reduces energy use significantly compared to conventional office buildings.

HPBs are a crucial step toward creating sustainable, energy-efficient, and resilient infrastructure for the future. By adopting these practices widely, we can address climate challenges while improving quality of life and lowering operational costs.

GRAP IV: IE Explained

Environment

Easy Explanation

Graded Response Action Plan (GRAP) is a set of emergency measures designed to combat severe air pollution levels in Delhi-NCR. The **Supreme Court recently questioned the Delhi government** for delaying the implementation of Stage IV of GRAP, which comes into effect when air quality becomes "severe+" (AQI above 450). This delay occurred even as pollution levels crossed the threshold late Sunday evening.

What is GRAP?

GRAP, introduced in 2017, activates incremental measures based on air quality categories (poor to severe+). Its main goal is to prevent further deterioration of air quality. It was developed by the

Environment Pollution (Prevention and Control) Authority (EPCA) in consultation with experts and state representatives.

AQI (Air Quality Index) determines the GRAP stage based on pollutants like nitrogen and sulphur oxides:

- Stage I: Poor (201–300)
- Stage II: Very Poor (301–400)
- Stage III: Severe (401–450)
- Stage IV: Severe+ (above 450)

Why Stage IV Was Implemented

Due to **unfavorable weather conditions** like heavy fog, stagnant winds, and poor dispersion of pollutants, air quality was predicted to worsen. This prompted the Commission for Air Quality Management (CAQM) to enforce Stage IV measures on Monday.

Measures Under GRAP Stage IV

Key actions include:

- **Ban on truck entry** into Delhi, except for those carrying essential goods or running on clean fuels (LNG, CNG, electric, or BS-VI diesel).
- Restrictions on Light Commercial Vehicles (LCVs) registered outside Delhi unless they run on EV, CNG, or BS-VI diesel.
- Halt on construction and demolition activities, including public infrastructure projects.
- **Closure of schools** for classes VI to IX and XI, with online classes recommended.
- Workforce reduction: Offices can function at 50% capacity, with the rest working remotely.

Supreme Court's Observations

The court criticized CAQM for not taking **preemptive action**, which is the core principle of GRAP, and emphasized that Stage IV measures should continue even if the AQI dips slightly below 450.

Key Takeaways

What is GRAP?

- **Purpose**: Emergency plan to combat worsening air pollution in Delhi-NCR.
- Stages Based on AQI:
 - Stage I: Poor (201–300)
 - Stage II: Very Poor (301–400)
 - Stage III: Severe (401–450)
 - Stage IV: Severe+ (above 450)

Why Was Stage IV Imposed?

• Worsening air quality due to heavy fog, stagnant winds, and adverse meteorological conditions.

Key Measures in Stage IV

• Truck Entry Ban: Only essential goods vehicles or those running on clean fuels allowed.

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- LCV Restrictions: No entry for non-CNG/EV/BS-VI diesel vehicles from outside Delhi, except for essentials.
- Construction Halt: Ban extended to public projects like roads and telecom infrastructure.
- Schools and Offices:
 - Physical classes for classes VI-IX and XI suspended; online classes encouraged.
 - Offices to operate at 50% strength, with remote work for others.

Supreme Court's Remarks

- Criticized the **delay in action** and stressed the need for **preemptive measures**.
- Directed that Stage IV measures continue even if AQI dips below the threshold.

GRAP's efficient implementation is crucial to curb pollution and protect public health, but delays and reactive actions reduce its impact.

Regulating fossil fuel, like nuclear weapons: IE Explained

Environment

Easy Explanation

At the ongoing **COP29 climate summit in Baku**, a group of governments and civil society organizations is advocating for a **Fossil Fuel Non-Proliferation Treaty (FF-NPT)**. This treaty, modeled after the 1968 **Nuclear Non-Proliferation Treaty (NPT)**, aims to address the urgent need to reduce greenhouse gas (GHG) emissions by phasing out fossil fuels globally.

The treaty has gained support from countries like Colombia and small island nations like Vanuatu and Tuvalu, as well as 25 members of the **Global Alliance for Banking on Values**. This push comes amid concerns that the planet is on track to warm by nearly 3°C this century, far exceeding the **1.5°C target** outlined in the **Paris Agreement**.

What is FF-NPT?

The **Fossil Fuel Non-Proliferation Treaty** was conceptualized in **2016** and officially launched in **2019**. It seeks to make it legally binding for nations to:

- End fossil fuel extraction,
- Phase out existing production, and
- Transition to renewable energy in a fair and equitable way.

It operates on three pillars:

- 1. Non-proliferation: Stopping the expansion of coal, oil, and gas production globally.
- 2. **Fair Phase-Out**: Equitably shutting down existing fossil fuel production, with wealthier nations leading the effort.
- 3. **Just Transition**: Accelerating renewable energy adoption and ensuring no worker, community, or nation is left behind.

This treaty is envisioned as a complementary tool to the **Paris Agreement** by supporting goals like financial assistance for developing countries and advancing **Nationally Determined Contributions (NDCs)**.



Has India Endorsed the Treaty?

India has not yet endorsed the treaty. The focus so far has been on smaller nations in Asia, Africa, and Latin America, but efforts will expand to larger fossil fuel-dependent countries like India. Advocates believe India stands to benefit from the treaty due to its emphasis on justice and equity in managing the global energy transition.

Key Takeaways

What is the Fossil Fuel Non-Proliferation Treaty (FF-NPT)?

- Aim: Legally bind nations to phase out fossil fuels and transition to renewables.
- Three Pillars:
 - **Non-Proliferation**: Halt expansion of fossil fuel production.
 - **Fair Phase-Out**: Shut down production equitably, with developed nations transitioning fastest.
 - **Just Transition**: Support workers, communities, and countries in moving to renewable energy.

Global Context

- Launched in **2019**, FF-NPT builds on the success of the **Paris Agreement**.
- Gained endorsements from Colombia, small Pacific island nations, and sustainable banks.
- Timely, as the world faces a likely **3°C warming** scenario without intensified efforts.

India's Role

- India has not yet been approached extensively.
- Advocates argue that India, as a major fossil fuel-dependent country, could benefit significantly from the treaty.

Importance of FF-NPT

- Complements **Paris Agreement** goals and financial frameworks like the **New Collective Quantified Goal**.
- Targets equitable transition, ensuring no community or country is left behind.
- Aims to prevent catastrophic climate impacts by phasing out fossil fuels globally.

The FF-NPT is an ambitious effort to curb climate change by addressing fossil fuel dependence at its root. Its success will depend on garnering widespread support, including from major economies like India.

Neighbourhood first, in practice: IE Ideas

International Relations

Easy Explanation

India's foreign policy in South Asia often faces criticism for overstepping boundaries and failing to maintain genuine neighborly relationships. In Nepal, India's actions, including support for certain political factions and alleged interference by intelligence agencies, have created mistrust. Stories of Indian "wheeler-dealers" and covert operations dominate public perception in Kathmandu, even if some are



exaggerated. This perception itself is damaging, leaving India unable to claim moral high ground or significant strategic successes.

The "Neighborhood First" policy of the Modi government aims to prioritize South Asia, but its execution often appears more about asserting India's dominance than fostering mutual respect. A more effective approach might be a policy of "Neighborliness First," emphasizing non-interference, mutual respect for sovereignty, and peaceful dispute resolution. Former Prime Minister I.K. Gujral's "Gujral Doctrine" suggested India should not demand reciprocity from smaller neighbors like Nepal and Bangladesh but act in good faith to accommodate their needs.

Critics argue that India's assertive policies have achieved little for its national interest. Instead, a neighborly approach rooted in respect and trust might yield better outcomes, ensuring stronger ties and less resentment in the region.

Key Takeaways

Challenges in India's Neighborhood Relations

- Allegations of Interference: Perceptions in Nepal suggest India meddles in its domestic politics, including favoritism toward certain leaders, parties, and business interests.
- **Distrust of Indian Agencies**: Widespread rumors in Kathmandu about Indian intelligence operations harm India's image, regardless of their truth.
- Missed Opportunities: Heavy-handed policies often fail to achieve strategic goals, leaving India with strained ties.

"Neighborhood First" vs. "Neighborliness First"

- **Current Policy**: Focuses on asserting India's dominance in the region but lacks clarity on its true priorities.
- **Proposed Approach**: Advocates for non-interference, respect for sovereignty, and acting in good faith to address neighbors' concerns without expecting immediate reciprocity.

Lessons from the Gujral Doctrine

- **Trust-Building**: India's accommodation of neighbors' needs without demanding favors in return can foster goodwill.
- **Focus on Sovereignty**: Respecting smaller nations' autonomy and resolving disputes peacefully is essential for better relations.

Reflection on National Interest

- **Questioning Objectives**: India's aggressive policies in the neighborhood often yield minimal benefits and significant backlash.
- **Reframing Priorities**: A softer, more collaborative approach could better serve India's long-term goals in South Asia.

RBI's blind spots: IE IDeas

Economy

Easy Explanation

| Clear your doubts now.

India's central bank, the Reserve Bank of India (RBI), is likely to keep interest rates unchanged during its December meeting despite high inflation. The recent surge in inflation is mainly due to a rise in vegetable prices, which is expected to ease with the arrival of fresh harvests. The RBI remains concerned about the possibility of food inflation causing a "wage-price spiral," but evidence does not support this fear—wage growth is weak, labor markets are soft, and core inflation remains subdued.

On the growth front, the RBI maintains an optimistic stance, forecasting steady GDP growth. However, government reports and economic indicators suggest that economic momentum is slowing. Weak household demand, lack of private-sector investment, and subdued wages are some of the key reasons for this slowdown. While affluent consumption has helped so far, it is insufficient to sustain growth. India's GDP growth is expected to fall below 7% this year, highlighting the need for new drivers of economic expansion.

The RBI's decision-making is also influenced by external factors, particularly currency considerations. The recent increase in U.S. interest rates and foreign investor withdrawals from Indian markets have put pressure on the Indian rupee. Cutting interest rates could weaken the currency further, creating challenges for companies with large foreign currency loans. Despite the pressures, the RBI might reassess its stance after December as the economic and political environment becomes clearer.

Key Takeaways

Inflation Trends

- Inflation has risen, primarily due to a spike in vegetable prices, which are expected to stabilize with the new harvest.
- Excluding vegetables, inflation remains low, signaling that underlying price pressures are minimal.
- There is no evidence of a wage-price spiral; wages and labor markets remain weak.

Growth Concerns

- India's GDP growth is expected to fall below 7%, down from 8.2% last year.
- Household demand remains weak due to subdued wages, lack of job opportunities, and high food inflation.
- Private-sector investment is yet to recover, and internal drivers of growth are missing.

Core Inflation and Economic Drivers

- Core inflation remains subdued due to weak household demand.
- Consumption by wealthier households is no longer enough to mask broader economic challenges.
- The economy urgently needs new growth drivers.

External Factors and Currency Pressure

- The U.S. Federal Reserve's actions and rising interest rates have strengthened the U.S. dollar.
- Foreign investors have withdrawn \$14 billion from Indian stock markets, adding pressure on the rupee.
- The RBI is cautious about cutting interest rates to avoid further capital outflows and currency depreciation.

Challenges for the RBI

• A weaker rupee could harm companies with large foreign currency loans.



- While a falling currency might boost exports, the overall economic risks are significant.
- The RBI might reassess its policies after December, depending on economic and political developments.

21st November 2024

The AQI we choose: IE Editorial

Environment

Easy Explanation

As COP29 progresses, air pollution in North India, particularly in Delhi, has reached severe levels, surprising even experts. The pollution levels have risen sharply, with toxic PM2.5 levels exceeding 500 μ g/m³, far above the severe AQI category threshold of 400 (equivalent to 250 μ g/m³). Interestingly, stubble-burning incidents, a common contributor to pollution, have dropped by 70-80% this season, indicating other factors at play.

One significant factor is the intrusion of pollution from neighboring areas like Punjab and Haryana, which combines with local emissions. A "pollution blanket" at around 500 meters in the atmosphere descends during cooler temperatures, worsening air quality. Another contributing factor is the unscientific AQI calculation system in India, which uses less stringent thresholds than WHO standards. While private agencies report AQI levels as high as 1,500, official figures cap at 500, creating confusion.

The ongoing La Niña phenomenon, which usually improves air circulation, has yet to fully set in, further complicating the situation. A claim that farmers have shifted stubble-burning times to avoid satellite detection also adds complexity. Indian geostationary satellites could provide clearer data, but they are underutilized for air quality monitoring.

The crisis underscores the need for a science-based, multidisciplinary approach to manage air quality. Solutions must integrate air quality management with climate factors, focusing on long-term health-centric measures. India has the technological capability to independently monitor and address these issues, but this requires prioritization and investment.

Key Takeaways

Current Air Pollution Crisis

- Severe pollution in North India, with PM2.5 levels exceeding 500 $\mu g/m^3$, well beyond the AQI severe category threshold.
- Despite reduced stubble-burning incidents (70-80% lower), pollution levels have risen sharply, pointing to additional factors.

Contributing Factors

- Intrusion of external pollution from Punjab-Haryana into Delhi due to atmospheric conditions.
- A "pollution blanket" at 500 meters worsens air quality as it descends during cooler temperatures.
- Local emissions combined with external sources exacerbate the problem.

Confusion Over AQI Reporting

| Clear your doubts now.

• Private agencies report AQI levels up to 1,500, creating a disparity with official figures.

Role of Satellites

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- Farmers may be burning stubble at different times to evade detection by NASA satellites.
- Indian geostationary satellites (INSAT-3D/3DR) can provide continuous coverage but are underutilized for air quality monitoring.

Impact of Climate Factors

- La Niña, which typically improves air circulation, has yet to fully develop, limiting its positive impact on pollution dispersion.
- The warmest October on record and climate change uncertainties contribute to unusual air quality patterns.

Need for a Comprehensive Approach

- A science-based, multidisciplinary strategy is required to integrate air quality and climate considerations.
- Prioritize health-centric solutions and invest in independent air quality monitoring technologies, such as high-resolution satellites.
- Frame long-term strategies focusing on sustainable resource management and public health.

Building on goodwill: IE Ideas

International Relations

Easy Explanation

Prime Minister Narendra Modi recently visited Nigeria, marking an important moment in India-Nigeria relations, with the last visit by an Indian Prime Minister happening in 2007. Modi met Nigerian President Bola Ahmed Tinubu, signed three agreements, and received Nigeria's prestigious national award, the Grand Commander of the Order of Niger.

The historical relationship between the two nations is strong, dating back to 1962 when India sent teachers, doctors, and engineers to help build Nigeria's infrastructure and public services. This goodwill remains evident today, with Indian businesses, healthcare, and educational institutions continuing to play a key role in Nigeria's development.

Nigeria, with its large and youthful population of 233 million, sees India as a significant partner in addressing challenges like healthcare, education, and employment. Despite recent trade declines due to India's shift to Russian oil, Nigeria remains a major African partner, hosting over 200 Indian companies with investments valued at \$27 billion.

India has also contributed significantly to Nigeria's defense capabilities, establishing its National Defence Academy and training many Nigerian officers. This cooperation has fostered lasting ties, with many Nigerians, including two former presidents, having studied in Indian military institutions.



The visit highlighted areas of potential collaboration, including healthcare, education, and defense. Nigeria seeks Indian guidance in countering Boko Haram insurgencies and is interested in Indian military equipment. The visit also underscored opportunities for Indian companies to establish hospitals and wellness centers in Nigeria, reduce medical travel, and form stronger business links through initiatives like an India-Nigeria Business Council.

Key Takeaways

Historical Ties

- **First Interaction**: In 1962, Indian Prime Minister Nehru visited Nigeria, marking the start of mutual cooperation.
- **Support for Development**: India sent teachers, doctors, and engineers to assist Nigeria postindependence.
- **Defense Cooperation**: India helped establish Nigeria's National Defence Academy and trained many of its officers.

Economic Relations

- **Trade Volume**: India was once Nigeria's largest trading partner in Africa, though trade has declined recently.
- Indian Investment: Over 200 Indian companies in Nigeria contribute \$27 billion in investments.
- Business Opportunities: Potential exists for Indian companies in healthcare, education, and infrastructure.

Healthcare Collaboration

- **Medical Tourism**: India is a top destination for Nigerians seeking affordable and advanced medical care.
- **On-Site Facilities**: Establishing Indian hospitals in Nigeria could reduce the need for medical travel.

Defense Partnership

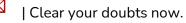
- **Military Training**: About 27,500 Nigerians have been trained in India, including former Nigerian presidents.
- Counterinsurgency Guidance: Nigeria seeks Indian expertise in tackling Boko Haram insurgencies.
- Defense Equipment: Nigeria has shown interest in acquiring Indian military equipment.

Youth-Centric Collaboration

- **Education**: Nigeria's young population makes collaboration in higher education and skill development essential.
- **Capacity Building**: India offers 500 training slots annually under the ITEC program for civilians and defense personnel.

Future Initiatives

- India-Nigeria Business Council: Proposed collaboration between major business houses to explore mutual opportunities.
- Enhanced Defense Cooperation: Increasing training slots and strategic support for Nigeria's defense needs.



Machines to harvest cane: A Maharashtra sugar mill story: IE Explaied

Agriculture

Easy Explanation

Labor shortages in agriculture have driven the adoption of mechanization, especially in Maharashtra's sugarcane harvesting sector. Traditionally, sugar mills hire middlemen (muqaddams) to organize teams of laborers (tolis) for harvesting. However, labor shortages, aging workers, and changing aspirations of younger generations have made manual labor less reliable. To address this, mills like the Manjara Cooperative Sugar Factory have introduced mechanical harvesters, significantly reducing their reliance on manual labor.

Mechanical harvesting offers several advantages, including faster operations, better sugar recovery from cutting the cane closer to the ground, and reduced dependency on unpredictable laborers. Machines also cut costs for mills by reducing the need for large supervisory teams. However, mechanical harvesters have their drawbacks, such as chopping green cane tops, which are traditionally used as cattle feed. Farmers argue that these chopped tops improve soil health by acting as mulch and enhancing organic matter.

The shift toward mechanization is supported by financial schemes, with local banks offering loans to entrepreneurs investing in harvesting machines. While machines reduce the strain of labor shortages, they also create a new avenue for agricultural entrepreneurs to profit from harvesting operations.

Key Takeaways

Traditional Sugarcane Harvesting System

- Labor-Based Harvesting: In Maharashtra, sugar mills manage cane harvesting by hiring muqaddams, who recruit laborers in teams (tolis) of 10 man-woman pairs.
- Labor Shortages: Increasing employment opportunities in other sectors, government welfare schemes, and an aging workforce have caused recurring labor shortages.

Mechanization in Harvesting

- Introduction of Machines: The Manjara Farmers' Cooperative Sugar Factory has progressively increased its use of mechanical harvesters, with 93% of its cane harvested mechanically in the 2023-24 season.
- **Cost Efficiency**: Machines reduce the mills' need for extensive labor management and improve efficiency by cutting cane closer to the ground, enhancing sugar recovery during processing.

Support for Mechanization

- **Financial Backing**: Local cooperative banks provide loans to entrepreneurs for purchasing harvesting machines, ensuring financial viability.
- **Higher Payment**: Mechanical harvesters are paid Rs 475/tonne compared to Rs 439 for manual laborers, including muqaddam commissions.

Challenges of Mechanization

| Clear your doubts now.

- Loss of Cattle Feed: Machines chop the green cane tops, traditionally used as cattle feed, into small pieces, making them unsuitable for direct feeding.
- **Soil Benefits**: Chopped tops act as mulch, improving soil moisture retention, organic matter, and protection against extreme weather.

Entrepreneurial Opportunities

- **Investment Viability**: Agricultural entrepreneurs like Sachin Shinde invest in mechanical harvesters and infielders, earning significant profits even after accounting for operational and maintenance costs.
- **Operational Efficiency**: Harvesting machines require fewer workers and can handle large volumes efficiently, reducing dependence on traditional labor systems.

WHAT ARE ATACMS, THE US MISSILES UKRAINE FIRED INTO RUSSIA?: IE Explained

Science

Easy Explanation

Ukraine used American-made **ATACMS (Army Tactical Missile System)** for the first time to strike inside Russia, marking a significant shift in U.S. policy. These long-range missiles, capable of striking up to 300 km, are known for their precision and devastating impact, especially with cluster munitions or highexplosive warheads. Ukraine likely used **M39A1 Block IA** and **M57 variants**, which have been part of the U.S. arsenal for decades and proven effective in past conflicts like the Iraq War.

The U.S. authorized Ukraine's use of these missiles in response to Russia deploying North Korean ground troops, a move that has raised alarms in both Washington and Kyiv. By using ATACMS, Ukraine can now target deep Russian military assets, especially in regions like Kursk, where Russian forces and North Korean troops are concentrated. While this enhances Ukraine's offensive capabilities, Russia may have preemptively moved some military assets further inland to avoid strikes.

Key Takeaways

About ATACMS Missiles

- What They Are: Long-range precision missiles used for military strikes, capable of carrying cluster bomblets or high-explosive warheads.
- Variants:
 - **M39A1 Block IA:** Guided by GPS, range of 70-300 km, can carry 300 cluster bomblets, first used in Operation Iraqi Freedom (1997).
 - **M57:** Delivers a single 230-kg high-explosive warhead, range of 70-300 km, first used in 2004.

U.S. Authorization

- The Biden administration reversed its policy to permit Ukraine to use ATACMS just two months before Donald Trump takes office.
- This decision is tied to Russia's use of **North Korean ground troops**, raising security concerns for Ukraine and the U.S.

Impact on Russia-Ukraine War

| Clear your doubts now.

- Ability to strike **deep into Russia**, targeting critical military installations, especially in areas like Kursk.
- \circ $\;$ Hundreds of Russian military assets are within the range of ATACMS.

• Russian Preparations:

• Likely preemptively moved military assets deeper into its territory to avoid strikes.

Significance of the Development

- Marks a critical escalation in the conflict, enabling Ukraine to potentially weaken Russian military logistics and bolster its defensive strategy.
- Highlights growing international dimensions of the conflict, with **North Korean troops** complicating the scenario

The China emissions paradox: IE Explained

Environment

Easy Explanation

China, despite being the second-largest economy in the world and the biggest emitter of greenhouse gases (GHGs) for over 15 years, is still considered a "developing" country under the United Nations framework. This status exempts China from mandatory short-term emission cuts, even though it contributes more than 30% of global emissions. If China doesn't significantly reduce its emissions, the global goal of limiting temperature rise to 1.5°C above pre-industrial levels will likely fail.

A recent analysis suggests that China needs to cut its emissions by 66% by 2030 and 78% by 2035 to meet the 1.5°C target. However, China's emissions are still rising. Ironically, cutting emissions too quickly could slow down the global deployment of renewable energy because China is the world's largest manufacturer of renewable energy equipment like solar panels and wind turbines.

This situation creates a global dilemma. Without China's emission cuts, global climate goals cannot be achieved. But if China cuts emissions aggressively, it could disrupt the supply of renewable energy technologies, slowing the energy transition for other countries.

China's dominance in renewable energy manufacturing stems from cost advantages and a favorable international climate framework. While China has made renewable energy affordable globally, its current emissions are almost three times those of the United States, and its short-term emission reduction targets remain unrealistic.

Key Takeaways

China's Role in Global Emissions

- China contributes over **30% of annual global emissions**, making it the world's largest emitter for more than 15 years.
- Despite its status as a "developing" country, China's emissions are key to meeting the **1.5°C** temperature target.

Emission Reduction Targets

()

- To align with the 1.5°C goal:
 - China needs to cut emissions by **66% by 2030**.
 - Emissions should reduce by **78% by 2035**.
- Current trends show **China's emissions are still rising**, with a 0.2% increase expected this year.

Impact on Renewable Energy

- China controls:
 - Over 80% of global solar panel manufacturing.
 - About 60% of global wind turbine production.
- Aggressive emission cuts could **disrupt the global supply of renewable energy equipment**, slowing the energy transition.

Challenges for Other Countries

- Other nations are highly dependent on China's renewable energy technologies and supply chains.
- Competing with China's **low manufacturing costs** is difficult:
 - Costs in China are **10% lower than India**, **20% lower than the U.S.**, and **35% lower than Europe**.

China's Advantage

- China's rise as a global power is partly due to **lenient emission standards** compared to developed countries like the U.S., Japan, and Germany.
- It has ensured **cheap renewable energy manufacturing**, making solar and wind energy affordable globally.

Global Dilemma

- Without China's emission cuts:
 - The world risks missing the 1.5°C target.
- With aggressive cuts:
 - **Renewable energy supply chains** could be disrupted, delaying the global energy transition.

Future Prospects

- China is likely to reach its **1,200 GW renewable energy capacity target** by the end of this year, six years ahead of schedule.
- However, near-term emission reduction targets (2030-2035) remain **unrealistic** and unlikely to be met.

A thousand days of Ukrainian resilience: TH Editorial

International Relations

Easy Explanation

Over the last 1,000 days since Russia's invasion of Ukraine on February 24, 2022, the world has witnessed the resilience of the Ukrainian people and the unity of international support in their fight against aggression. Ukraine has faced immense challenges, including heavy human and economic losses, but has managed to halt Russia's advances, liberating key regions like Kyiv, Kharkiv, and Kherson. Under



the leadership of President Volodymyr Zelenskyy, Ukraine has shown extraordinary determination to defend its sovereignty and identity.

The war has resulted in thousands of civilian casualties, with over eight million Ukrainians fleeing the country, many of whom have since returned. Infrastructure, cultural landmarks, and educational institutions have been devastated, leading to over \$400 billion in economic losses. Despite these hardships, Ukraine has made significant strides in rebuilding its nation with international aid and solidarity.

On the other hand, Russia has faced severe consequences for its actions. Over 7,22,440 Russian military personnel have been killed or wounded, and its global defense reputation has plummeted. International sanctions have crippled Russia's economy, causing inflation, a brain drain of skilled professionals, and a shrinking international presence. The country has become increasingly isolated, with limited support from rogue states like North Korea.

Ukraine's fight is not just about territorial sovereignty but about defending democratic values, European identity, and global stability. President Zelenskyy has emphasized that neutrality in this war means siding with the aggressor, urging the global community to take a firm stance against Russia. He aligns this struggle with the principles of justice and peace, reminiscent of Mahatma Gandhi's philosophies of non-violence and anti-colonial resistance.

Key Takeaways

Ukraine's Resilience

- Ukraine has withstood Russia's full-scale invasion since February 2022, defending Kyiv and liberating Kharkiv and Kherson.
- President Zelenskyy united the nation and international community to resist aggression and maintain sovereignty.
- Ukrainian armed forces have emerged as one of the strongest militaries globally.

Humanitarian Crisis

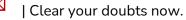
- Thousands of civilians, including 600 children, have died due to Russian aggression.
- Over 8 million Ukrainians fled the country, with many returning, while 3.6 million remain internally displaced.
- Russia deported over 20,000 Ukrainian children, with ongoing efforts to bring them back.

Economic and Infrastructure Damage

- The war has caused \$400 billion in economic losses, with rebuilding efforts requiring \$500 billion.
- Over 3,793 educational institutions, 1,714 medical facilities, and 2,100 cultural landmarks have been destroyed.

Russia's Decline

- Russia has suffered immense military losses, with over 9,365 tanks and 19,073 UAVs destroyed.
- International sanctions have restricted access to financial systems and technology, causing long-term economic damage.
- Over 1 million professionals have fled Russia, affecting key sectors like IT and engineering.
- Russia's global image and influence have significantly diminished.



Global Significance

- Ukraine defends not just its sovereignty but democratic values and European identity.
- Zelenskyy stresses that neutrality is untenable, equating it to supporting Russia's aggression.
- Ukraine's fight is a call for global adherence to international law and justice.

Gandhian Philosophy

- The struggle resonates with Mahatma Gandhi's principles of non-violence and resistance against oppression.
- Gandhi would likely have called for Russia to quit Ukraine, emphasizing peace through justice and respect for sovereignty.

A consistent response: TH Editorial

Environment

Easy Explanation

Delhi faces severe air pollution every year, particularly during November, with air quality reaching hazardous levels. On Monday, the average Air Quality Index (AQI) in Delhi reached 488, with some reports claiming levels above 1,000. Despite years of research, government initiatives, and significant investments, Delhi has failed to effectively manage episodes of severe pollution (AQI above 400). Official data indicates that such episodes are recurrent, with only slight improvements over the years.

Pollution sources vary—stubble burning from Punjab is a common cause during this period, but other factors like household emissions and road dust are significant contributors. The availability of advanced tools to track pollution sources daily has improved, but this understanding has not translated into effective action.

The bodies responsible for addressing air pollution, such as the Commission for Air Quality Management (CAQM), seem ineffective. Political leaders, both at the central and Delhi levels, are distracted by other priorities, failing to provide the public with consistent communication or solutions. Addressing stubble burning has gained some attention, but the year-round problem of road dust remains largely ignored due to limited immediate political benefits. Real progress requires consistent efforts and rising above political differences to address this crisis seriously.

Key Takeaways

Severity of Pollution in Delhi

- Delhi's AQI hit an alarming average of 488 on Monday, with some stations reporting levels exceeding 1,000.
- Episodes of "severe" pollution (AQI > 400) are recurrent, with minimal improvement since 2016.
- Meteorological conditions exacerbate pollution levels, making air quality worse during specific periods.

Sources of Pollution

• **Stubble burning:** A significant contributor during November, especially from Punjab farms.

• Analytical tools now allow tracking pollution sources daily, improving understanding but not action.

Institutional and Political Response

- The Commission for Air Quality Management (CAQM) appears ineffective, responding mainly to Supreme Court criticism.
- Central and Delhi government leaders are distracted by other responsibilities and fail to address public concerns adequately.
- Politicians focus on short-term fixes, such as blaming stubble burning or proposing "cloud seeding," instead of long-term solutions.

Road Dust: A Missed Priority

- Road dust remains a significant year-round issue, offering substantial air quality gains if addressed.
- Tackling road dust involves effort but yields limited immediate political rewards, leading to neglect.

Call for Action

- Governments must consistently communicate intent and plans to the public.
- Rising above political differences and focusing on long-term solutions is critical to combating Delhi's air pollution crisis.

Is imposing tariffs on Chinese imports a good idea?: TH Text&Context

International Relations

Easy Explanation

Donald Trump's promise to impose tariffs of up to 60% on Chinese imports and 10% on imports from the European Union is aimed at reducing the U.S. trade deficit and discouraging subsidized foreign goods. By making Chinese and European goods more expensive in the U.S. market, the intention is to encourage Americans to buy locally produced goods, boosting domestic industries.

However, the impact of these tariffs is complex:

- 1. **Higher Prices in the U.S.**: The prices of imported goods in the U.S. will rise due to the tariffs, leading to inflation. If a significant portion of consumer goods is affected, the cost of living for Americans could increase.
- 2. **Shifting Consumer Behavior**: If higher tariffs discourage purchases of foreign goods, domestic industries might grow, increasing the supply of locally made products and helping moderate inflation over time.
- 3. **Risk of Retaliation**: Countries like China might respond by imposing tariffs on U.S. goods, leading to a global trade war. This could harm global commodity prices and worsen inflation worldwide.

A hypothetical example illustrates the dynamics:

• A shirt costing 724 Chinese yuan in China is sold in the U.S. for \$100.



- U.S.-made shirts cost \$105 and are uncompetitive at this price.
- A 10% tariff raises the price of Chinese shirts to \$110, making U.S. shirts competitive at \$105.
- Chinese exporters may lose market share unless their government intervenes. China could:
 - Subsidize exporters to cover the tariff cost.
 - Devalue the yuan, making their goods cheaper.
 - \circ $\;$ Lower interest rates and increase domestic spending to offset losses.

If China devalues its currency to counter tariffs, it could face domestic inflation, but this might be balanced by higher production and exports, boosting its economy.

Key Takeaways

Trump's Tariff Policy

- **Objective**: Reduce the U.S. trade deficit and encourage domestic production by making imported goods expensive.
- **Proposed Tariffs**: Up to 60% on Chinese goods and 10% on imports from the EU.

Impact of Tariffs

- Higher Domestic Prices: Tariffs will make imported goods costlier, potentially raising inflation.
- Boost to U.S. Industries: Domestic products may become competitive, increasing local production.
- Global Trade Risks: Retaliatory tariffs by other countries could spark a trade war, disrupting global markets.

Hypothetical Example

- **Before Tariffs**: Chinese shirts cost \$100 in the U.S.; U.S.-made shirts cost \$105 and are uncompetitive.
- After a 10% Tariff: Chinese shirts rise to \$110, making U.S. shirts (\$105) more attractive.
- Chinese Countermeasures:
 - Subsidize exporters.
 - Devalue the yuan to offset tariff effects.
 - Lower interest rates to stimulate the economy.

China's Risks and Opportunities

- Inflation Risk: Currency devaluation could lead to domestic inflation.
- **Economic Growth**: Policy adjustments might boost production and exports, increasing GDP growth.

Long-Term Implications

- Tariffs may temporarily benefit U.S. industries but could strain international trade relations.
- Global trade wars could destabilize markets, affecting inflation and economic growth in multiple countries.

21st November 2024

DON'T LOSE MOMENT: IE Editorial



Easy Explanation

In governance, making timely decisions is critical, and delays can lead to widespread consequences, as seen in issues like stubble burning and fertilizer shortages.

Stubble Burning and Delayed Paddy Procurement

- Stubble burning in north India, especially in Punjab and Haryana, has spiked sharply in November, contributing to severe air pollution. Officially reported farm fires between November 8 and 19 were higher than the total from mid-September to early November.
- Some researchers suggest farmers might be burning stubble late in the afternoon to avoid detection by NASA satellites, though this is speculative.
- A significant reason for the rise in stubble burning is delayed paddy procurement by government agencies. Warehouses in Punjab and Haryana were full of rice from last year, leaving little space for new stocks.
- Farmers slowed down harvesting to match delayed procurement, narrowing the window to sow the next wheat crop. This delay pushed many farmers to resort to burning stubble to clear fields quickly for wheat sowing.

Fertilizer Shortages

- A similar delay in decision-making is evident in the shortage of di-ammonium phosphate (DAP), a crucial fertilizer for sowing wheat and other crops.
- Lower imports of DAP and raw materials used for domestic production have caused a supplydemand mismatch, leading to reports of farmers buying it at inflated prices.
- The government has set a low maximum retail price (MRP) for DAP but hasn't provided sufficient subsidies to make imports financially viable for companies. This has led to inadequate availability of fertilizers during peak demand.

Policy Challenges

- Rice, wheat, and fertilizers are heavily regulated by government policies. Farmers produce rice and wheat primarily for procurement by government agencies rather than the open market.
- Delays or misalignments in subsidy announcements and procurement plans disrupt the system, with farmers and the general public bearing the brunt of these inefficiencies.

Key Takeaways

Stubble Burning and Air Quality

- Spike in Farm Fires: 15,475 incidents from November 8-19 surpassed earlier reports for the season.
- **Delayed Paddy Procurement**: Sluggish government purchases due to full warehouses narrowed the window for wheat sowing, increasing reliance on stubble burning.
- Environmental Impact: Increased air pollution in north India, including Delhi.

Fertilizer Shortages

| Clear your doubts now.

- **Shortage of DAP**: Lower imports and insufficient subsidies have led to supply-demand mismatches.
- Farmers Paying Higher Prices: Reports of DAP being sold above the government-fixed MRP.

Policy and Governance Issues

- **Excessive Policy Intervention**: Rice, wheat, and fertilizers are over-regulated, leading to inefficiencies.
- **Delayed Decisions**: Misaligned policies on procurement and subsidies affect farmers and public welfare.

By addressing these delays and aligning policy with market realities, governance can prevent such recurring challenges and ensure timely support for farmers.

What to know about indoor air quality and purification: IE Explained

Environment

Easy Explanation

Air pollution in India affects everyone, but its impact is disproportionately higher on those who cannot avoid outdoor exposure. While the privileged few can manage indoor air quality using air purifiers and sealed spaces, a large majority, like street vendors, laborers, and those living in unsealed homes, remain vulnerable.

Improving Indoor Air Quality:

The primary concern is exposure to PM2.5, a pollutant linked to severe health problems. Managing indoor air starts with keeping windows and doors closed and using air purifiers, particularly in bedrooms or frequently used rooms. However, purifiers work best in sealed spaces, and their effectiveness diminishes in poorly insulated homes. "Outdoor air purifiers" like smog towers are impractical due to the vast volume of outdoor air.

Indoor Pollution Sources:

Indoor air quality is also degraded by activities like cooking with solid fuels, burning incense, or poor kitchen ventilation. These activities release harmful gases and fine particles, disproportionately affecting women who spend more time in kitchens due to entrenched societal norms.

Air Quality Measurement:

Many spaces claim to have good air filtration, but without monitoring tools, these claims are unverifiable. Low-cost air quality sensors can measure PM2.5 levels indoors. For those in regions with consistently poor air quality, air purifiers are often necessary even if the air seems clear. Reliable data from air quality monitors provides a more accurate understanding than visibility or news reports.

Air Purifiers:

Air purifiers with HEPA filters are effective at trapping PM2.5. Activated carbon filters help capture gaseous pollutants. A key metric for selecting purifiers is the Clean Air Delivery Rate (CADR), which indicates the speed and efficiency of air purification. However, purifiers that generate ozone should be avoided as they can worsen air quality.

In cars, using the air conditioner in recirculation mode helps reduce exposure to outdoor air. Ironically, while protecting passengers, cars themselves contribute to air pollution.



Ethical Concerns:

Air purifiers and other measures are inequitable solutions, accessible only to those who can afford them. This selective insulation reduces pressure for systemic change, perpetuating the air pollution problem. The ultimate solution lies in improving outdoor air quality for all, rather than relying on temporary fixes.

Key Takeaways

The Disproportionate Burden of Pollution

- Vulnerable groups like street vendors, laborers, and those in unsealed homes face prolonged outdoor exposure.
- Privileged individuals can create controlled air environments, but the majority cannot.

Indoor Air Quality Management

- PM2.5 is the main concern, linked to respiratory and cardiovascular diseases.
- Steps: Seal gaps, keep windows closed, and use air purifiers in key areas.

Indoor Pollution Sources

- Cooking with solid fuels, poor kitchen ventilation, and burning incense contribute to indoor pollution.
- Women face higher risks due to societal roles keeping them in kitchens.

Importance of Monitoring

- Use low-cost air quality sensors to verify claims of good air filtration.
- Nearby air quality monitors provide accurate data compared to visibility or media reports.

Air Purifiers

- HEPA filters are essential for trapping PM2.5, while activated carbon filters target gases.
- Avoid ozone-generating purifiers as they worsen air quality.
- Clean Air Delivery Rate (CADR) indicates purification speed and efficiency.

Ethical and Systemic Issues

- Air purifiers address symptoms, not root causes, and are inequitable.
- True solutions lie in improving outdoor air quality for all.

India's undertrial prisoners: IE Explained

Polity

Easy Explanation

India's Union Home Minister Amit Shah has emphasized the need to release undertrial prisoners who have already served more than one-third of the maximum sentence for their alleged crimes before **Constitution Day** (November 26). This directive aligns with provisions in the newly introduced **Bharatiya Nagarik Suraksha Sanhita, 2023 (BNSS)**, which relaxes bail standards, especially for first-time offenders.

Relaxed Bail Provisions Under BNSS



The BNSS, Section 479 states that:

- 1. **General Provision**: Undertrials not facing charges punishable by death or life imprisonment should be released on bail if they've served half the maximum prescribed sentence.
- 2. For First-Time Offenders: The threshold is reduced to one-third of the maximum sentence.
- 3. **Exceptions**: These provisions do not apply if the individual is involved in multiple cases or ongoing trials.

This provision builds upon and replaces **Section 436A of the Code of Criminal Procedure (CrPC)** by making bail more accessible for first-time offenders.

Supreme Court's Stance

The **Supreme Court** has been actively addressing issues related to undertrial prisoners since 2013. In August 2024:

- 1. The court ruled that the BNSS provision should apply retrospectively to first-time offenders whose cases were registered before the law's enactment in July 2024.
- 2. It directed all states and union territories to identify eligible undertrial prisoners and file affidavits detailing their release.
- Jail superintendents were ordered to initiate bail applications for eligible undertrials as per Section 479.

Despite this, implementation has been slow, with only 19 out of 36 states and UTs filing responses by October 2024. In November 2024, the court reiterated its directive to expedite the identification and bail process, particularly for women undertrials.

State of Undertrial Prisoners in India

- 1. **Overcrowding**: As of December 2022, **75.8% of prisoners in India** were undertrials, amounting to 4,34,302 individuals out of a total prison population of 5,73,220.
- 2. Women Undertrials: Among women prisoners, 76.33% (18,146 out of 23,772) were undertrials.
- 3. **Long Detentions**: Around **8.6% of undertrials** had been in prison for more than three years, highlighting the urgent need for bail reforms.

Key Takeaways

BNSS Section 479

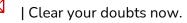
- General Rule: Undertrials are entitled to bail after serving half their maximum sentence.
- First-Time Offenders: Can be released after serving one-third of their sentence.
- **Exemptions**: Not applicable to those involved in multiple cases or with ongoing investigations.

Supreme Court Intervention

- Ruled for **retrospective application** of Section 479 for eligible cases.
- Directed states and UTs to identify and report eligible undertrials.
- Emphasized jail superintendents' responsibility to ensure timely bail applications.

Undertrial Statistics

• **Total Undertrials**: 75.8% of the prison population are undertrials.



- Women Prisoners: 76.33% of women in prison are undertrials.
- **Prolonged Detention**: 8.6% of undertrials have been in prison for over three years.

Challenges in Implementation

- Slow responses from states and union territories in identifying eligible undertrials.
- Persistent issues of overcrowding and delays in justice delivery for undertrials.

This initiative aims to reduce prison overcrowding and expedite justice, particularly for first-time offenders languishing in jail without trial.

GM crops can help fight hunger depending on farming method: TH Science

Science

Easy Explanation

With a growing global population and rising food demand, expanding agricultural land isn't sustainable. Cutting forests or overusing pesticides harms ecosystems and depletes resources. Genetically modified (GM) crops offer a solution by enhancing crop efficiency and sustainability.

GM crops, like **Bt cotton in India** and **Bt brinjal in Bangladesh**, have genes added to their DNA to produce toxins that protect against specific pests. Others, like herbicide-tolerant (HT) crops, resist weed killers, making farming more efficient. These modifications can boost yields, reduce pesticide use, and cut costs for farmers, helping balance food production with environmental concerns. However, challenges arise as pests and weeds develop resistance over time, forcing farmers to use stronger or additional chemicals, which can harm the environment and human health.

While GM crops offer benefits, they often depend on specific herbicides sold by large corporations, leading to concerns about monopolies and environmental priorities. Issues like glyphosate resistance in weeds and potential health risks from newer herbicides highlight the need for balanced approaches like **crop rotation** and **integrated pest management**. Modern tools like **CRISPR** reduce the cost of developing GM crops, but high regulatory expenses often limit innovation to profit-driven companies.

Though GM crops can be part of sustainable agriculture, more data is needed to fully understand their long-term impact on biodiversity, pollinators, and ecosystems. Scientists argue that GM farming isn't the problem itself—it's how agriculture competes with nature for resources to feed a growing global population.

Key Takeaways

Why GM Crops Are Important

- **Food demand vs. sustainability**: Growing populations require more food, but expanding farmland harms ecosystems.
- **GM crops as a solution**: Modify crops for pest resistance, higher yield, and better nutrient profiles, reducing the need for harmful farming practices.

Benefits of GM Crops

• **Reduced pesticide use**: GM crops like Bt cotton minimize insecticide use, improving farmer safety and reducing environmental harm.



- **Herbicide tolerance**: HT crops allow targeted weed removal, supporting no-till farming and reducing carbon emissions.
- Increased efficiency: Advanced modifications enhance yield and reduce input costs for farmers.

Challenges and Risks

- **Pest and weed resistance**: Over time, pests and weeds adapt to GM traits and herbicides, increasing the need for stronger chemicals.
- **Health concerns**: Herbicides like glyphosate and dicamba pose potential health risks and environmental damage.
- **Corporate control**: Few companies dominate the GM crop market, tying farmers to specific products.

Strategies for Sustainable Use

- **Diversifying resistance**: Combining multiple resistance traits in crops to slow pest adaptation.
- Crop rotation: Alternating crops to reduce reliance on specific herbicides and improve soil health.
- Integrated pest management: A balanced approach that tolerates some weeds while minimizing herbicide use.

Scientific and Regulatory Concerns

- Limited data: Lack of comprehensive studies on the long-term effects of GM crops on biodiversity and ecosystems.
- **Regulatory hurdles**: High costs of regulation restrict innovation to profit-driven companies, limiting public-sector development.
- **Bias in research**: Industry-sponsored studies complicate understanding of GM farming's environmental impact.

Broader Context

- Agriculture vs. nature: Feeding a growing population with limited land requires increased production efficiency.
- **Technology and innovation**: Tools like CRISPR offer promise but face regulatory and public acceptance challenges.

The long fight for accessibility, dignity in Indian prisons: TH Editorial

Polity

Easy Explanation

The tragic story of Professor G.N. Saibaba sheds light on the harsh realities faced by prisoners with disabilities in Indian jails. After a decade of suffering due to inaccessible conditions, he was finally exonerated in March 2024 but tragically passed away months later. His experience highlights the physical and emotional hardships he endured, from the inability to use basic facilities due to lack of wheelchair access to injuries caused by cramped conditions. Indian prisons, notorious for overcrowding, neglect, and violence, are especially cruel to disabled prisoners who lack essential accommodations and face abuse from fellow inmates and prison staff.



Despite legal and constitutional rights ensuring equality and humane treatment, prisoners with disabilities often face inhumane conditions. International frameworks like the Nelson Mandela Rules and India's Rights of Persons with Disabilities Act, 2016, call for accessible and dignified conditions for prisoners. However, these remain poorly implemented.

Cases like Father Stan Swamy, denied basic tools like a sipper despite his Parkinson's disease, illustrate systemic failures. Audits of facilities, such as Delhi's Tihar Jail, expose glaring accessibility issues like inaccessible cells and toilets. While guidelines exist on paper, political apathy and societal indifference perpetuate the suffering of disabled prisoners. This underscores the urgent need for State governments to act, as they are responsible for prison management.

Key Takeaways

Challenges Faced by Disabled Prisoners

- Lack of Accessibility: Indian jails lack wheelchair-friendly infrastructure, accessible toilets, and other basic facilities, as seen in the cases of G.N. Saibaba and Father Stan Swamy.
- **Physical and Emotional Abuse**: Disabled prisoners are vulnerable to violence and neglect by staff and inmates.
- **Overcrowding**: Indian prisons house 5.73 lakh prisoners against a capacity of 4.36 lakh, worsening conditions for disabled inmates.

Legal and Constitutional Rights

- **Constitutional Guarantees**: Prisoners have the right to equality, freedom, and humane conditions under Articles 14, 19, and 21.
- International Commitments: India is obligated to follow the Nelson Mandela Rules and the UN Convention on the Rights of Persons with Disabilities, which mandate accommodations for disabled prisoners.
- **Domestic Laws**: The Rights of Persons with Disabilities Act, 2016, and the Model Prison Manual, 2016, emphasize dignity, accessibility, and protection from abuse for prisoners with disabilities.

Systemic Failures

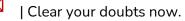
- **Ignored Guidelines**: Policies like the Ministry of Home Affairs' Accessibility Guidelines (2024) are poorly enforced.
- Lack of Data: The government does not maintain specific data on disabled prisoners, hindering targeted reforms.

Call for Action

- **State Responsibility**: Prisons are a State subject, and governments must ensure rights are upheld for disabled inmates.
- **Political Will Needed**: Societal indifference towards prisoner suffering delays reform. However, ensuring dignity and accessibility is the state's legal obligation.

Lessons from Saibaba's Case

- His suffering is a stark reminder of the urgent need to reform prison conditions for disabled inmates.
- Authorities must implement existing laws and guidelines in both spirit and practice.



Environment

Easy Explanation

Since 1984, when M.C. Mehta filed a public interest litigation, combating air pollution in Delhi has seen bursts of activity in October, only to subside later. Despite some progress, population growth and rapid urbanization have outpaced these measures. This issue is not unique to Delhi—cities like Los Angeles and Beijing face similar challenges, showing that urban air pollution is a long-term, complex problem requiring systemic solutions rather than temporary fixes.

The National Green Tribunal (NGT) and National Clean Air Programme (NCAP) have initiated actions, but results remain minimal due to a lack of transformative measures. The Supreme Court has highlighted the right to a clean environment as a fundamental right, but compliance reports often fail to translate into real improvements on the ground. The issue stems from tackling symptoms rather than addressing the interdependent causes of air pollution.

In Delhi, vehicular emissions contribute significantly (about 60%) to pollution, with other sources like soil dust and stubble burning playing smaller roles. Temporary solutions like smog towers or dust control committees cannot solve the systemic problem. For instance, farmers in Punjab and Haryana are pushed to delay sowing crops to conserve groundwater, leaving little time for alternatives to stubble burning. However, Delhi itself has not been similarly proactive in reducing its contributions.

Beijing's approach offers lessons in tackling air pollution systematically. It combines accurate monitoring, large-scale public transport solutions, and public awareness campaigns. For Delhi, a similar comprehensive "toxicity management plan" involving technological innovation, political will, and budgetary support is essential to address both primary and secondary pollutants like PM2.5. Episodic measures and shifting blame will not suffice; what Delhi needs is a regional mechanism for coordinated action.

Key Takeaways

The Problem

- Air pollution in Delhi is a chronic issue, peaking in October-November, driven by rapid urbanization and inadequate systemic measures.
- Major contributors:
 - **60%** from vehicular emissions.
 - 20% from soil dust.
 - Less than **20%** from other sources, including stubble burning.
- Temporary solutions, like smog towers, fail to address the root causes.

Systemic Challenges

- **Dispersed sources:** Unlike point sources, vehicular and soil pollution are harder to regulate and require societal and infrastructural changes.
- **Stubble burning:** Farmers face constraints like reduced sowing windows, and technological alternatives remain ineffective.
- Lack of regional coordination: Pollution control requires collective action from neighboring states, but blame-shifting persists.

Judicial and Administrative Efforts

- **Supreme Court:** Declared the right to a clean environment as fundamental but noted limited onground impact despite compliance reports.
- National Clean Air Programme (NCAP): Launched in 2019 with a collaborative approach but has shown minimal results.
- **Commission for Air Quality Management (CAQM):** Struggles to address the political and systemic dimensions of pollution.

Beijing's Lessons

- Advanced monitoring: 1,000+ PM2.5 sensors for real-time data and 24-hour smog warnings.
- Public transport: 30,000+ low-floor buses, significantly more than Delhi's fleet.
- **Regional approach:** Integrated planning to address pollution beyond city limits.

Recommendations

- Develop a **Toxicity Management Plan** with clear goals, budgetary support, and political endorsement.
- Mandate the Graded Response Action Plan (GRAP) for consistent implementation, not just episodic actions.
- Shift focus to secondary pollutants like PM2.5, requiring regional cooperation and systemic changes.
- Invest in robust public transport and awareness campaigns to build long-term resilience against pollution.

Should packaged food content be labelled?: TH Text&Context

Sociology

Easy Explanation

A recent report by the **Access to Nutrition Initiative (ATNi)** has highlighted significant disparities in the healthiness of food and beverage products sold in different countries. The report found that products offered in low-and-middle-income countries (LMICs) are generally less healthy compared to those sold in high-income countries (HICs). It analyzed over 52,000 food products from major brands like Nestle, PepsiCo, Unilever, and Coca-Cola using a health star rating system. Products were rated based on their nutritional components, with healthier options scoring above 3.5 out of 5.

In LMICs, the average healthiness score was much lower (1.8) compared to HICs (2.3). Moreover, only 30% of companies have strategies to make healthier products affordable for lower-income consumers. These findings echo previous reports, such as one earlier this year that accused Nestle of selling baby food products with higher sugar content in LMICs compared to Europe. This disparity raises concerns in countries like India, where a dual burden of malnutrition and non-communicable diseases (NCDs) like obesity and diabetes exists.

In India, over 50% of people cannot afford a healthy diet, and processed food consumption has increased significantly. Despite government initiatives to regulate food marketing and labeling, such as the **National Multisectoral Action Plan** and draft regulations for front-of-pack labeling, progress has been slow. Studies from countries like Chile and Mexico show that mandatory labeling can reduce the consumption of unhealthy foods, but voluntary actions by companies have been insufficient.



Key Takeaways

Findings of the ATNi Report

- Leading food and beverage companies sell less healthy products in LMICs compared to HICs.
- Health Star Rating System:
 - \circ $\;$ Rates products on a scale of 1 to 5 based on their nutritional content.
 - Average score: 1.8 in LMICs, 2.3 in HICs.
- Only 30% of companies have strategies to make healthier products affordable for lower-income consumers.
- Micronutrient data is less available in LMICs.

Previous Instances

- A 2023 report found that Nestle's baby food in India and LMICs had higher sugar content compared to Europe.
- The Indian government urged the Food Safety and Standards Authority of India (FSSAI) to investigate these claims.

Significance for India

- India faces a dual burden:
 - Non-Communicable Diseases (NCDs): Over 10 crore Indians have diabetes, and obesity rates are rising.
 - **Undernutrition**: Micronutrient deficiencies and anemia persist.
- Unhealthy diets contribute to 56.4% of the disease burden, exacerbated by:
 - Increased consumption of processed foods.
 - Limited access to diverse and nutritious foods.
- Over 50% of Indians cannot afford a healthy diet.

Need for Front-of-Pack Labeling

- India is a signatory to World Health Assembly (WHA) resolutions on regulating junk food marketing to children.
- A 2022 draft regulation for front-of-pack labeling has made little progress.
- Evidence from Chile and Mexico shows that such labeling reduces the consumption of sugary beverages and junk food.

Call for Policy Action

- Activists and organizations like Nutrition Advocacy for Public Interest (NAPi) recommend:
 - Mandatory front-of-pack labeling for high sugar, fat, and sodium content.
 - Stricter government regulations, as voluntary corporate efforts have been inadequate.
- Policymakers must act to ensure better nutrition standards for pre-packaged foods.

How does PM Vidyalaxmi differ from other schemes?: TH Text&Context

Polity

Easy Explanation

| Clear your doubts now.

The Indian government has launched a new scheme called **PM Vidyalaxmi**, aimed at supporting meritorious students in pursuing higher education by providing **collateral-free**, **guarantor-free loans**. Students who secure admission in top-ranking institutions as per the **National Institutional Ranking Framework (NIRF)** can access these loans to cover tuition and other course-related expenses.

Under the scheme, students from families earning up to **₹8 lakh annually** will receive a **3% interest subsidy** on loans up to **₹10** lakh during the moratorium period (the time while studying and up to one year after completing the course). Priority is given to students in government institutions pursuing technical or professional courses. The scheme is designed to benefit **7 lakh students** over seven years, with an allocated budget of ₹3,600 crore.

Unlike past schemes that targeted only low-income groups, PM Vidyalaxmi includes **middle-income families** and simplifies the process with the **Vidyalaxmi portal**, which links major banks and enables easy tracking of loan status. However, the scheme narrows eligibility to institutions ranked in the NIRF top 100, creating challenges for students admitted to non-ranked colleges, who may face higher interest rates or outright loan rejections.

Key Takeaways

What the Scheme Covers

- Loans up to ₹10 lakh for tuition and related expenses.
- Applicable to students admitted to 860 NIRF-ranked institutions.
- Covers **22 lakh students** with an annual family income of up to ₹8 lakh.
- **3% interest subsidy** during the moratorium period for eligible students.
- Focus on **technical and professional courses** in government institutions.

How it Differs from Past Schemes

- Broader coverage, including middle-income families.
- Loan applications are streamlined through the Vidyalaxmi portal for easy tracking.
- Eligibility limited to institutions ranked in **NIRF** rather than NAAC or NBA accreditation.
- Past schemes catered to around 20,000 institutions; Vidyalaxmi focuses on a narrower list.

Implications for Students and Institutions

- Higher reliance on NIRF rankings for loan eligibility.
- Increased competition for admission in top-ranked colleges.
- Students in non-ranked institutions may face higher interest rates or loan rejections.
- Rankings now hold greater significance for students and institutions.

Budget and Coverage

- Total budget: **₹3,600 crore** (2024-25 to 2030-31).
- Annual coverage of **1 lakh students** for interest subsidies.

This scheme highlights the growing importance of academic performance and institutional rankings while expanding financial support for a broader demographic.

22nd November 2024



A primer on how to survive the declining air quality in India: TH Science

Environment

Easy Explanation

Air pollution in India has worsened due to winter and festive activities, prompting the Union Health Ministry to issue an advisory. The government has directed state health departments and hospitals to prepare for the rising health risks caused by poor air quality. Vulnerable groups, such as children, the elderly, and those with pre-existing health conditions, are particularly at risk. The advisory recommends limiting outdoor activities, especially in the mornings and evenings, and raising public awareness about the dangers of air pollution.

The air quality in Delhi-NCR has reached critical levels, with the AQI consistently in the 300-400 range and even exceeding 500 at times. Hospitals are reporting a sharp increase in cases of respiratory and cardiovascular issues linked to air pollution. Experts have highlighted that pollutants like particulate matter (PM2.5 and PM10) from stubble burning, traffic emissions, and industrial activities are major contributors to health problems.

Long-term exposure to air pollution is linked to severe health conditions such as heart disease, strokes, and neurological disorders like Alzheimer's and Parkinson's. The World Heart Federation's 2024 report underscores the significant role of air pollution in worsening cardiovascular diseases. Experts emphasize that without addressing pollution, tackling these health issues will remain difficult.

Preventive measures include using public transport, reducing stubble burning, and adopting clean energy sources. Air pollution is a global health crisis, with the WHO estimating 4.2 million premature deaths annually due to outdoor air pollution, particularly in low- and middle-income countries.

Key Takeaways

Health Advisory

- Union Health Ministry has advised limiting outdoor activities, especially for vulnerable groups like the elderly, pregnant women, and children.
- States and Union Territories instructed to increase healthcare preparedness and run public awareness campaigns.

Current Air Quality

- AQI in Delhi-NCR consistently in the 300-400 range, peaking above 500 in some areas.
- Rise in respiratory and cardiovascular cases reported in hospitals.

Health Impacts of Pollution

- Long-term exposure leads to endothelial dysfunction, oxidative stress, and increased risks of heart disease and strokes.
- Pollution is linked to cognitive decline, neurodegenerative disorders, and mental health issues like brain fog and irritation.

Contributors to Pollution

• Stubble burning in North India is a significant contributor to PM2.5 and PM10 levels.



Preventive Measures

- Encourage public transport, reduce reliance on diesel generators, and discourage stubble burning.
- Use clean energy and maintain vehicles to minimize pollution emissions.

Global Impact

- WHO estimates 4.2 million premature deaths annually due to outdoor air pollution.
- Low- and middle-income countries bear the brunt, with air pollution being the second leading cause of non-communicable diseases globally.

India needs an environmental health regulatory agency: TH Editorial

Environment

Easy Explanation

The conclusion of COP29 in Azerbaijan highlights India's dual challenge: advocating for climate mitigation financing while grappling with worsening pollution and its health impacts. India's greenhouse gas emissions have risen by over 6% compared to the previous year, underscoring the urgency of addressing environmental and public health issues. However, existing governance frameworks—like those of the Central Pollution Control Board (CPCB) and the Ministry of Environment, Forest and Climate Change (MoEFCC)—are not adequately integrated with health concerns.

To address this gap, India could establish an **Environmental Health Regulatory Agency (EHRA)**. This centralized body would unify environmental and health data, enabling more effective pollution control and health risk mitigation. Inspired by models like the U.S. Environmental Protection Agency (EPA), Germany's Federal Environment Agency (UBA), and Japan's Ministry of the Environment (MOE), an EHRA would ensure integrated, evidence-based policymaking.

An EHRA would focus on localized interventions, monitor health outcomes, and align environmental policies with economic growth. It would educate the public, encourage cleaner technologies, and support sustainable development while creating jobs and fostering innovation. Challenges like bureaucratic inertia and resistance from industries could be mitigated through clear coordination frameworks and operational independence. Such an agency would be crucial in helping India meet international commitments like the Paris Agreement and Sustainable Development Goals.

Key Takeaways

India's Environmental Challenges

- India's greenhouse gas emissions have risen by 6% compared to the previous year.
- Pollution in air, water, and land poses severe health risks, especially to vulnerable populations like children and the elderly.
- Current governance systems lack integration between environmental monitoring and health impact assessments.

Proposal for an Environmental Health Regulatory Agency (EHRA)

• An EHRA would centralize environmental and health data for cohesive policymaking.

- It would align efforts across multiple ministries, including pollution control, health surveillance, and broader environmental policies.
- Examples: The U.S. EPA, Germany's UBA, and Japan's MOE offer operational frameworks for integrating environmental management with public health.

Benefits of an EHRA

- **Evidence-based policies:** Research into specific health risks like poor air quality, chemical exposures, and climate change impacts.
- Localized interventions: Tailored solutions for diverse environmental challenges across India's regions.
- **Public awareness:** Educating communities about environmental health risks and empowering them to advocate for cleaner living conditions.
- **Economic alignment:** Promotes sustainable practices, fosters innovation, creates green jobs, and aligns environmental goals with economic growth.

Global Commitments

- An EHRA would help India meet its commitments under the Paris Agreement and Sustainable Development Goals.
- It would enable India to contribute to global efforts against climate and health challenges, including transboundary issues.

Challenges and Mitigation

- **Resistance:** Industries wary of regulation and bureaucratic inertia are potential hurdles.
- **Solutions:** Establish operational independence, measurable objectives, and strong inter-ministerial coordination.
- India's renewable energy successes show its ability to achieve systemic change, paving the way for effective environmental health governance.

A bilateral investment treaty with a 'bit' of change: TH Editorial

International Relations

Easy Explanation

India recently made public its bilateral investment treaty (BIT) with the UAE, signed earlier this year. This agreement replaces the 2014 treaty and shows how India's approach to such treaties is evolving. A BIT is meant to balance protecting foreign investments while ensuring that a country can still regulate its economy. It should also have clear rules to limit the discretion of arbitration tribunals that resolve disputes.

Key Changes in the India-UAE BIT:

1. Shorter Waiting Period for Disputes

Investors must try resolving disputes in Indian courts for three years before approaching international arbitration. This is a shift from the five-year period in India's 2015 Model BIT. Shortening this timeline acknowledges that India's court system is slow and gives foreign investors quicker access to arbitration. However, as long as India avoids misuse of regulatory powers, it need not worry about disputes.

2. Clearer Definition of Investment

The treaty defines investment as something involving capital, profit expectation, and risk. It removes a clause from the Model BIT requiring the investment to also be "significant for the host state's development." This makes it easier to define what qualifies as an investment, reducing room for arbitration tribunals to interpret this subjectively.

3. Specific Grounds for Treaty Violations

The treaty explicitly lists actions like denial of justice or breach of due process as violations but avoids referencing "customary international law" (CIL). Since the rules of CIL are unclear, leaving it out reduces the discretion of arbitration tribunals and ensures clearer rules for both states and investors.

Continuities and Additions:

No MFN Clause

Like the Model BIT, the India-UAE BIT does not include a "most favoured nation" (MFN) clause. This means investors cannot demand the same benefits given to investors from other countries.

- **Taxation Issues Excluded** Tax-related actions remain outside the scope of the treaty, ensuring India's taxation policies cannot be challenged under BIT provisions.
- Bar on Reviewing Domestic Court Decisions ٠

Arbitration tribunals are barred from reviewing domestic court decisions. However, this provision could be interpreted in ways that prevent arbitration altogether, potentially limiting investors' riahts.

New Provisions

The BIT prohibits third-party funding for arbitration claims and bars arbitration if fraud or corruption allegations are made against an investor.

This treaty reflects some adjustments in India's investment treaty strategy but retains significant elements of its Model BIT. Developed countries may appreciate the shorter waiting period but could remain wary of the exclusion of MFN and taxation issues.

Key Takeaways

Main Changes

- Three-Year Litigation Period: Investors need to try resolving disputes in Indian courts for three years (instead of five) before international arbitration.
- Simplified Definition of Investment: Removes the "development significance" requirement for • investments.
- **Clearer Violation Rules:** Lists treaty violations without referencing unclear international laws.

Continuities

- **Exclusion of MFN Clause:** Prevents foreign investors from claiming benefits given to others.
- Taxation Outside Treaty Scope: Tax measures cannot be challenged under the treaty.
- Domestic Court Decisions: Arbitration tribunals cannot question court judgments. •

Additional Provisions

Third-Party Funding Ban: Bars external funding for disputes.

• **Fraud and Corruption Clause:** Arbitration is unavailable if the investor is accused of fraud or corruption.

Strategic Implications

- India softens its stance with shorter litigation timelines, benefiting investors.
- Developed nations may remain cautious due to the exclusion of MFN and taxation issues.
- The treaty reflects India's attempt to balance investment protection with its regulatory autonomy.

Is Delhi becoming an uninhabitable city?: TH Text&Context

Environment

Easy Explanation

The **Air Quality Index (AQI)** measures the concentration of pollutants in the air, including particulate matter (PM10, PM2.5), nitrogen dioxide, sulphur dioxide, carbon monoxide, ozone, ammonia, and lead. In Delhi, **PM2.5** is the most concerning pollutant as its tiny size allows it to reach deep into the lungs, posing severe health risks.

Why is Delhi's Air Quality So Bad?

- 1. **Systemic Issues:** Over the years, Delhi has had only two days annually with "good" air quality. Even during the 2020 lockdown, there was only a slight improvement, showing that pollution is deeply ingrained in the system.
- 2. **Stubble Burning:** While often blamed for Delhi's poor air, stubble burning contributes only about 15-35% to PM2.5 levels during peak November days. Even without it, AQI levels remain dangerously high, indicating deeper systemic pollution issues.

Key Contributors Beyond Stubble Burning

- **Delhi's Own Emissions:** About 50% of the pollution originates from within the city. Vehicles are the largest contributor, accounting for 58% of PM2.5 pollution, including exhaust and tire/brake wear.
- **Transportation Dependency:** Over-reliance on private vehicles highlights the need for a massive shift to public transport powered by clean energy.

Why Are Winters Worse?

• Meteorological Factors: Cold air traps pollutants close to the ground, while weak winds and lack of rain prevent their dispersion. These conditions turn Delhi into a "pollution pot with a lid on." Warmer months (March to September) have relatively better air quality due to higher wind speeds and rainfall.

Health Impacts

- Air pollution affects nearly every organ in the body, causing systemic inflammation and cancer risks.
- A study in *The Lancet* showed that 1.67 million deaths in India in 2019 were attributable to pollution, with Delhi having higher death rates from ambient particulate matter compared to the national average.



• Poorer residents, like Monu from a low-income neighborhood, face disproportionately higher exposure to PM2.5 than affluent residents like Aamya. This disparity could reduce Monu's life expectancy by five years compared to Aamya's.

Insufficient Government Responses

- **Temporary Measures:** Initiatives like odd-even traffic rules, water sprinklers, or distributing masks are insufficient and mostly aimed at managing public perception.
- **Political Blame Game:** The central government blames the Delhi government and vice versa, without either taking substantial proactive measures to tackle the problem comprehensively.

Key Takeaways

Air Quality Index (AQI)

- Measures concentrations of pollutants like PM10, PM2.5, NO2, SO2, CO, O3, NH3, and Pb.
- PM2.5 is particularly harmful due to its small size, making it the primary concern for Delhi.

State of Air Quality in Delhi

- Delhi experiences over half the year with poor or severe air quality.
- Even during the lockdown in 2020, pollution levels only marginally improved.

Primary Contributors to Pollution

- Vehicles: Responsible for 58% of Delhi's PM2.5 pollution.
- **Other Factors:** Industrial emissions, dust, and burning of waste within the city contribute significantly.

Why Winters Are More Polluted

- Cold air traps pollutants near the surface.
- Weak winds and lack of rain exacerbate pollution levels in winter.

Health Impacts

- Air pollution causes serious health risks, including systemic inflammation and cancer.
- Poor residents face significantly higher exposure to pollution, worsening health inequalities.

Government Actions and Challenges

- **Temporary Solutions:** Measures like odd-even traffic restrictions or water sprinklers are largely ineffective.
- **Political Blame Game:** Both the state and central governments blame each other without implementing systemic solutions.

Conclusion

Delhi's pollution problem is deeply rooted and requires bold, comprehensive policies to address systemic issues like transportation, industrial emissions, and waste management. Political will and a long-term vision are critical to ensure residents' health and quality of life.



Environment

Easy Explanation

The severe air pollution in Delhi has created a crisis not just of health but also of inequality, as the poor and marginalized bear the brunt of its effects. The current Air Quality Index (AQI) has exceeded safe levels by a wide margin, prompting emergency measures like closing schools, shifting to online education, and allowing work-from-home options. However, these measures widen existing disparities.

For children, online education is often inaccessible for families without the necessary devices, stable internet, or a quiet space to learn. Families with limited resources may have to prioritize the education of one child over others. During the COVID-19 pandemic, similar challenges led to significant learning losses and higher dropout rates, particularly among older children from economically weaker sections.

Beyond education, women are disproportionately affected by these disruptions. With caregiving responsibilities increasing at home due to work-from-home arrangements or school closures, women often face additional stress and reduced opportunities for professional growth. Reports indicate that women are more likely to take work-from-home options, further burdening them with domestic responsibilities.

While addressing air pollution is crucial, the fight for clean air must also consider its social and economic consequences, ensuring that solutions do not worsen inequality or exclusion.

Key Takeaways

Impact on Education

- School Closures: Physical classes for primary and senior school students are halted due to poor air quality under the Graded Response Action Plan (GRAP) IV.
- **Online Education Challenges:** Families with limited resources struggle to provide devices and internet access, forcing them to prioritize one child's education over others.
- Learning Loss: The shift to online learning, similar to the COVID-19 era, risks higher dropout rates and unequal learning outcomes, especially among older children.
- **Risks in Online Environments:** Children without adult supervision are vulnerable to cyberbullying, exposure to inappropriate content, and digital addiction.

Burden on Women

- **Increased Domestic Load:** Women, regardless of economic status, bear a disproportionate share of caregiving responsibilities during school closures and work-from-home arrangements.
- Work-from-Home Dynamics: Many women opt for work-from-home options, managing both professional duties and household chores simultaneously.
- **Mental Health Strain:** The invisible "mental load" of household management adds to their stress, affecting overall well-being.

Broader Concerns

• Air Pollution as a Chronic Issue: India's air pollution levels have consistently exceeded WHO's recommended levels over the past decade.

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- **Unequal Impact:** Marginalized groups, including the poor and women, face the worst consequences of pollution-induced disruptions.
- Holistic Solutions Needed: The fight for clean air must address not only health concerns but also the social and economic disparities it exacerbates.

TRUST THE FARMERS: IE Editorial

Agriculture

Easy Explanation

The government, six months into its third term, has yet to announce any major agricultural reforms or policies, leaving the farming community in a state of uncertainty. While it has good intentions and courage, the lack of innovative ideas has stalled meaningful progress. Key areas of concern include the indecision over new biotech crops and inadequate support for natural farming. This indecision has left both the scientific community and farmers frustrated.

The government has prioritized controlling food inflation, which may appeal to voters but often comes at the cost of neglecting the long-term interests of farmers, who make up 40% of India's population. This short-term focus stems from two factors: the inflexibility of traditional economic frameworks and the political compulsion to win frequent elections.

Poor communication between Union ministers and farmer organizations has exacerbated the situation. Ministers appear out of touch with ground realities, ignoring farmers' grievances and innovative suggestions. For example, the much-publicized introduction of nano urea has been a failure, with farmers rejecting it and agricultural universities refusing to endorse it. Similarly, other initiatives like climateresilient seed varieties and decomposer technologies have seen little adoption due to poor implementation and lack of trust.

The root problem lies in the government's inability to engage with diverse voices and gather meaningful feedback from the ground. Solutions often come from those outside the traditional power structure, yet these perspectives remain ignored. Trust is crucial for successful policy adoption and reform, but the government's approach has bred mistrust among farmers. If the government hopes to regain credibility and foster transformation, it must start by trusting farmers and incorporating their feedback into policies.

Key Takeaways

Lack of Major Agricultural Reforms

- No significant announcements or reforms in agriculture six months into the government's term.
- Issues like biotech crops and natural farming remain unresolved, creating frustration among farmers and scientists.

Misplaced Priorities

- Controlling food inflation is prioritized over long-term agricultural welfare, affecting 40% of India's population.
- Short-term electoral goals overshadow the need for sustainable agricultural progress.

Failed Initiatives

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| Clear your doubts now.

- Nano Urea: Rejected by farmers; nitrogen content increased by 400% but still lacks credibility.
- **Climate-Resilient Seeds:** Of 109 varieties released, very few are likely to be adopted commercially.
- Other programs like Pusa decomposer and Drone Didis fail to leave an impression.

Lack of Engagement

- Union ministers are inaccessible, ignoring feedback and innovative ideas from farmers and independent experts.
- Policies are often shaped by international consultancy firms and NGOs, sidelining grassroots input.

Erosion of Trust

- Poor implementation of schemes like fertilizer distribution and paddy procurement has damaged trust.
- Trust, essential for successful reforms, is hard to rebuild once lost.
- The government must focus on building genuine trust with farmers and include their voices in policymaking.

Path to Improvement

- Farmers and independent voices need to be actively engaged in shaping agricultural policies.
- Trust-building requires transparency, timely delivery, and policies aligned with farmers' needs.

At centre of Gautam Adani's indictment in the US, the world's 'largest' solar deal: IE Explained

Polity

Easy Explanation

A U.S. court has accused Adani Group's chairman, Gautam Adani, his nephew Sagar Adani, and others of offering bribes totaling ₹2,029 crore (\$265 million) to Indian government officials. The bribes allegedly aimed to secure power supply agreements (PSAs) under a solar energy tender floated by the state-owned Solar Energy Corporation of India (SECI) in 2019. The tender involved developing large-scale solar power projects and manufacturing solar modules.

The allegations claim that SECI faced difficulties signing PSAs with power distribution companies (DISCOMs) in five states due to high energy prices proposed in the tender. Prosecutors state that Adani and others paid bribes to overcome these challenges. Gautam Adani reportedly met with Andhra Pradesh's Chief Minister in 2021 and promised a significant bribe to finalize PSAs in that state.

The U.S. Department of Justice and the Securities and Exchange Commission (SEC) are investigating the case because the Adani Group raised funds from American investors and operated in the U.S. through Azure Power, whose securities were listed on the New York Stock Exchange until 2023. The U.S. Foreign Corrupt Practices Act prohibits offering bribes to foreign officials to gain business advantages.

The Allegations

- Gautam Adani, Sagar Adani, and six others are accused of paying ₹2,029 crore in bribes to Indian officials.
- Bribes were allegedly linked to a 2019 SECI tender awarded to Adani Green and Azure Power to develop solar energy projects.

Solar Tender Details

- The tender aimed to establish 12 GW of solar generation capacity and 3 GW of solar module manufacturing capacity.
- Adani Green won 8,000 MW of solar capacity, while Azure Power was awarded 4,000 MW.

Reasons for Bribery

- SECI struggled to sign PSAs with DISCOMs in states like Andhra Pradesh, Odisha, Tamil Nadu, Chhattisgarh, and Jammu & Kashmir due to high proposed tariffs.
- Allegations suggest Adani met Andhra Pradesh officials in 2021, offering bribes to secure PSAs.

U.S. Involvement

- The U.S. Department of Justice and SEC are investigating under the Foreign Corrupt Practices Act.
- Adani Green raised over \$3 billion from U.S. investors, while Azure Power had securities listed on the NYSE until 2023.

Solar Tariffs and Industry Challenges

- Tariffs quoted in the tender (₹2.92 per unit) exceeded the average rates (₹2.3-2.4 per unit) in 2020, causing resistance from DISCOMs.
- SECI's inability to finalize PSAs jeopardized the projects and their expected revenues.

Legal Implications

- The SEC alleges that the Adani Group misled investors and used bribes to push through PSAs at above-market rates.
- The case highlights potential regulatory violations and risks for Indian and international stakeholders.

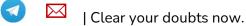
What is Global Alliance Against Hunger and Poverty, launched at Brazil G20?: IE Explained

Sociology

Easy Explanation

The Global Alliance Against Hunger and Poverty, launched during the G20 summit in Rio de Janeiro, Brazil, is a significant initiative aimed at eradicating hunger and poverty worldwide. This effort, championed by Brazil during its G20 presidency in 2024, seeks to connect countries in need with those willing to provide expertise or financial support for public policies targeting these issues.

Why is the Alliance Necessary?



The UN's 2030 Agenda for Sustainable Development had set goals to end poverty and hunger and improve food security and nutrition. However, progress towards these goals has been severely hindered by several factors:

- **COVID-19 Pandemic**: Increased extreme poverty and lowered global nutrition standards, particularly in the Global South.
- Global Conflicts: Ongoing wars and displacement have worsened poverty and hunger.
- **Climate Change**: Extreme weather events have negatively impacted food security. Current projections indicate that by 2030, over 600 million people will still live in extreme poverty, and a similar number will face hunger, putting the world far from its goals.

How Will the Alliance Work?

The Alliance is a collaborative platform involving 81 countries (including India), 26 international organizations, financial institutions, and NGOs. It focuses on knowledge sharing and matchmaking between countries needing assistance and donors. Key aspects include:

• Evidence-Based Policy Support: A basket of over 50 proven policy tools will help member countries address hunger and poverty.

- Sprints 2030 Initiatives: These are target-driven actions in six critical areas:
 - School meal programs
 - Cash transfer schemes
 - Support for small-scale and family farmers
 - Socio-economic inclusion programs
 - Maternal and early childhood care
 - Water access solutions

Unlike many programs, the Alliance does not create a central fund but connects donors with countries in need. Its operational costs, estimated at \$2-3 million annually, will be supported by member countries and institutions like the FAO, UNICEF, and the World Bank.

Key Takeaways

Urgent Need for the Alliance

- **2030 Goals in Jeopardy**: Projections show 622 million people could remain in extreme poverty, and 582 million in hunger by 2030.
- **Contributing Factors**: COVID-19, global conflicts, and climate change have reversed progress.

Structure and Functioning

- **Global Collaboration**: 81 countries, 26 international organizations, 9 financial institutions, and 31 NGOs have joined.
- Matchmaking Model: Links countries in need with donors and technical expertise providers.
- **Policy Tools**: Provides over 50 evidence-based solutions to member countries.

Key Focus Areas – Sprints 2030

- 1. School meals to combat child malnutrition.
- 2. Cash transfer programs to provide financial relief.

- 3. Support for smallholder and family farming to enhance food security.
- 4. Socio-economic inclusion to improve livelihoods.
- 5. Maternal and early childhood interventions for better health outcomes.
- 6. Water access solutions to ensure clean and adequate water supply.

Funding and Location

- **No Central Fund**: Operational costs of \$2-3 million annually will be supported by FAO, UNICEF, the World Bank, and member contributions.
- **Headquarters**: Likely to be based in Brasilia or another Global South country, with an additional office at the FAO headquarters in Rome.

This initiative represents a critical step in global efforts to address hunger and poverty, fostering collaboration across nations to achieve sustainable development goals.

23rd November 2024

Damaged: India Inc credibility- IE Editorial

Economy

Easy Explanation

India's global ambitions in geopolitics and geo-economics have faced challenges due to controversies surrounding the Adani Group. Allegations of undue influence by the Indian government to secure contracts for Adani have raised questions about crony capitalism. For example, Sri Lanka initially accused India of pressuring it into awarding a renewable energy project to Adani, but later partnered with the United States to finance an Adani port project in Colombo. Other countries, like Kenya and Bangladesh, are now reevaluating contracts with the Adani Group following allegations of misconduct.

The Adani Group's global ventures have been supported by the Indian government, often framed as part of India's larger geo-economic strategy to counter China's influence. However, Adani's financial model relies heavily on external borrowing, making the group vulnerable to legal and financial scrutiny abroad, such as under U.S. laws that regulate overseas investments.

Critics argue that this dependency on foreign funding exposes India's strategy to inherent risks. Unlike China, which uses its domestic financial resources for global expansion, India relies on Western support, subjecting its businesses to Western legal systems. This has led to global reputational damage, undermining India's broader goals of projecting economic and political power.

The controversy also highlights the longstanding nexus between politics and business in India. While political favoritism is not new, the overt global support provided to Adani by the government has crossed acceptable boundaries. Many believe that defending such practices in the name of "national interest" harms India's credibility.

To protect India's global reputation and restore confidence in Indian businesses, swift and exemplary action is needed against any wrongdoing. Such measures will reinforce the distinction between legitimate business support and cronyism.

Key Takeaways

| Clear your doubts now.

Adani Controversies Abroad

- Allegations of Indian government pressure in securing Adani contracts, like in Sri Lanka's renewable energy project.
- Kenya and Bangladesh are reevaluating their agreements with the Adani Group.
- U.S. laws are scrutinizing Adani's operations due to its borrowing and business registration in the U.S.

Government's Role in Adani's Global Expansion

- The Indian government frames its support for Adani as part of a broader geo-economic strategy.
- The rationale includes countering China's influence and projecting India's global economic power.
- Critics argue this approach crosses into crony capitalism, damaging India's credibility.

Financial Vulnerabilities

- Adani Group's reliance on foreign borrowing exposes it to legal risks in Western countries.
- Unlike China, India's global strategy is dependent on external financial systems, limiting autonomy.

Impact on Brand India

- The controversy has weakened India's global business reputation.
- Established Indian brands like Tata and Infosys risk being overshadowed by scandals involving politically connected entities.

Lessons and Recommendations

- A clear separation between government support and private sector corruption is essential.
- Upholding transparency and ethical practices is critical to protecting national interest.
- Exemplary action against any wrongdoing is necessary to rebuild trust in Indian businesses globally.

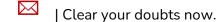
ZONE OF CONTAINMENT: IE Editorial

Science

Easy Explanation

Antimicrobial resistance (AMR) is a growing global health threat where microbes become resistant to drugs used against them, making infections difficult or impossible to treat. This resistance results in numerous deaths worldwide, especially in low- and middle-income countries like India. AMR gained global attention after a 2014 projection estimated 10 million annual deaths from it by 2050, leading to initiatives like the Global Action Plan (2015) and the UN Resolution on AMR (2016).

India has made progress in monitoring AMR through networks that track drug-resistant infections in hospitals and other settings, but these initiatives don't cover the entire country yet. The government has also mandated microbiology labs in district hospitals and started monitoring antimicrobial use in livestock and fisheries. However, challenges such as fragmented efforts, lack of governance, and inadequate funding remain.



This year, global leaders, including India, committed to reducing AMR-related deaths by 10% by 2030 at the UN General Assembly. India was among the first countries to launch a National Action Plan (NAP) on AMR in 2017. Going forward, India needs to strengthen governance, invest in healthcare systems, improve diagnostics, and promote vaccine uptake to effectively combat AMR. Additionally, research to develop new drugs and diagnostics is essential to respond to the crisis.

Key Takeaways

Understanding AMR

- What is AMR?: Resistance of microbes to drugs, leading to untreatable infections.
- **Global Burden**: 1.14 million deaths in 2021 were directly linked to AMR, with the highest burden in South Asia and Africa.
- Older Adults at Risk: Deaths in adults aged 70+ increased by over 80% from 1990 to 2021.

Global Initiatives

- Key Actions Taken:
 - Global Action Plan (2015) and UN Resolution on AMR (2016) raised global awareness.
 - **GLASS (Global Antimicrobial Resistance and Use Surveillance System)**: A WHO initiative for standardized AMR data sharing, now involving 137 countries.
- **2023 Commitment**: UNGA pledged to reduce AMR-related deaths by 10% by 2030 and ensure 60% of countries have funded action plans.

India's Efforts

- Surveillance Networks: AMR tracking in hospitals, livestock, poultry, and fisheries.
- **District-Level Data**: Efforts underway to establish microbiology labs in district hospitals for better AMR tracking.
- National Action Plan (2017): India was among the first to launch an AMR-specific NAP.

Challenges in Implementation

- Fragmented Governance: Lack of coordination among multiple players.
- Funding Issues: Absence of sustained financing mechanisms.
- Healthcare Gaps: Limited reach of diagnostic facilities and infection control programs.

Future Roadmap

- 1. Strengthen Governance: Improve accountability and align efforts with national targets.
- 2. Focus on Interventions: Promote infection control, vaccine uptake, and antimicrobial stewardship.
- 3. Invest in Healthcare: Strengthen healthcare systems to reduce AMR transmission.
- 4. Foster Research: Accelerate the development of new drugs, diagnostics, and vaccines.
- 5. **Ambitious Action**: Commit to long-term and sustained efforts to protect public health and tackle AMR effectively.

Argentina considers Paris treaty pullout: What does that mean?: IE Explained

Environment

Easy Explanation

| Clear your doubts now.

Argentina's far-right President, Javier Milei, is considering pulling Argentina out of the **Paris Agreement**, an international treaty to combat climate change. This move has stirred global concern as the Paris Agreement is a major effort to reduce greenhouse gas (GHG) emissions and limit global warming. Milei, known for his skepticism about climate change, has previously dismissed it as a "socialist lie." His government is re-evaluating Argentina's participation in the treaty but has yet to make a final decision.

The Paris Agreement, signed by nearly every country in 2015, aims to keep global warming well below 2°C, preferably limiting it to 1.5°C. Countries commit to submitting increasingly ambitious plans, called **Nationally Determined Contributions (NDCs)**, every five years to reduce emissions. Withdrawal from the treaty requires a formal written notification to the UN, and it takes effect one year after submission.

Argentina's potential withdrawal could harm global climate efforts, as the country is a significant emitter with abundant fossil fuel reserves. Exiting the treaty could also isolate Argentina diplomatically, making it less attractive as a trading partner, especially with nations imposing climate-related tariffs. Domestic opposition and constitutional hurdles may, however, prevent this withdrawal from happening.

Key Takeaways

Paris Agreement Basics

- Adopted in 2015 to combat climate change by reducing GHG emissions.
- Aims to limit global warming to **below 2°C**, ideally **1.5°C**.
- Requires countries to submit **Nationally Determined Contributions (NDCs)** every five years, increasing their ambitions over time.

Withdrawal Procedure

- Countries can withdraw three years after the agreement comes into force.
- Withdrawal becomes effective one year after notification to the UN.
- Until then, the country remains a member and must participate in activities.

Argentina's Re-evaluation

- President Milei, a **climate change skeptic**, has criticized the Paris Agreement as unnecessary.
- His government claims climate change is part of **natural cycles** but agrees on mitigation measures.
- Argentina has vast **fossil fuel resources**, including the second-largest reserves of **shale gas** and fourth-largest reserves of **shale oil** globally.

Global Impact of Withdrawal

- Could set off a **domino effect**, leading other countries to reconsider their participation.
- Undermines global goals to reduce emissions by **42% by 2030** and **57% by 2035** to avoid breaching the 1.5°C limit.
- Argentina's exit could **isolate the country diplomatically**, especially with new climate-related import duties being imposed by countries like the EU.

Domestic and Legal Challenges

- Withdrawal requires parliamentary approval, which may face opposition.
- Argentina ratified the Paris Agreement in 2016, granting it **constitutional status**, complicating any withdrawal efforts.



Potential Risks

- Argentina risks damaging its reputation and economic ties with climate-conscious trading partners.
- Its withdrawal may weaken collective global efforts to combat climate change, given its significant role as a GHG emitter.

China-India state of play: IE Explained

International Relations

Easy Explanation

India and China have been working towards improving their strained relations, particularly after the violent border clashes in Ladakh's Galwan Valley in 2020. The tension over the past four-and-a-half years created a significant trust deficit. Recent diplomatic engagements, including discussions between high-level officials and meetings between Indian Prime Minister Narendra Modi and Chinese President Xi Jinping, signal both nations' willingness to move forward cautiously.

China's Perspective:

China has expressed a strong desire to normalize relations and resume business and cultural exchanges. It has proposed several steps, such as reinstating direct flights, easing visa restrictions, allowing journalists to work freely, and lifting bans on Chinese apps. Chinese officials described the Modi-Xi meeting at the BRICS Summit as a "restart and re-launch" of ties.

India's Approach:

India remains cautious, emphasizing that resolving border issues is a prerequisite for progressing in bilateral relations. While India has engaged in talks and proposed initiatives like restarting the Kailash Mansarovar Yatra and sharing river data, it has been guarded, reflecting the hardened public opinion against China since the Galwan clashes.

Progress Made:

- Both nations have resumed limited military patrols along the Line of Actual Control (LAC) as part of a three-step process: disengagement, de-escalation, and de-induction of troops.
- Defense Minister Rajnath Singh and his Chinese counterpart met recently, emphasizing cooperation over conflict and confidence-building.

Challenges Ahead:

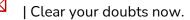
Despite agreements, divergences remain. For instance:

- India is wary of normalizing ties without substantial de-escalation at the border.
- China has not addressed India's concerns about the Kailash Mansarovar Yatra and river datasharing.

Next Steps:

The focus will now shift to de-escalation, with both countries maintaining large troop deployments along the LAC. Upcoming meetings between Special Representatives and Foreign Secretary-level officials will





likely determine the pace of future cooperation. India's cautious approach reflects its commitment to securing peace at the border before fully restoring bilateral ties.

Key Takeaways

Background of Tensions

- The border standoff began in April-May 2020, with violent clashes in Galwan resulting in the deaths of 20 Indian soldiers and at least four Chinese soldiers.
- This was the most deadly border conflict since 1967 and led to strained political and economic ties.

Recent Developments

- **Patrolling Agreement:** Soldiers from both sides resumed limited patrols in Ladakh, marking the beginning of the disengagement process.
- **Diplomatic Engagements:** High-level meetings have taken place, including between Modi and Xi Jinping and their respective foreign and defense ministers.

China's Proposals

- Resume direct flights between India and China.
- Ease visa restrictions for diplomats, scholars, and journalists.
- Lift bans on Chinese apps and encourage cultural exchanges.

India's Prop<mark>o</mark>sals

- Restart the Kailash Mansarovar Yatra for Indian pilgrims.
- Share data on trans-border rivers to manage water resources effectively.
- Strengthen people-to-people and media exchanges.

Key Challenges

- Trust deficit remains high due to unresolved border issues.
- Public opinion in India is still hardened against normalizing relations with China.
- China's proposals for cultural and economic normalization have not fully addressed India's security concerns.

Focus on De-escalation

- Both nations have over 50,000 troops stationed near the LAC in Ladakh.
- The next phase of talks will prioritize reducing troop deployments and rebuilding trust.

Outlook

- While there is momentum toward normalization, progress will depend on tangible improvements at the border.
- India remains cautious, balancing public sentiment with diplomatic engagements to ensure national security.

Chhattisgarh's new tiger reserve, at heart of animal's contiguous home: IE Explained



Environment

Easy Explanation

The Chhattisgarh government has declared **Guru Ghasidas-Tamor Pingla** as India's **56th tiger reserve**, aiming to improve its declining tiger population. This is the fourth tiger reserve in the state, following **Achanakmar**, **Indravati**, and **Udanti Sitanadi**. With a size of **2,829 sq km**, it is the third largest tiger reserve in the country. Located in northern Chhattisgarh's **Sarguja region**, it serves as a critical corridor between other tiger reserves in **Madhya Pradesh (Bandhavgarh)** and **Jharkhand (Palamau)**.

The reserve is home to a wide variety of wildlife, including **elephants**, **sloth bears**, **leopards**, **jackals**, and **vultures**, as well as a rich array of **flora** such as **sal** and **kusum** trees. Currently, it houses **five to six tigers**, with the state's total tiger population reported to be **30**, a sharp drop from **46 in 2014**.

To address this decline, the state plans to **relocate tigresses** from Madhya Pradesh and implement measures like **grassland development**, **increasing prey**, and **building awareness among villagers**. A comprehensive **Tiger Conservation Plan (TCP)** is being developed to tackle issues like patrolling hilly terrains, strengthening wildlife corridors with Madhya Pradesh, and mitigating human-wildlife conflict. Villagers are being encouraged to **relocate voluntarily** and offered opportunities in **tourism-related jobs**.

Key Takeaways

About Guru Ghasidas-Tamor Pingla Tiger Reserve

- Location: Sarguja region of Chhattisgarh, spanning four districts (MCB, Korea, Surajpur, Balrampur).
- Size: 2,829 sq km (third largest tiger reserve in India).
- **Significance**: Lies between Bandhavgarh (Madhya Pradesh) and Palamau (Jharkhand), making it part of the largest contiguous habitat for tigers.

Current Wildlife and Features

- Fauna: Tigers, elephants, sloth bears, jackals, chitals, vultures, and more.
- Flora: Rich in sal, saja, dhavda, and kusum trees.
- Habitat: Hills, plateaus, valleys, and river systems offering diverse ecological zones.

Chhattisgarh's Tiger Population

- Current count: 30 tigers (five to six in the new reserve).
- Decline: Population dropped from 46 (2014) to 17 (2022) as per NTCA's 2023 report.

Conservation Measures

- Tiger Relocation: Plans to bring tigresses from Bandhavgarh and Sanjay Dubri tiger reserves.
- Tiger Conservation Plan (TCP):
 - Enhance road and wireless connectivity for effective patrolling.
 - Develop grasslands and waterbodies to increase prey availability.
 - Strengthen wildlife corridors with Madhya Pradesh to facilitate natural tiger migration.
- Villager Engagement:
 - Encourage voluntary relocation with priority for reserve-related jobs.
 - Promote tourism-related businesses (tour guides, homestays, boating).



Human-Wildlife Conflict Mitigation

- Initiatives: Awareness campaigns and training for villagers to reduce conflicts.
- **Support**: Sparsely populated villages (42 in total) offered relocation and employment opportunities.

Importance of Corridors

• **Connectivity**: Strengthen corridors between Bandhavgarh and Sanjay tiger reserves to facilitate migration and boost tiger population naturally.

This initiative underscores Chhattisgarh's efforts to restore its wildlife and create a balanced coexistence between humans and animals.

Understanding the changing face of extremist violence: TH Editorial

Internal Security

Easy Explanation

The article discusses how recent conflicts, such as the Ukraine war and the Israel-Hamas conflict, have overshadowed other forms of violence, particularly extremist activities. This shift in focus is dangerous, as new trends in extremist violence continue to emerge, potentially posing threats to global security. A RAND study in the U.S. highlighted these changing trends in domestic extremism, urging law enforcement to adapt their strategies. Although the study focused on the U.S., its findings are relevant globally, including India.

India's Post-Independence Challenges

India's post-independence history has been marked by significant internal challenges. Communal violence and left-wing revolutionary movements like the Tebhaga Movement in Bengal and the Communist uprising in Telangana in the late 1940s caused disruptions. Although these movements were suppressed, left-wing extremism persisted and evolved into the Naxalite Movement in the late 1960s. This movement, inspired by Marxist ideologies, gained traction among educated youth and established influence in regions like West Bengal, Andhra Pradesh, and Kerala. Over time, however, it descended into violence and lost much of its ideological appeal. Yet, left-wing extremism remains a latent threat that demands vigilance.

The Global Shift to Right-Wing Extremism

In recent years, right-wing ideologies have gained prominence worldwide, especially in Europe. Countries like Germany have witnessed growing xenophobia and political polarization. France faces challenges in balancing its liberal traditions with rising right-wing pressures, signaling a broader erosion of liberal values across Europe. This shift is not new; events like Brexit in 2016 hinted at the growing influence of right-wing politics. These trends are significant because they challenge democracy, governance, and international stability.

Drivers of Extremism

The spread of extremist ideologies is influenced by several factors:

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- 1. **Misinformation and Disinformation:** False narratives fuel radicalization, particularly through social media.
- 2. **COVID-19 Pandemic:** Social isolation and economic hardships during the pandemic created fertile ground for radicalization.
- 3. **Islamic State's Influence:** The rise of the Islamic State catalyzed extremist activities, spreading its ideology across West Asia and beyond. This has contributed to insecurity in multiple regions.
- 4. **Cross-Pollination of Ideologies:** Right-wing extremism and Islamist militancy influence each other, creating a complex and interconnected threat landscape.

Indian Responses to Extremism

India has taken steps to address extremist threats, focusing on both left-wing and right-wing violence. For instance:

- Crackdowns on groups like the Popular Front of India (PFI) and the Social Democratic Party of India (SDPI), which were identified as pro-right-wing extremist Muslim organizations, have been controversial but deemed necessary.
- Left-wing extremism continues to require attention, as remnants of Naxalite influence persist in certain regions.

Implications for Global and Domestic Security

The rise of right-wing extremism has global implications, including:

- **Radicalization of Mainstream Ideas:** Right-wing ideologies are becoming mainstream, affecting governance and policy.
- **Challenges for Law Enforcement:** Agencies must adapt to new threats while maintaining democratic values.
- Balance Between Security and Liberty: Striking this balance is critical, as harsh measures can undermine public trust and freedoms.

Ultimately, extremist violence—whether left-wing, right-wing, or Islamist—poses enduring challenges. Governments must remain vigilant and proactive to counter these threats effectively.

Key Takeaways

Changing Trends in Extremist Violence

- Conflicts like the Ukraine war and Israel-Hamas crisis overshadow ongoing extremist threats.
- Extremist violence evolves over time, requiring adaptive responses from law enforcement.

India's Post-Independence Challenges

- **Early Threats:** Communal violence and Communist uprisings, such as the Tebhaga Movement and Telangana revolt, disrupted stability.
- Naxalite Movement: A left-wing extremist movement with significant ideological appeal, it spread across regions like West Bengal, Andhra Pradesh, and Kerala but eventually descended into violence.

Rise of Right-Wing Extremism



- **Global Growth:** Right-wing ideologies are rising in Europe, with increasing polarization in Germany and France.
- Brexit as a Signal: The 2016 Brexit vote reflected a shift toward right-wing politics.
- Implications: Challenges democratic values and governance worldwide.

Factors Fueling Extremism

- 1. Misinformation: False narratives spread through social media fuel radicalization.
- 2. **COVID-19 Isolation:** Social and economic stresses during the pandemic exacerbated grievances.
- 3. Islamic State: Its rise contributed to insecurity and spread extremist ideologies globally.
- 4. **Cross-Pollination:** Interconnected ideologies of right-wing and Islamist extremism intensify threats.

India's Countermeasures

- **Crackdowns on Extremist Groups:** Actions against PFI and SDPI highlight efforts to address growing militancy.
- Vigilance Against Left-Wing Extremism: Despite its decline, Naxalism remains a latent threat.

Global Implications

- Radicalization of Mainstream Ideas: Right-wing and Islamist ideologies increasingly influence policies.
- **Challenges for Law Enforcement:** Adapting to evolving threats while protecting democratic values is critical.
- **Balance of Security and Liberty:** Essential to maintain public trust and ensure effective governance.

Democratising AI needs a radically different approach: TH Editorial

Science

Easy Explanation

The dominance of Big Tech companies in the AI ecosystem has become a global concern. These companies control essential resources like data, computational power, and developer tools, creating significant barriers for smaller players and governments trying to compete. India, like other nations, is working to address this issue by investing in sovereign cloud infrastructure, promoting open data initiatives, and supporting local startups. However, these efforts alone may not break Big Tech's stranglehold and could unintentionally reinforce their dominance.

Challenges of Big Tech Dominance

Deep learning, the most popular form of AI, is computationally expensive to develop. For example, training Gemini Ultra in 2023 cost approximately \$200 million, a level of investment most organizations cannot afford. This forces smaller players to depend on Big Tech for computational resources, allowing these companies to maintain their monopoly by advocating for larger, costlier models.



Big Tech also provides end-to-end services, including advanced developer tools optimized for their infrastructure. These services simplify AI development but lock developers into their ecosystems, making it costly to switch to other providers. Moreover, Big Tech's access to vast amounts of real-time data from multiple domains gives them an unparalleled competitive edge. Even open data initiatives, meant to level the playing field, often fail because Big Tech's superior resources allow them to exploit these platforms more effectively than smaller competitors.

In addition, Big Tech dominates academic research in AI, with industry players producing more publications and shaping the field's direction. This limits the role of independent academic research, further entrenching Big Tech's influence.

Rethinking AI Development: A Theory of Change

Instead of competing directly with Big Tech, there is a need to adopt a radically different approach to AI development:

- 1. **Focus on Small AI:** Develop smaller, purpose-driven AI models guided by domain expertise and real-world needs, rather than relying solely on statistical patterns in massive datasets.
- 2. **Theory of Change:** Use a scientific approach to understand how different factors interact and how targeted interventions can drive progress. Data collection should support these hypotheses, prioritizing quality over quantity.
- 3. **Historical Lessons:** Many breakthroughs in fields like medicine and aviation came from theorydriven approaches rather than data-heavy models. Al development can learn from these examples.

This approach can lead to a more democratic and sustainable AI ecosystem, reducing dependence on Big Tech and avoiding the resource-heavy "bigger is better" mentality.

Missed Opportunities

Global initiatives like the recently signed Global Development Compact aim to democratize AI but fall into the same trap of focusing on large datasets and computational power. This reinforces reliance on Big Tech instead of promoting genuinely alternative models of AI development. A shift in focus is urgently needed to reduce dependence on Big Tech and build AI systems that address real-world challenges effectively.

Key Takeaways

Big Tech's Dominance in AI

- **Expensive Al Models:** Deep learning requires enormous computational power (e.g., \$200 million to train Gemini Ultra), creating barriers for smaller players.
- End-to-End Services: Big Tech provides integrated tools optimized for their infrastructure, locking developers into their ecosystems.
- **Data Monopoly:** Access to continuous, real-time data gives Big Tech a competitive advantage, limiting the effectiveness of open data initiatives.
- Academic Influence: Industry dominates AI research, reducing the role of independent academic exploration.

Challenges with Current Responses

| Clear your doubts now.

• **Open Data Risks:** Open data is often exploited by Big Tech, further entrenching their dominance.

A New Approach to AI Development

- Small AI Models: Focus on smaller, purpose-driven AI systems tailored to specific needs.
- **Theory of Change:** Use scientific methods and domain expertise to guide AI development rather than relying on large datasets alone.
- **Historical Examples:** Fields like medicine and aviation advanced through theory-driven approaches, not sheer data volume.

Missed Opportunities

• **Global Development Compact:** While aiming to democratize AI, it reinforces the "big-data and compute power" model, increasing reliance on Big Tech.

Call to Action

• Al development must shift away from resource-heavy models to create a more equitable and sustainable ecosystem. A focus on smaller, theory-driven Al models can help break Big Tech's monopoly and democratize innovation.

Urgent Deadline: TH Editorial

Sociology

Easy Explanation

The recent G-20 summit in Rio de Janeiro focused on global hunger, poverty, and climate justice, but it fell short of concrete solutions. Brazilian President Lula Da Silva emphasized the need to tax the super-rich, proposing a 2% wealth tax on the wealthiest individuals to raise over \$200 billion, but the G-20 declaration did not include this. Prime Minister Narendra Modi highlighted how the "Global South" (poorer and emerging economies) bears the brunt of global challenges and called for global administration to represent the majority of the world. This was the third G-20 summit hosted by a Global South country after Indonesia in 2022 and India in 2023, with South Africa set to host in 2024. However, global conflicts and geopolitical tensions diluted the focus on pressing issues.

Geopolitical Challenges

The summit occurred amidst significant conflicts, such as the Israel-Hamas war and Russia's invasion of Ukraine. These tensions made it difficult to forge consensus among G-20 nations. The declaration expressed "deep concern" over the humanitarian crisis in Gaza but avoided strong language or specific solutions. On Russia's invasion of Ukraine, it dropped direct references to Russia, focusing instead on global food and energy security concerns.

Overlap with Climate Goals



The summit also coincided with preparations for COP29, the climate conference to be hosted by Azerbaijan in 2025. Brazil, set to host COP30, was expected to integrate climate justice and financing into G-20 discussions, particularly issues critical to developing nations. However, progress was limited.

Challenges from the U.S. Political Landscape

The timing of the U.S. presidential election results cast a shadow over the summit. If Donald Trump returns to power in 2025, his known disregard for climate issues and preference for fossil fuels could stall global efforts to address climate change. His slogan "Drill, baby, drill" and climate-denier cabinet choices are particularly worrying for climate justice advocates.

Future of Global South Leadership

The Global South quartet—Indonesia, India, Brazil, and South Africa—must take a stronger stance to ensure the G-20 addresses the concerns of developing countries. The focus should remain on tackling poverty, hunger, climate change, and ensuring equitable global governance. The urgency is greater as the G-20 will return to the U.S. in 2026, which may shift the agenda away from the priorities of the developing world.

Key Takeaways

Focus Areas of the Rio G-20 Summit

- **Global Hunger and Poverty:** Lula Da Silva proposed a 2% wealth tax on the super-rich to raise \$200 billion, but the declaration did not adopt this idea.
- **Global South Leadership:** PM Modi emphasized the need for greater representation of developing nations in global decision-making.

Challenges and Dilution of Focus

- **Geopolitical Tensions:** The Israel-Hamas war and Russia-Ukraine conflict dominated discussions, diluting attention to global hunger and poverty.
- **Vague Declarations:** The G-20 expressed "deep concern" over humanitarian crises but avoided specific commitments or solutions.

Climate Justice and Overlapping Agendas

- Integration with COP Process: Climate financing and justice raised by developing countries were expected to feature prominently, but little progress was made.
- Brazil's Role: As host of COP30 in 2025, Brazil's leadership on climate issues will remain critical.

Impact of U.S. Politics

• **Trump's Return:** If Donald Trump returns to power, his pro-fossil fuel stance could derail climate action and hinder support for Global South priorities.

Way Forward for the Global South

| Clear your doubts now.

- Leadership by Quartet: Indonesia, India, Brazil, and South Africa must push harder for concrete solutions on poverty, hunger, and climate change.
- **Urgency of Action:** The 2026 G-20 summit in the U.S. underscores the need for decisive steps before the agenda shifts away from developing-world priorities.

24th November 2024

How should India tackle diabetes load?: TH FAQ

Science

Easy Explanation

On International Diabetes Day (November 14), a study published in *The Lancet* revealed alarming statistics: more than 800 million adults globally live with diabetes, over four times the number in 1990. Shockingly, **212 million of these individuals are in India**, making it the country with the largest diabetic population, followed by **148 million in China**. However, the estimate from *The Lancet* is much higher than India's last official study by the Indian Council of Medical Research (ICMR), which pegged the diabetic population at over 100 million. The discrepancy lies in the different methods used to measure diabetes.

Why the Numbers Differ

- 1. Different Measurement Standards:
 - The *The Lancet* study used data from over 140 million people worldwide from various studies, relying on measures like HbA1C (average blood sugar over three months) and fasting glucose. HbA1C, with a 6.5% cutoff, may overestimate diabetes as it is affected by factors like anemia and age.
 - The ICMR study used the Oral Glucose Tolerance Test (OGTT), which measures blood sugar after fasting and post-meal, widely considered the "gold standard."
- 2. Global Context:
 - Not all countries use OGTT due to resource limitations. The *Lancet* study had to rely on available data, making it broader but less precise.

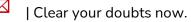
Areas of Concern

- Regardless of the exact figure (100 million or 200 million), **India faces a diabetes epidemic**, with millions requiring treatment. Diabetes is associated with severe complications such as **heart disease**, **kidney failure**, **vision loss**, and nerve damage.
- Over **half of diabetics globally are untreated**, increasing the risk of complications. Low-income countries face even more challenges as diabetics there tend to be younger, leading to lifelong health issues and economic strain.

Prevention and Control

1. Prevention as the Priority:

- Experts emphasize awareness, healthy diets, and physical activity as key to prevention.
 Obesity, especially abdominal obesity, is a major driver of diabetes among Indians.
- Legal measures like taxing sugary drinks and reducing carbohydrate-rich diets are critical.
- Mass awareness campaigns can inform people about lifestyle changes.



2. Focus on Vulnerable Populations:

- Efforts should prioritize **semi-urban and rural areas** and educate women, particularly postpregnancy and menopause, to combat obesity-related risks.
- Long-term solutions require **better access to healthcare**, safe spaces for exercise, and affordable healthy foods.

3. Government Role:

 Governments must enact policies to regulate unhealthy food, provide free or subsidized healthy meals, and ensure public spaces for physical activity. These structural changes are essential to empower individuals to adopt healthier lifestyles.

Individual Action

- The study identifies **obesity and poor diets** as key contributors to the rise of Type 2 diabetes. Regions with rising obesity rates, like South Asia, show a sharper increase compared to stable trends in Western Europe.
- **Mindful eating and regular exercise** are proven ways to prevent diabetes and manage blood sugar levels.

The Bigger Picture

Without immediate, coordinated efforts, the growing diabetes burden could overwhelm healthcare systems, especially with costly complications like kidney failure requiring treatments such as transplants. Experts liken the challenge to a "war" that requires both systemic reforms and individual commitment to tackle effectively.

Key Takeaways

Diabetes Epidemic: Global and Indian Context

- Over 800 million adults globally have diabetes, up from 199 million in 1990.
- India leads with **212 million diabetics**, followed by **148 million in China**.
- Measurement Variations:
 - The Lancet study used HbA1C, which may inflate numbers.
 - ICMR relied on the more precise OGTT standard.

Challenges

- **Complications**: Untreated diabetes leads to **kidney failure, heart disease, nerve damage**, and premature death.
- **Global Inequality**: Low-income countries face higher risks due to limited access to treatment.
- **Obesity and Poor Diets**: Key contributors to rising diabetes rates, especially in South Asia.

Prevention and Solutions

- 1. Systemic Efforts:
 - Promote legal measures to limit unhealthy food and sugary drinks.
 - Improve access to exercise facilities, parks, and subsidized healthy meals.
- 2. Individual Action:
 - Adopt **mindful eating** and maintain physical activity to prevent and manage diabetes.

3. Target Vulnerable Groups:

• Focus on **rural populations**, educate women post-pregnancy and menopause, and combat obesity.

Call to Action

• **Governments and individuals** must work together to curb diabetes. Awareness campaigns, structural reforms, and personal commitment to healthy living are essential to prevent this growing crisis from overwhelming healthcare systems.

What can CAQM do to improve Delhi air?: TH FAQ

Environment

Easy Explanation

Delhi's air pollution has been in the "severe" or "severe plus" category for the last 10 days, causing major concern. The Supreme Court criticized the **Commission for Air Quality Management (CAQM)** for its delayed response and lack of strict action to control pollution. The CAQM is a government body set up in 2020 to coordinate efforts, enforce measures, and address air quality issues in Delhi and nearby areas. It replaced the earlier **EPCA (Environmental Pollution Authority)**, which lacked legal authority.

The CAQM has the power to issue directions and even penalize officials who fail to act. It also implements the **Graded Response Action Plan (GRAP)**, a system of emergency measures to address pollution depending on its severity. However, the Supreme Court pointed out that the CAQM waited too long to implement Stage IV of GRAP, the highest level of restrictions, even after pollution reached the severe plus category. The court remarked that the commission's efforts need to be more effective and result in visible improvements in air quality.

The CAQM defends itself by highlighting its efforts to coordinate with states like Punjab and Haryana to tackle **stubble burning**, a major pollution source during October-November. Meetings with state officials start as early as February to prepare action plans. The commission acknowledges challenges but says it is expanding its focus to other areas like **dust control** and **vehicular pollution**. Experts, however, believe that pollution forecasting must improve and that CAQM should act proactively instead of waiting for air quality to worsen.

The problem, according to experts, lies in the gap between planning and execution. While CAQM has the authority, it depends on state governments and local agencies to implement measures on the ground. Without better coordination and timely enforcement, efforts to reduce pollution will remain ineffective.

Key Takeaways

About CAQM

- The Commission for Air Quality Management (CAQM) was established in 2020 to manage air pollution in Delhi and surrounding areas.
- It replaced the EPCA, which lacked legal authority to enforce decisions.
- The CAQM has statutory powers to issue directions, take measures, and penalize officials for noncompliance.



Supreme Court Criticism

- The Supreme Court criticized CAQM for delaying Stage IV of GRAP, which involves strictest restrictions when air quality reaches "severe plus."
- The court called for more proactive and effective action from the CAQM.

CAQM's Defense

- The commission highlights its improved coordination with states like Punjab and Haryana to tackle **stubble burning**.
- It is expanding its focus to address dust and vehicular pollution.

Challenges

- The CAQM's plans depend on state and local agencies for implementation, leading to gaps in enforcement.
- Experts call for improved **pollution forecasting** and more preemptive measures.

Way Forward

- A multi-pronged strategy is required to tackle pollution sources like **stubble burning**, **dust**, and **vehicular emissions**.
- Timely and strict enforcement of measures under GRAP is critical to reduce pollution levels effectively.

Why is there a row over climate finance?: TH FAQ

Environment

Easy Explanation

The 29th edition of the **Conference of Parties (COP29)**, a key UN climate conference, was scheduled to end on November 22, but negotiations are likely to continue due to disagreements on important issues. This conference aims to address rising carbon emissions and set targets for global climate finance, but sticking points between developed and developing nations remain unresolved.

Developing countries, including India, China, and the Group of 77, demand that developed nations provide **at least \$1 trillion annually from 2025-35** to help poorer countries transition away from fossil fuels, reduce emissions, and mitigate the effects of climate change. They also want compensation for climate-related damage already experienced. These demands are based on the principle that developed nations, historically responsible for the majority of carbon emissions, should pay more to address the problem.

Developed nations, led by the European Union, have pushed back, arguing that these demands are too high. They have proposed a collective goal of **\$1.3 trillion annually by 2035**, with their contribution being only **\$250-300 billion per year**, sourced from public and private entities, loans, and grants. Developing countries argue that this amount is insufficient and that climate finance should primarily consist of grants or low-cost loans rather than commercial sources.



A significant topic of contention is the **Carbon Border Adjustment Mechanism (CBAM)** introduced by the European Union, which taxes imports based on carbon emission standards. Countries like China, under the BASIC group (Brazil, South Africa, India, China), raised concerns at COP29, arguing that such measures unfairly affect developing countries and should be discussed at trade forums like the WTO instead.

One major agreement achieved during COP29 was the establishment of a **UN-supervised carbon market**, allowing countries to trade carbon credits—certified reductions in emissions. These credits are expected to facilitate climate finance and help nations meet their emission reduction targets. India, for instance, has been negotiating bilateral carbon trading agreements, which could gain momentum with this decision.

However, despite this progress, many core issues remain unresolved. The divide between developed and developing nations over the scale and structure of climate finance highlights the challenges of achieving global consensus. The urgency is underscored by rising global emissions, which are expected to increase by 0.8% in 2023, far from the reductions needed to combat climate change effectively.

Key Takeaways

COP29 Context and Goals

- Focused on addressing **rising carbon emissions** and setting targets for **climate finance**.
- Disagreements between developed and developing countries delayed progress.

Developing Countries' Demands

- \$1 trillion annually (2025-35) to support transitions to clean energy, meet emission targets, and mitigate climate impacts.
- Compensation for climate-related damage, reflecting developed nations' historical emissions.
- Contributions based on per capita GDP and historical responsibility.

Developed Countries' Proposals

- Proposed **\$1.3 trillion by 2035**, with their annual share only **\$250-300 billion**, sourced from public, private, and multilateral funds.
- Prefer diverse funding mechanisms, including loans, which developing nations oppose.

Key Issues and Agreements

- **Carbon Border Adjustment Mechanism (CBAM):** EU's tax on imports based on carbon emissions sparked opposition from developing nations, led by BASIC.
- **UN-Supervised Carbon Market:** Agreement on a global carbon trading system to help countries finance emission reductions and meet targets.
- Challenges remain in ensuring the transparency and authenticity of carbon credits.

The Bigger Picture

- Global emissions are rising, projected to increase **0.8% in 2023**, highlighting the gap between current actions and necessary reductions.
- The divide between developed and developing nations underscores the difficulty of achieving equitable climate agreements.



Science

Easy Explanation

A long-term study conducted in Scotland from 1988 to 2016 found **zero cervical cancer cases** in women who were fully vaccinated with the **HPV vaccine** at the age of 12-13. This remarkable finding highlights the effectiveness of the **HPV immunization program**, which began in Scotland in 2008. Women who were vaccinated later, between the ages of 14 to 22 as part of a catch-up program, also showed significant reductions in cervical cancer cases, though not as high as those vaccinated at a younger age. This study, published in the *Journal of the National Cancer Institute*, confirms that HPV vaccination, especially when given early, is a powerful tool in preventing cervical cancer.

HPV (Human Papillomavirus) types 16 and 18 are responsible for about 70% of cervical cancers worldwide. While the bivalent HPV vaccine primarily targets these two types, it also offers partial protection against a few other types, such as HPV 31, 33, and 45. Despite this, some cancers caused by other HPV types can still occur. Therefore, even vaccinated women need to undergo **regular cervical cancer screenings**, though less frequently, because vaccination alone cannot eliminate all risks.

In India, where screening for cervical cancer is poorly implemented, the HPV vaccine has been hailed as a solution. However, experts argue that vaccination should be paired with improved screening efforts. Adding the HPV vaccine to India's **universal immunization program** is important, but it must also involve educating women about the need for regular screenings.

The study also highlighted the vaccine's reduced effectiveness if administered after the onset of sexual activity. For instance, the HPV vaccine showed poor or no protection when given to women aged 20 or older. Vaccination between 14 and 18 years still showed significant benefits but did not eliminate cervical cancer entirely. This reinforces the importance of vaccinating girls before they become sexually active.

Additionally, cervical cancer incidence was linked to socioeconomic factors in Scotland. Women from more deprived areas had a higher incidence (10.1 per 100,000) compared to those from less deprived areas (3.9 per 100,000). This indicates that social factors and access to healthcare also play a crucial role in cervical cancer prevention.

Key Takeaways

HPV Vaccine Effectiveness

- Women vaccinated with the HPV vaccine at 12-13 years had zero cases of cervical cancer.
- Vaccination between 14-22 years significantly reduced cervical cancer but did not eliminate it.
- The vaccine works best when administered before the onset of sexual activity.

Vaccine Coverage

- The **bivalent HPV vaccine** protects against HPV types **16 and 18** (responsible for 70% of cervical cancers) and offers partial protection against other types like **HPV 31, 33, and 45**.
- The **nonavalent vaccine** (nine-valent) has a broader spectrum, offering protection against approximately **85% of HPV-positive cervical cancers**.

Importance of Screening

- Vaccinated women must still undergo **cervical cancer screening**, albeit less frequently, as the vaccine does not eliminate all risks.
- Screening can help detect cancers caused by other HPV types not covered by the vaccine.

Challenges in India

- Poor cervical cancer screening uptake in India requires a combined approach of vaccination and **improved screening programs**.
- Public awareness and accessibility to both vaccination and screening need to be prioritized.

Socioeconomic and Age Factors

- Women from **deprived areas** are more likely to develop cervical cancer due to limited access to healthcare and preventive measures.
- Vaccine effectiveness diminishes significantly if administered after sexual activity begins or in older age groups.

Way Forward

- Early HPV vaccination (before sexual activity) and education on cervical cancer prevention are critical.
- Governments should incorporate vaccines into immunization programs while ensuring robust cervical cancer screening infrastructure.

26th November 2024

The Constitution still thrives, let it show India the way: TH Editorial

Polity

Easy Explanation

This month marks **75 years since the Constituent Assembly adopted India's draft Constitution** on November 26, 1949. The government plans to commemorate this occasion with a special joint sitting of Parliament, likely filled with celebratory speeches. However, the words of **B.R. Ambedkar**, the principal draftsman of the Constitution, delivered on November 25, 1949, remain strikingly relevant. He cautioned that no matter how good a Constitution may be, it depends on the people and political leaders to make it effective. Conversely, even a bad Constitution can succeed if those implementing it are committed and virtuous.

Ambedkar also pointed out two critical gaps in Indian society—**equality and fraternity**. Politically, India embraced equality by ensuring every adult has one vote. But socially and economically, inequalities rooted in caste, wealth, and opportunity continued to deny true equality. Ambedkar questioned how long India could live with such contradictions, where liberty and equality coexist uneasily without a sense of **fraternity**—a feeling of unity and brotherhood among citizens. He argued that liberty without equality



could create dominance by the few, while equality without liberty could stifle individual freedom. Without fraternity, both liberty and equality would require external enforcement, undermining their true purpose.

In the **75 years since**, progress has been made, especially with measures like **abolishing untouchability** and introducing **reservations for Scheduled Castes and Other Backward Classes (OBCs)**. These steps, initially meant to be temporary, are now deeply embedded in the political and social fabric. However, the demand for a **caste census** and further representation reflects ongoing dissatisfaction among groups that still feel excluded from equality of outcomes.

Fraternity, however, remains a challenge. Mobilization of political support based on **caste**, **religion**, **language**, **or region** has often divided people instead of uniting them. Despite these divisions, a sense of **nationhood** has emerged, visible in moments like national celebrations during cricket matches or collective grief during events like the **Kargil war (1999)** or the **Galwan clash (2020)**. Yet, Ambedkar's vision of fraternity as a means to erase caste hierarchies has not materialized fully. Instead, caste has often been reinforced as a political resource, shifting the focus from eliminating caste to representing it.

While India's Constitution has endured, its institutions have faced erosion. Parliament's role has diminished, the judiciary is under pressure, and democratic practices are sometimes undermined. Institutions meant to uphold the Constitution must be revitalized to fulfill Ambedkar's vision. As Ambedkar reminded us, independence has removed the excuse of blaming colonial rule for failures. Now, the responsibility lies with us. On this 75th anniversary, we must commit to reducing the mistakes we make as custodians of the Constitution and let its guiding principles inspire progress.

Key Takeaways

B.R. Ambedkar's Concerns

- The Constitution's success depends on how well people and leaders implement it.
- Indian society lacked **equality and fraternity**, creating contradictions between political equality and social and economic inequality.
- Fraternity is essential to unite citizens and sustain liberty and equality without enforcement.

Progress Over 75 Years

- Achievements:
 - Abolition of untouchability and affirmative action for Scheduled Castes and OBCs.
 - A growing sense of **nationhood**, seen during national events and crises.
- Shortcomings:
 - Social and economic inequality persists, fueling demands for measures like a caste census.
 - Caste has shifted from being a hierarchy to a **political resource**, contrary to Ambedkar's aim of its annihilation.

Challenges to Democracy

- Erosion of institutions, including Parliament, the judiciary, and democratic practices.
- Concerns over India being labeled as an "electoral autocracy" by organizations like the V-Dem Institute.

Way Forward

| Clear your doubts now.

- Embrace the Constitution's principles to tackle inequality and foster fraternity.
- Strengthen institutions to uphold the Constitution's spirit.
- Reduce the gaps in fulfilling Ambedkar's vision of liberty, equality, and fraternity intertwined for a just and united India.

Feminist ideology in India's constitutional discourse: TH Editorial

Polity

Easy Explanation

The term "founding fathers" of the Indian Constitution is often criticized for being patriarchal and dismissive of the contributions of the **"founding mothers"**—the remarkable women of the Constituent Assembly. These women worked alongside men, shaping the Constitution while advocating for gender equality and social reform. As noted by Achyut Chetan, the Constitution reflects not only women's consent but also their determined will, making it a landmark in the history of Indian feminism.

Despite their efforts, the Constitution itself embodies compromises. Christine Keating pointed out that while the Constitution enshrines equality for women in the public sphere, it also upheld **discriminatory personal laws**, subordinating women within family and religious frameworks to secure societal consent for centralized governance.

The **founding mothers**, such as Amrit Kaur and Hansa Mehta, aligned with B.R. Ambedkar to challenge the oppressive traditions rooted in **brahmanical patriarchy**. They pushed for a **Uniform Civil Code (UCC)** in the **Fundamental Rights** to dismantle patriarchal structures like child marriage and polygamy. When the UCC was relegated to the **Directive Principles of State Policy**, they ensured it was framed as fundamental to governance, influencing constitutional interpretations in the 1980s.

Begum Aizaz Rasul highlighted secularism as a cornerstone of the Constitution, while Hansa Mehta advocated limiting religious rights that could impede women's equality. Amrit Kaur strongly opposed unchecked religious freedom, warning it would validate oppressive practices like **sati**, **polygamy**, and **purdah**. However, in a compromise, **men's right to religion overshadowed women's right to equality**, a legacy still felt today.

Although the Constitution promised a new beginning for Indian women, **progress has been slow**. A 1974 government report, *Towards Equality*, found that even decades later, gender equality remained elusive. Women's representation in politics and leadership is still minimal, and the UCC, envisioned to promote gender justice, remains unrealized.

The contributions of the founding mothers laid a foundation for gender justice in India, but their vision remains only partially fulfilled. Achieving their dream of true equality requires addressing the persistent dominance of patriarchy in law and society.

Key Takeaways

Contributions of the Founding Mothers

• Women like **Amrit Kaur**, **Hansa Mehta**, and **Begum Aizaz Rasul** played a pivotal role in shaping the Constitution, particularly on issues of **gender equality** and **secularism**.



• They worked to include a **Uniform Civil Code (UCC)** in the **Fundamental Rights** but compromised by moving it to the **Directive Principles of State Policy**.

Challenges to Women's Equality

- The **right to religion** often undermined **women's right to equality**, allowing practices like **child marriage**, **polygamy**, and **purdah** to persist.
- Despite constitutional promises, the **1974 report 'Towards Equality'** revealed significant failures in achieving gender equality.

Unrealized Vision

- The UCC, meant to promote gender justice, remains unimplemented.
- Women's representation in politics and leadership continues to be limited.

Way Forward

• Honoring the founding mothers' vision requires stronger efforts to **dismantle patriarchal laws** and practices and to **empower women politically and socially**.

Return to action: TH Editorial

Environment

Easy Explanation

After two extra days of negotiations at COP in Baku, countries settled on a "roadmap" that has left developing nations frustrated and developed countries relieved, while the planet remains at significant risk. The final agreement included a commitment to **triple public finance for developing countries**, increasing the annual goal from \$100 billion to \$300 billion by 2035, and scaling total public and private climate finance to **\$1.3 trillion per year by 2035**. However, these figures fall far short of the demands made by developing countries, which had called for trillions annually. The agreed amount represents just **20% of the original demand**, leading to widespread disappointment.

What makes this outcome more troubling is the lack of additional concessions. There were no provisions for making the \$300 billion primarily public finance, which could have supported **affordable technology transfer** or investments to help developing countries adapt to climate change. Instead, the agreed roadmap remains vague, offering limited meaningful action.

Developed countries, despite their scientific progress and understanding of climate risks, have consistently fallen short of their responsibility to lead global climate solutions. They have also failed to discourage developing nations from pursuing fossil-fuel-based growth. This failure reflects shifting geopolitics, where climate action is increasingly tied to **market competition** rather than **global solidarity**.

The negotiations were marred by political posturing and trade conflicts, with meaningful climate action taking a backseat. With the potential return of a **Trump presidency**, climate agreements may face further setbacks, reminiscent of the U.S. withdrawal from the Paris Agreement. Next year's COP in Brazil holds symbolic significance, as Brazil hosted the **1992 Earth Summit**, where the need for real action was first recognized. As the climate crisis worsens, the global community must go beyond promises and take transformative action to tackle the challenges ahead.



Key Takeaways

- Climate Finance Commitments:
 - Public finance for developing nations was increased from \$100 billion to \$300 billion annually by 2035.
 - Total climate finance, including private sources, was set to scale to \$1.3 trillion annually by 2035.
- Developing Nations' Disappointment:
 - The agreed amount represents just **20% of the original demand**, leaving critical gaps in addressing climate adaptation and technology transfer.
- Failures of Developed Countries:
 - Developed nations have failed to fulfill their responsibility to lead climate action or discourage fossil-fuel-based development in poorer countries.
 - Climate action is now framed around **market competition**, not global cooperation.
- Trade and Politics Overshadow Action:
 - Negotiations were dominated by **political posturing** and **trade conflicts**, rather than meaningful agreements.
- Next Steps at COP in Brazil:
 - The 2024 COP in Brazil revisits the legacy of the 1992 Earth Summit, a reminder of the urgent need to shift from empty promises to transformative action.

MACE in Ladakh opens its one-of-a-kind eye to cosmic gamma rays: TH Science

Science

Easy Explanation

The Major Atmospheric Cherenkov Experiment (MACE) telescope, inaugurated on October 4 in Hanle, Ladakh, is the highest imaging Cherenkov telescope in the world. Situated at an altitude of 4.3 km above sea level, it features a 21-meter-wide dish, the largest in Asia and the second-largest globally. Built by several Indian research institutions, including the Bhabha Atomic Research Centre (BARC) and the Tata Institute of Fundamental Research (TIFR), it represents a significant advancement in Indian gamma-ray astronomy.

Gamma rays, the most energetic form of light in the electromagnetic spectrum, are produced by cosmic phenomena like **black holes, supernovae**, and **pulsars**. Earth's atmosphere blocks gamma rays, making them undetectable at ground level. However, when these rays enter the atmosphere, they interact with air molecules to create a **shower of particles** that emit faint blue light, called **Cherenkov radiation**. Instruments like MACE detect this light to study gamma rays indirectly.

The MACE telescope collects this radiation using **356 mirror panels**, each made up of smaller mirrors arranged in a honeycomb pattern, similar to the design of the **James Webb Space Telescope**. These mirrors focus the light onto a **high-resolution camera** with **1,088 photomultiplier tubes**, which amplify the faint signals and convert them into digital data for real-time analysis.

The telescope, weighing **180 tonnes**, is mounted on a movable base with a **27-meter-wide curved track**, allowing it to rotate both vertically and horizontally. Its high-altitude location minimizes atmospheric interference, and its mirrors are coated with a protective layer of **silicon dioxide**.



MACE aims to study gamma rays with energies exceeding **20 billion electron volts (eV)**, focusing on phenomena like **gamma-ray pulsars**, **blazars**, and **black holes**. It also has the potential to help discover **dark matter**, a mysterious substance thought to constitute **85% of the universe's mass**. Dark matter particles, such as **WIMPs (Weakly Interacting Massive Particles)**, may produce gamma rays when they collide, and MACE could provide critical insights into their existence or behavior.

This telescope marks a major milestone for India's role in **gamma-ray astronomy**, with most of its components designed and built domestically. MACE is expected to contribute significantly to our understanding of **high-energy astrophysics**, particle physics, and the nature of the universe.

Key Takeaways

- MACE Telescope:
 - Located in **Hanle, Ladakh**, at **4.3 km altitude**, it is the highest Cherenkov telescope globally.
 - Features a **21-meter-wide dish**, the largest in Asia and second-largest worldwide.
- Purpose:
 - Detects **gamma rays** indirectly through **Cherenkov radiation** produced in Earth's atmosphere.
 - Focuses on studying high-energy cosmic phenomena like **black holes**, **supernovae**, and **pulsars**.
- Technology:
 - Equipped with **356 honeycomb-patterned mirrors** for efficient light collection.
 - Uses a **high-resolution camera** with **1,088 photomultiplier tubes** for signal amplification and data processing.
- Scientific Goals:
 - Investigate high-energy gamma rays with energies over 20 billion eV.
 - Search for **dark matter particles** (e.g., WIMPs) and test their behavior or existence.
- Significance for India:
 - A milestone in **gamma-ray astronomy**, with most subsystems designed and built domestically.
 - Enhances India's contribution to high-energy astrophysics and particle physics research.

'Toxic chalice' awaits in 2025 after COP29 anticlimax: TH Science

Science

Easy Explanation

At the close of COP29, President Mukhtar Babayev finalized a climate finance agreement to provide **\$300 billion annually by 2035** to help developing nations address the escalating costs of global warming. This deal, although praised as a "breakthrough," left many developing countries deeply dissatisfied, labeling it insufficient to meet their urgent needs. The agreement was passed quickly to avoid extended objections, allowing Babayev to present a positive conclusion to the summit.

Expectations for a robust deal were low due to several factors, including fears of the **U.S.'s potential withdrawal** from global climate agreements under Donald Trump, who is set to take office in January. Trump has previously dismissed climate change as a "hoax" and pledged to withdraw from the Paris Agreement, which could severely impact global climate efforts. Additionally, the ongoing **war in Ukraine**



and rising tensions in West Asia have shifted global priorities toward security and energy concerns, making nations more hesitant to allocate significant funds for climate change.

The financial commitment, while theoretically tripling earlier pledges from developed nations, falls short of the demands made by vulnerable countries. Wealthy nations' reluctance to contribute more and their focus on concluding a deal amid political turbulence highlighted a growing trust deficit. Climate advocates have criticized the negotiations as showcasing **political opportunism**, with developed countries prioritizing their interests over the needs of the most vulnerable.

Looking ahead, Brazil will host COP30 in the Amazonian city of Belem. However, the divisions exposed at COP29 and the dissatisfaction of poorer nations will make it challenging for Brazil to rebuild trust and momentum for meaningful climate action. Experts warn that Brazil faces the tough task of uniting countries while ensuring the next conference yields stronger commitments.

Key Takeaways

- The Deal:
 - A commitment of **\$300 billion annually by 2035** to assist developing countries with climate adaptation and mitigation.
 - Represents a theoretical tripling of earlier financial commitments but falls short of developing nations' demands.
- Key Challenges:
 - **U.S. Withdrawal Concerns**: Donald Trump's likely return to office threatens global climate cooperation, as he has pledged to withdraw from the Paris Agreement.
 - **Global Distractions**: The war in Ukraine and conflicts in West Asia have shifted focus away from climate priorities.
- Criticism:
 - Developing nations and climate advocates condemned the deal as inadequate and reflective of **political opportunism**.
 - Poorer countries feel a growing trust deficit due to wealthy nations' unwillingness to provide more robust support.
- Future Implications:
 - The divisions and frustrations from COP29 create a difficult backdrop for **COP30 in Brazil**.
 - Brazil faces the challenge of restoring trust among nations and achieving stronger climate commitments.

On stubble burning and satellite data: TH Science

Environment

Easy Explanation

Delhi's air quality has struggled to improve despite implementing strict measures like **GRAP Stage IV** and intervention from the Supreme Court. Much of the blame is directed toward **stubble burning** by farmers in Punjab and Haryana. Farmers burn leftover paddy stubble after harvesting to clear fields quickly for the wheat sowing season. The toxic smoke from these fires combines with Delhi's weather conditions to worsen air pollution. However, a **controversy has emerged** over whether satellite data accurately reflects the prevalence of stubble-burning incidents.



| Clear your doubts now.

Satellites such as NASA's **Aqua** and **Suomi-NPP** are used to track fires, capturing data twice a day at fixed times. While they are effective, concerns have arisen that **farmers may be burning stubble after the satellites' overpass times** to avoid detection. This claim was supported by observations from South Korea's **GEO-KOMPSAT 2A** satellite, which showed smoke increasing later in the day. Despite evidence suggesting delayed burns, the **CAQM (Commission for Air Quality Management)** has maintained that farm fires have significantly reduced, citing its efforts.

The CAQM's claims are contested by data from other sources. For instance, while CAQM reported a reduction in burnt areas, Punjab and IARI (Indian Agricultural Research Institute) data indicated increases. Additionally, farmers themselves have alleged that officials advised them to burn stubble after 4 p.m., further complicating the issue.

The **Supreme Court** has criticized the CAQM for its inaction and has demanded explanations about its failure to address stubble burning effectively. The CAQM, in its defense, said it has requested ISRO to develop better protocols for measuring burnt areas. Currently, Indian satellites like **INSAT-3DR** and **RESOURCESAT** are limited in their ability to detect fires with precision, and efforts to improve this capacity are ongoing.

The larger issue is the lack of an effective, unified response to Delhi's air pollution. While steps like satellite monitoring, government policies, and judicial interventions exist, coordination among agencies remains weak. With the air quality crisis persisting, the challenge of mitigating pollution caused by stubble burning continues to loom large.

- Stubble Burning and Air Pollution:
 - Farmers in Punjab and Haryana burn **paddy stubble** after harvesting rice, contributing to severe air pollution in Delhi.
 - Toxic smoke combines with Delhi's weather patterns, worsening the Air Quality Index (AQI).
- Satellite Monitoring:
 - NASA's Aqua and Suomi-NPP satellites track fires but are limited by fixed overpass times (1:30 PM and 1:30 AM).
 - Evidence suggests farmers may burn stubble after satellite overpass times to avoid detection.
 - South Korea's **GEO-KOMPSAT 2A** satellite confirmed increased smoke levels later in the day.
- Controversy and CAQM's Role:
 - The **CAQM** claims significant reductions in stubble burning, but data from Punjab and IARI contradicts this.
 - Allegations have surfaced that farmers were advised to burn stubble after 4 p.m. to bypass detection.
- Challenges with Indian Satellites:
 - Existing Indian satellites like **INSAT-3DR** lack the precision needed to detect farm fires accurately.
 - ISRO is working on improving protocols and exploring better satellite solutions.
- Judicial and Government Actions:
 - The **Supreme Court** has criticized CAQM for its inability to address stubble-burning effectively.



- The Indian government and CAQM face growing scrutiny for inadequate measures to combat air pollution.
- Future Focus:
 - Improving satellite monitoring and strengthening coordination between agencies is essential to tackle the ongoing air pollution crisis in Delhi effectively.

The Constitution has always been secular both in spirit and in letter: TH Text&Context

Polity

Easy Explanation

The idea that **secularism** was not a part of the original Indian Constitution and only added during the **Emergency** is a common misconception. While the words "secular" and "socialist" were officially added to the **Preamble** in 1977 through the 42nd Amendment, the Constitution was already secular in its structure and essence. The framers crafted it against the backdrop of immense challenges, including the **Partition** and **World War II**, emphasizing unity in diversity and protecting justice, liberty, and equality.

Secularism in the Constitution means equal treatment of all religions, maintaining a principled distance from religious matters while regulating practices where necessary. This principle is evident in various constitutional provisions: equality under **Article 14**, non-discrimination under **Articles 15 and 16**, and protection of religious and linguistic minorities under **Articles 29 and 30**. The Constitution refrains from privileging any religion, and **God** is notably absent from its text.

During debates in the Constituent Assembly, **K.T. Shah** proposed including "secular" and "socialist" in the Preamble, but **B.R. Ambedkar** opposed it, reasoning that the Constitution already incorporated these values through its **Directive Principles** and **Fundamental Rights**. Ambedkar believed the Constitution should not tie future generations to specific economic or social ideologies but leave room for evolution based on changing times and needs.

The Kesavananda Bharati case (1973) cemented secularism as part of the Constitution's basic structure, making it beyond Parliament's power to amend. Later, the S.R. Bommai case (1994) reaffirmed this by upholding the dismissal of BJP-ruled governments post the Babri Masjid demolition, emphasizing secularism's centrality to governance.

The Emergency-era **42nd Amendment** introduced "secular" and "socialist" into the Preamble, but this was largely symbolic since the Constitution was already secular. The **44th Amendment**, passed by the Janata government, undid many Emergency-era changes but retained these additions, recognizing their alignment with the Constitution's original intent.

Today, **secularism** is an unalterable part of India's constitutional identity. Despite political debates over its interpretation and use, it remains a cornerstone of the nation's legal and democratic framework, ensuring that all religions are treated equally and protecting the country's pluralistic character.

- Secularism in the Constitution:
 - The Constitution was inherently secular from the beginning, as reflected in provisions like **Articles 14, 15, 16, 27, 28, 29, and 30**.
 - Secularism ensures a principled distance from religion while regulating practices inconsistent with modern society.



- Constituent Assembly Debates:
 - **K.T. Shah** proposed including "secular" and "socialist" in the Preamble, but **B.R. Ambedkar** opposed it, citing the Constitution already embodied these values.
- Landmark Cases:
 - **Kesavananda Bharati (1973)**: Secularism was declared part of the **basic structure** of the Constitution.
 - **S.R. Bommai (1994)**: Reaffirmed secularism's centrality to governance, upholding the dismissal of state governments violating this principle.
- Amendments:
 - **42nd Amendment (1977)**: Added "secular" and "socialist" to the Preamble during the Emergency.
 - **44th Amendment**: Retained these additions while reversing other Emergency-era changes.
- Current Context:
 - Secularism remains a constitutional value beyond the power of transient parliamentary majorities to alter or erase. It is essential for managing India's diversity and upholding its democratic ethos.

THE BAKU BETRAYAL: IE Editorial

Environment

Easy Explanation

The **29th Conference of Parties (CoP29)**, held in Baku, failed to meet expectations, continuing the trend of underwhelming results at recent UN climate meetings. This conference, labeled the "Finance CoP," aimed to address the massive funding gap for climate action in developing countries. Experts estimated that at least **\$1.3 trillion annually** is required to counter the devastating effects of climate change, especially given the alarming warming trends that threaten to exceed the **1.5°C limit** set during the Paris Agreement. However, the final agreement to provide **\$300 billion annually by 2035** fell significantly short.

The agreed amount could theoretically act as a starting point to attract more investments, but history offers little hope. For example, the **\$100 billion goal** set in 2009 at CoP15 took over a decade to materialize, and much of it was provided as **loans**, burdening low-income countries with debt. Despite acknowledgment from organizations like the **OECD** about the need for innovative and effective financing solutions, developed nations resisted significant commitments at Baku, initially proposing **\$250 billion**, which was marginally increased after protests from developing nations and advocacy groups.

This reluctance has created frustration among developing countries, also referred to as the **Global South**, which urgently needs funding to adapt to climate challenges. While the **International Solar Alliance (ISA)**, led by India, showcases the Global South's determination to tackle climate change independently, such initiatives cannot replace the large-scale financial backing that the **UNFCCC** process is supposed to provide.

Moving forward, developing nations must **unite** at international platforms to demand accountability and pressure wealthier countries into fulfilling their financial obligations. These efforts are crucial for ensuring climate equity and helping vulnerable nations prepare for the escalating impacts of global warming.



- Baku Outcomes:
 - CoP29 failed to meet the estimated **\$1.3 trillion annual requirement** for climate action, agreeing on only **\$300 billion by 2035**.
 - The agreement falls short in addressing both **equity** and **ambition**, frustrating developing countries.
- Historical Failures:
 - The **\$100 billion target** set in 2009 took over a decade to meet, and much of it was provided as **loans**, leading to debt traps for low-income nations.
- Missed Opportunities:
 - Despite recognizing the need for better climate finance mechanisms, developed countries resisted ambitious targets, scaling up their initial proposal only marginally.
- Role of the Global South:
 - Initiatives like the **International Solar Alliance (ISA)** highlight the resolve of developing nations but cannot replace large-scale UNFCCC-backed funding.
 - The Global South must leverage **multilateral platforms** to press wealthier nations for stronger commitments.
- Urgency for Action:
 - With warming trends threatening to surpass the **1.5°C limit**, the lack of adequate climate finance undermines global efforts to combat climate change effectively.

Significance of European solar mission, which ISRO will launch: IE Explained

Science

Easy Explanation

The **Proba-3 mission** by the European Space Agency (ESA), set to launch on **December 4** via ISRO's PSLV rocket from Sriharikota, is an innovative solar study mission aimed at understanding the **Sun's corona**, the outermost layer of its atmosphere. The corona, with temperatures soaring to **2 million degrees Fahrenheit**, is crucial for studying space weather phenomena like **solar storms** and **solar winds** that impact Earth's satellite communications, navigation systems, and power grids.

Proba-3 consists of **two satellites** flying in formation, creating a **solar coronagraph**—a device that blocks the Sun's blinding light to focus on the corona. These satellites, called the **Occulter Spacecraft** and the **Coronagraph Spacecraft**, will be positioned **150 meters apart**, simulating a stable solar eclipse for up to **six hours** at a time. This will offer unparalleled observation time compared to natural solar eclipses, which last only about **10 minutes** and occur approximately 1.5 times a year.

The mission will carry three instruments:

- 1. ASPIICS (coronagraph): A device to closely study the Sun's inner and outer corona.
- 2. DARA: Measures the Sun's total energy output, known as total solar irradiance.
- 3. **3DEES**: Tracks electron fluxes in Earth's radiation belts, aiding space weather research.

Proba-3's groundbreaking precision involves maintaining a formation within a **few millimeters** and autonomously maneuvering to cast one satellite's shadow on the other. This stability will allow the coronagraph to photograph and study the corona's lesser-known features.

India benefits significantly from this collaboration, as **ISRO** is proving its global reliability with this costeffective launch. Indian scientists, some of whom contributed to Proba-3's goals, are likely to gain **exclusive access to data**, enhancing their research capabilities. A planned post-launch meeting with ESA



could foster collaborative research between Proba-3 and **Aditya L1**, India's first solar mission launched in **2023**, paving the way for new scientific discoveries.

Key Takeaways

- Mission Overview:
 - ESA's **Proba-3 mission**, launching via ISRO's PSLV on December 4, will study the Sun's corona.
 - Uses **two satellites** flying in formation to simulate a stable **solar eclipse**.
- Scientific Goals:
 - Investigate the Sun's corona, the source of space weather phenomena like **solar storms**.
 - Instruments include:
 - ASPIICS: Focuses on the inner and outer corona.
 - DARA: Monitors total solar irradiance.
 - **3DEES**: Measures electron fluxes in Earth's radiation belts.
- Unique Features:
 - Proba-3 creates a stable eclipse lasting six hours, equivalent to observing 50 natural solar eclipses per year.
 - Achieves precise formation with satellites positioned **150 meters apart**.
- India's Role:
 - o ISRO demonstrates its space capabilities with a cost-effective launch.
 - Indian scientists likely to gain **exclusive data access** and collaborate on research with ESA.
- Future Potential:
 - Collaboration between Aditya L1 and Proba-3 could lead to significant advancements in solar physics.

Why India's trade deficit reflects strength of the country's service sector: IE Explained

Economy

Easy Explanation

India often faces criticism for importing more goods than it exports, which some interpret as a sign of weak manufacturing. However, this **trade deficit** actually reflects India's **strength in services** and its ability to attract **foreign investment**. India excels in exporting services, but since it is a net exporter of services, it must naturally be a **net importer of goods**. This is a result of **comparative advantage**, where India focuses on areas where it performs best—such as services—and imports goods where its advantages are smaller.

When a country like India attracts foreign investment, it leads to a **capital inflow**. By simple economic logic, capital inflows must be matched by either a **current account deficit** (spending more on imports than earning from exports) or **reserve accumulation** (saving foreign exchange). India already holds adequate reserves as a buffer for emergencies, such as oil price shocks. Maintaining additional reserves comes at a cost, as the returns on reserves are lower than the returns foreign investors earn on their investments in India. Therefore, India sensibly runs a current account deficit to balance capital inflows.

India's current account deficit, kept at a manageable level of about **2% of GDP**, is not a weakness but rather a reflection of its status as an **attractive investment destination**. Within this, India is a **net exporter of services** like IT and pharmaceuticals, but a **net importer of goods** due to its smaller comparative



advantage in manufacturing. This does not mean Indian manufacturing is unproductive—it simply means services are an even greater strength.

To grow manufacturing further, India needs to focus on **domestic demand**. If domestic demand increases and the current account deficit remains stable, manufacturing can expand to meet this internal demand. In essence, India's economic strategy should not solely depend on exporting goods but also on boosting domestic consumption and production.

Key Takeaways

- India's Trade Deficit: Reflects strength in services exports and status as an investment destination, not weak manufacturing.
- Capital Flows and Current Account Deficit:
 - Foreign investment inflows naturally lead to a **current account deficit** or **reserve accumulation**.
 - India maintains a sensible current account deficit (~2% of GDP) and avoids unnecessary reserve accumulation.
- Comparative Advantage:
 - India excels in services, making it a **net exporter of services**.
 - Consequently, it must be a **net importer of goods**.
- Manufacturing Exports:
 - India exports high-value goods like pharmaceuticals, automobiles, and auto components, sufficient to maintain a stable current account deficit.
 - Comparisons with Vietnam or Bangladesh in exports don't imply weaker manufacturing but rather India's stronger focus on services.
- Path to Growth:
 - Faster manufacturing growth depends on **domestic demand** rather than exports.
 - Stable current account deficit alongside increased domestic consumption can drive manufacturing expansion.

27th November 2024

Why Income Tax Department has introduced PAN 2.0: IE Explained

Economy

Easy Explanation

The Indian government is upgrading the Permanent Account Number (PAN) system with the introduction of **PAN 2.0** to make it a more robust and universal identification tool. This upgrade includes adding enhanced features like QR codes, a fully online application process, and unifying all identification numbers like PAN, TAN (Tax Deduction and Collection Account Number), and TIN (Taxpayer Identification Number) under one system for businesses. The goal is to make PAN a **single source of truth and a common business identifier**.

Existing PAN holders don't need to apply for a new card mandatorily; their current PAN will remain valid, but they can upgrade for free if they want enhanced features like the new QR code.



The system aims to integrate all PAN-related services, currently scattered across different platforms, into a **single unified portal**. This portal will handle everything from issuing and updating PAN to grievance redressal. The new QR code will help validate PANs more efficiently, and a **data vault system** will ensure the secure handling of PAN data by entities like banks and government departments.

For individuals, the upgrade makes the PAN application process fully paperless, helping eliminate duplicate PANs and improving accuracy. For businesses, this system simplifies tax filings by consolidating various tax-related services under one platform. This transformation, backed by a financial outlay of ₹1,435 crore, aims to improve ease of access, reduce delays, and offer a seamless experience.

Key Takeaways

- What is PAN 2.0?
 - A project to upgrade the PAN system with better features and make it a universal identifier for businesses.
 - $_{\odot}$ $\,$ Merges PAN, TAN, and TIN under one system for simplicity.
- Features of PAN 2.0:
 - Enhanced QR codes for validation.
 - A unified portal for all PAN/TAN-related services.
 - Paperless, online PAN application process.
 - Mandatory data vault system to securely store PAN information.
- Benefits for Individuals:
 - Existing PANs remain valid; upgrades are optional and free.
 - Online submission for new applications.
 - Helps eliminate duplicate PANs.
- Benefits for Businesses:
 - Common system for all tax-related filings.
 - Integrated services on one platform for convenience.
- Aim of the Project:
 - To simplify processes, enhance service delivery, and improve ease of access for taxpayers and businesses.

Dismantling of climate talks: IE Explained

Environment

Easy Explanation

The recently concluded COP29 climate meeting in Baku highlighted the growing challenges in global climate negotiations. Developed countries agreed to raise climate finance for developing nations to \$300 billion annually by 2035, a significant increase from the current \$100 billion but far below the \$1 trillion required to address global warming. This slow financial commitment underscores a larger problem of insufficient action against climate change.

The international climate framework, established under the UNFCCC, places responsibility on developed nations based on the "polluter pays" principle, as they are historically the largest contributors to greenhouse gas emissions. However, since the 1997 Kyoto Protocol, developed countries have systematically worked to dilute their obligations. This effort culminated in the Paris Agreement, which replaced fixed targets with voluntary, self-determined contributions for all nations, effectively reducing the accountability of developed nations.



Developed countries are now shifting the burden of financing to include wealthier developing nations, arguing that financial needs have grown and that some developing countries have become wealthier. At COP29, efforts to expand the list of contributors, particularly targeting China, were blocked by developing countries, but the overall financial commitment was kept minimal.

The trust of developing countries in these forums continues to erode as developed nations repeatedly fail to meet their commitments. While small island nations and vulnerable countries still benefit from some climate funding, the overall effectiveness of global climate talks as a platform for meaningful action is steadily declining. Despite these limitations, the forum remains significant as it gives smaller nations a voice in global climate discussions.

Key Takeaways

- **Climate Finance:** Developed countries committed to raising \$300 billion annually for climate finance by 2035, far below the \$1 trillion needed.
- **Historical Responsibility:** The UNFCCC initially placed responsibility for emissions reductions on developed nations based on the "polluter pays" principle.
- **Paris Agreement Changes:** Emission reduction targets became voluntary for all nations, weakening accountability for developed countries.
- **Dilution of Finance Responsibility:** Developed countries argue for broader contributions from wealthier developing nations, targeting countries like China.
- **Declining Trust:** Developing nations are losing faith in climate negotiations due to unmet commitments and inadequate financial support.
- **Role of Small Nations:** Small island states continue to benefit from some climate finance but remain under-supported.
- Effectiveness of COP: While still relevant, the global climate negotiation platform is becoming less effective in driving meaningful change.

OCEANS OF WATER MAY BE HIDING WITHIN URANUS AND NEPTUNE: STUDY- IE Explained

Science

Easy Explanation

A new study using simulations suggests that Uranus and Neptune might have an ocean of water hidden inside them, which could explain their unusual magnetic fields. Unlike Earth's magnetic field, which is generated in its core and has a clear north and south pole aligned with the planet's axis, the magnetic fields of Uranus and Neptune are highly tilted and offset from their centers. This discovery was first noted by NASA's Voyager 2 spacecraft during its flybys in the 1980s.

The study, led by planetary scientist Burkhard Militzer, proposes that these planets have a layer of water about 8,047 kilometers thick beneath their atmospheres. This water layer, mixed with hydrogen, behaves like a supercritical fluid—a state between gas and liquid—because of the extreme pressure, 60,000 times greater than Earth's surface pressure. This fluid is highly conductive, which is essential for generating magnetic fields.

What's unique is that this water layer is separated from a carbon-rich layer below, which divides it from the planet's core. Previously, scientists thought the interiors of these planets were more mixed, but this



study shows that water and carbon separate, likely because these planets formed with less hydrogen due to their greater distance from the Sun compared to Jupiter and Saturn.

This new understanding suggests that the disordered magnetic fields of Uranus and Neptune originate not from their cores but from this high-pressure water layer. The findings are significant for understanding ice giants and could help guide future missions, such as NASA's proposed return to Uranus next decade.

Key Takeaways

- **Unusual Magnetic Fields:** Uranus and Neptune's magnetic fields are tilted and offset, unlike the clear dipoles of Earth or Jupiter.
- **Hidden Water Layer:** Simulations suggest a thick water layer (~8,047 km) beneath the atmospheres of these planets, behaving as a supercritical fluid due to immense pressure.
- Magnetic Field Origin: This water layer, not the core, likely generates the planets' magnetic fields.
- **Separation from Core:** The water layer is separated from the carbon-rich core by a distinct boundary, challenging previous assumptions of a mixed interior.
- Formation Differences: Uranus and Neptune might have less hydrogen than Jupiter and Saturn because they formed farther from the Sun.
- Future Missions: The findings could inform NASA's planned mission to Uranus in the next decade.

Recalling stories of women who helped draft the Indian Constitution: IE Explained

Polity

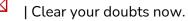
Easy Explanation

On Constitution Day, President Droupadi Murmu highlighted the contributions of women in the Constituent Assembly, which had 15 women members. These women came from diverse backgrounds and actively shaped discussions on gender equality, caste, and reservations. Here are some notable women and their contributions:

- Ammu Swaminathan: Hailing from Kerala, she opposed societal restrictions on widows and advocated for gender equality through the Hindu Code Bill. She later became a Lok Sabha MP from Tamil Nadu.
- Annie Mascarene: Born in a lower caste Latin Christian family in Kerala, she campaigned for universal adult franchise and emphasized strong central governance while advocating for local autonomy.
- **Begum Qudsia Aizaz Rasul:** Coming from a royal Punjabi family, she opposed separate religious electorates and remained in India after Partition. She later served in the UP Rajya Sabha.
- **Dakshayani Velayudhan:** A Dalit woman from Kerala, she was the first in her community to graduate in science. She advocated for Dalit rights but opposed separate electorates, aligning her views with nationalism.
- **Renuka Ray:** A prominent activist for women's rights, she opposed reservations for women in legislatures, believing in their equality and capability. She later served as a Lok Sabha MP.

These women played a crucial role in shaping India's Constitution, advocating for social justice and equality despite societal challenges.

Key Takeaways



- Women in the Constituent Assembly contributed significantly to debates on gender equality, caste, and reservations.
- Figures like Ammu Swaminathan, Annie Mascarene, Qudsia Aizaz Rasul, Dakshayani Velayudhan, and Renuka Ray highlighted diverse issues, from opposing widow restrictions to advocating universal franchise and Dalit rights.
- Their work laid the foundation for India's constitutional principles of equality and justice.
- Despite societal obstacles, their activism and leadership shaped post-independence India, influencing debates on Hindu Code Bill, Dalit empowerment, and women's rights.

Six decades since Thumba launch, slew of private entities prepare for flight: TH Science

Science

Easy Explanation

On November 21, India celebrated 61 years of its space program, which began with the launch of a Nike-Apache sounding rocket from Thumba, Kerala, in 1963. This marked the start of India mastering solid propellant technology, crucial for today's launch vehicles. Around the anniversary, key developments highlight India's growing space capabilities:

1. GSAT-N2 Launch:

 India launched the 4,700-kg GSAT-N2 satellite aboard SpaceX's Falcon 9 rocket from Florida. This was necessary as the payload exceeded the capacity of ISRO's LVM-3 rocket, which can carry up to four tonnes to geostationary transfer orbit (GTO). The satellite will enhance broadband connectivity, including in underserved regions like the northeast, Andaman & Nicobar Islands, and Lakshadweep, as well as support in-flight internet services and Smart City missions.

2. Upcoming Proba-3 Mission:

 ISRO is preparing to launch the PSLV-C59 mission on December 4, carrying the European Space Agency's Proba-3 satellites. These will achieve "precision formation flying" to mimic solar eclipses and study the Sun's corona for extended durations.

3. Private Sector Contributions:

- Pixxel is set to launch six hyperspectral satellites, which can monitor crop health, detect deforestation, and track ocean pollution.
- GalaxEye and PierSight Space are testing synthetic aperture radar (SAR) technology for applications like advanced imaging and aeronautical information services.
- HEX20 will launch the "Nila" satellite on SpaceX's Transporter mission in February 2025, providing versatile data processing capabilities.

4. Space Science Achievements:

- ISRO's Aditya-L1 spacecraft has successfully provided data to predict coronal mass ejections, events that affect satellites and communication systems.
- India has joined the Square Kilometre Array Observatory (SKAO) project, contributing to the world's largest radio telescope system for cutting-edge astronomical research.

5. Future Missions:

- Training for astronaut Shubhanshu Shukla, India's candidate for a 2025 International Space Station mission, continues in Europe.
- Collaborative experiments on the Bharatiya Antariksh Station, India's future space station, are being planned to study biological systems in space.

6. Rural Mapping Initiative:

 SatSure is working with the government to map rural properties using drone and satellite data under the Svamitva program. This will aid in identifying property features for more than two lakh villages.

India's space program reflects an ambitious mix of government-driven and private sector initiatives, showcasing significant advancements in technology and science.

Key Takeaways

- Anniversary Milestone: November 21 marked 61 years since the launch of India's space program, starting with the Nike-Apache rocket in 1963, a key step in mastering solid propellant technology.
- **GSAT-N2 Launch Success:** The satellite was launched aboard SpaceX's Falcon 9 due to its weight, demonstrating India's strategic partnerships to overcome payload capacity constraints. GSAT-N2 will boost broadband and Smart City services in remote and underserved areas.
- **Proba-3 Mission by PSLV:** Scheduled for December 4, the mission will allow extended solar corona observations through precision satellite formation flying, a major leap in solar research.
- **Private Sector Innovations:** Indian private companies are actively contributing to space with advanced technologies like hyperspectral imaging (Pixxel), synthetic aperture radar (GalaxEye and PierSight), and cubesat platforms (HEX20).
- Scientific Collaborations: India's contributions to global projects like SKAO and advancements from Aditya-L1 reinforce its leadership in space research.
- Astronaut Training: Shubhanshu Shukla's preparation for the International Space Station mission reflects India's progress in human space exploration.
- **Bharatiya Antariksh Station:** Collaborations for biological experiments onboard India's space station highlight future-oriented research goals.
- **Rural Mapping Efforts:** SatSure's involvement in the Svamitva program showcases the application of space technologies for governance and rural development.
- **Space Science Leadership:** ISRO continues to bridge gaps in scientific understanding, from space weather to radio astronomy, setting the stage for future advancements.

India's space journey continues to evolve, balancing significant scientific contributions with commercial and strategic growth.

From a republic to a republic of unequals: TH Editorials

Polity

Easy Explanation

Constitution Day 2024 marked 75 years of India's adoption of the Constitution, a moment to reflect on its vision of liberty, equality, and state intervention to reduce inequalities. The Constitution's framers embraced liberalism while recognizing the need for a proactive state to address India's social and economic disparities at independence. This blend of liberty and affirmative action laid the foundation for creating an egalitarian society, as envisioned in Part III (Fundamental Rights) and Part IV (Directive Principles of State Policy).

Key principles like equal opportunities, reduction of income inequalities, and prevention of wealth concentration underpin the constitutional framework. Landmark judgments such as **D.S. Nakara vs Union of India (1982)** and **Samatha vs State of Andhra Pradesh (1997)** reinforced the state's role in fostering



social justice. However, since India's neoliberal reforms of the 1990s, the constitutional commitment to an egalitarian society has weakened, with rising income inequality and a shift towards market prioritization.

Research by economists like Thomas Piketty shows that India's top 1% earners now hold 22.6% of the income, compared to 6% in the 1980s. Inequality has deepened, with a stark overlap between social and economic inequities, as seen in the disproportionate wealth held by upper castes compared to marginalized communities. Reports like the **State of Inequality in India (2022)** further highlight the income disparity, where the top 10% earn significantly more than the rest of the population.

The vision of the Constitution—to minimize inequalities and ensure equal opportunities—is increasingly at odds with current economic policies. As Babasaheb Ambedkar warned, neglecting social and economic equality risks undermining India's political democracy.

Key Takeaways

- **Constitutional Vision:** The framers envisioned a liberal political state with state intervention to reduce inequalities, emphasizing liberty, equality, and affirmative action to create an egalitarian society.
- **Egalitarian Liberalism:** Inspired by John Rawls' principles, the Constitution focuses on equal liberties, opportunities, and reducing income disparities. Articles 38(2) and 39(c) advocate minimizing inequalities and preventing wealth concentration.
- Judicial Reinforcement: Key judgments like D.S. Nakara (1982) and Samatha (1997) underscored the state's role in fostering social justice and preventing economic disparity.
- Impact of Neoliberal Reforms: Post-1990s reforms prioritized market-driven growth, leading to rising inequality. The top 1% now control 22.6% of income and 40.1% of wealth, reversing gains made under the welfare state model.
- **Overlap of Social and Economic Inequalities:** Reports reveal that wealth is predominantly held by upper castes, highlighting how social privilege overlaps with economic advantage, further marginalizing lower castes and tribes.
- **Threat to Constitutional Ideals:** The constitutional vision of reducing inequalities and fostering egalitarianism is under threat, requiring a reevaluation of economic and social policies to align with the original framework.

Reaffirming the Constitution's ideals is essential to address these disparities and ensure that political democracy is not jeopardized by social and economic inequalities.

Timely reiteration: TH Editorial

Polity

Easy Explanation

The Supreme Court recently rejected a challenge to the inclusion of the terms "secular" and "socialist" in the Preamble of the Constitution. These terms were added during the Emergency through the 42nd Amendment. While critics, especially from right-wing factions, argue that secularism and socialism are inconsistent with India's principles, the Court reaffirmed their importance. The original Constitution emphasized equality, religious freedom, and non-discrimination, which inherently made it secular. However, the explicit addition of these terms in 1976 formalized these values.

Dr. B.R. Ambedkar had resisted including "socialist" in the original Preamble, as he believed future generations should have the freedom to choose their economic policies. Despite this, the inclusion of



"socialist" has not hindered market-driven reforms in India. The Court noted that secularism in India reflects a unique model where the state neither supports nor opposes any religion. Similarly, socialism in the Preamble emphasizes economic and social justice, ensuring no citizen is disadvantaged due to their circumstances.

The Court highlighted that these values were debated even after the Emergency, during the 44th Amendment discussions in 1978, reinforcing their legitimacy. This judgment, as India celebrates 75 years of the Constitution, reaffirms the core ideals of secularism and socialism as fundamental to the nation's identity.

Key Takeaways

- **Rejection of Challenge:** The Supreme Court upheld the inclusion of "secular" and "socialist" in the Preamble, rejecting the argument that their addition during the Emergency undermines their legitimacy.
- Secularism as a Basic Feature: The Constitution inherently embodies secularism through rights like equality, religious freedom, and non-discrimination, as affirmed in past judgments like *S.R. Bommai* (1994).
- Socialism and Economic Freedom: Despite Ambedkar's initial opposition to including "socialist," its presence in the Preamble has not obstructed India's transition to market-driven economic policies.
- Unique Indian Secularism: India's secularism neither promotes nor penalizes any religion, embodying a commitment to equal treatment of all faiths.
- **Timely Reaffirmation:** The verdict reaffirms the values of secularism and socialism as India celebrates 75 years of its Constitution, highlighting their importance for social and economic justice.

An ideal way to treat India's corneal blindness problem: TH Editorial

Science

Easy Explanation

India faces a severe shortage of corneas for transplant despite widespread support for eye donation. About 1,00,000 corneal transplants are needed annually, but only 30% of the demand is met. A proposed amendment to the Transplantation of Human Organs and Tissues Act (THOTA), 1994, suggests a "presumed consent" approach, which would treat all eligible deaths in hospitals as potential donors unless explicitly opted out.

Corneal blindness affects over a million people in India, with a significant number eligible for treatment through transplants. However, challenges include inadequate eye banks, insufficient trained corneal surgeons, and logistical delays in securing consent for donations. While presumed consent may increase corneal availability by removing consent barriers, evidence suggests that public education and a "Required Request" policy—where families are asked for consent—are more effective.

India's hospital cornea retrieval programs (HCRPs) have successfully boosted donations through grief counseling, achieving significant results in some states. This approach has reduced waiting lists and provided emotional solace to donor families. To eliminate avoidable corneal blindness, India must invest in expanding eye banks, training surgeons, and maintaining a consent-driven donation system.



- **Corneal Shortage:** India requires 1,00,000 transplants annually, but only 30% of the demand is met due to logistical and systemic challenges.
- **Presumed Consent Proposal:** The amendment suggests treating all hospital deaths as potential donors unless opted out. It aims to simplify cornea retrieval but risks undermining the voluntary nature of donations.
- **Challenges in Infrastructure:** India lacks enough high-functioning eye banks (needs 50, has 12-14) and trained corneal surgeons (needs 500, performing 200 surgeries annually).
- **Successful Existing Model:** The "Required Request" policy, where families are counseled for consent, has proven highly effective in states like Andhra Pradesh and Telangana.
- **The Way Forward:** Eliminating corneal blindness requires investing in eye banks, training surgeons, and enhancing public education about eye donation. A consent-driven model ensures ethical practices and public trust.

SC ruling on socialism, secularism: TH Text&Context

Polity

Easy Explanation

On Constitution Day, the Supreme Court dismissed petitions challenging the inclusion of the words "socialist" and "secular" in the Preamble of the Constitution. These words were added through the 42nd Amendment during the Emergency in 1976. The court ruled that both terms are essential to the Constitution's basic structure, emphasizing that the Constitution is a living document and can be amended, including its Preamble.

Background: The original Preamble, adopted in 1949, described India as a sovereign, democratic republic. The framers avoided the word "socialist" to allow future generations to decide their economic models. Indian secularism, unlike the Western model, involves state regulation of religious practices for social reform while ensuring freedom of religion.

Case Details: Petitioners argued that the amendments during the Emergency forced ideological conformity. They sought either the removal of these terms or their relocation in a separate paragraph. The court rejected these arguments, affirming that "socialism" represents a welfare state promoting equality and opportunity, while "secularism" ensures state neutrality toward all religions.

Significance: India's post-independence era was marked by democratic socialism, transitioning later to a market-oriented economy after 1991. While economic reforms have reduced poverty, inequality persists, necessitating welfare measures. The court highlighted the importance of balancing socialism for the needy with economic growth through private enterprise while preserving secularism to uphold equality and unity in diversity.

Key Takeaways

- **Original Preamble:** Adopted in 1949, it described India as a sovereign, democratic republic without the terms "socialist" or "secular."
- Amendment History: The 42nd Amendment added "socialist" and "secular" during the Emergency in 1976, reflecting evolving national values.



- **Supreme Court's View:** The Preamble is amendable, and these terms are integral to the Constitution's basic structure. "Socialism" emphasizes a welfare state ensuring equality, while "secularism" promotes religious neutrality by the state.
- **Economic Evolution:** India moved from democratic socialism with state-led growth to market liberalization after 1991. Welfare schemes like MGNREGA and food subsidies continue to address poverty amid rising inequality.
- **Significance of Secularism:** Indian secularism maintains state neutrality in religious matters, supporting social harmony and equality in a diverse nation.
- **Court's Ruling:** Reaffirmed the dynamic nature of the Constitution, ensuring it adapts to changing needs while retaining its foundational principles of equality and inclusiveness.

28th November 2024

Greatest show must go on: IE Editorial

Polity

Easy Explanation

November 26 marks Constitution Day in India, commemorating the adoption of the Constitution in 1949 after almost three years of rigorous work by the Constituent Assembly (CA). Alongside creating a democratic framework, the CA also laid the foundation for fair elections by establishing the Election Commission of India (ECI). The ECI, formed on January 25, 1950, was tasked with ensuring free and fair elections across India, including state elections—a decision made to prevent local prejudices from influencing electoral outcomes.

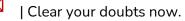
India's elections have been internationally praised, with the ECI becoming a global role model for democratic practices. However, challenges such as low voter literacy, gender gaps in participation, corruption, and rising criminalization in politics persist. The Supreme Court has played a pivotal role in safeguarding electoral integrity, striking down unconstitutional measures like electoral bonds in 2024.

Women's participation has shown remarkable progress, with voter registration and turnout nearly equal to men in 2024. While legislative action, like the 33% reservation for women in Parliament, is set to begin in 2029, systemic issues like black money, political defection, and inadequate funding mechanisms for political parties remain critical concerns. The ECI has called for reforms, including caps on party expenditures, state funding for parties, and the establishment of a National Election Fund.

Despite certain flaws in the recently passed Election Commission law, the ECI remains a robust institution protecting Indian democracy. Cooperation among the executive, legislature, and judiciary is essential to sustain and strengthen democratic practices.

Key Takeaways

- **Constitution and Elections:** The Constitution adopted on November 26, 1949, laid the groundwork for free and fair elections through the establishment of the ECI on January 25, 1950.
- **Election Commission's Role:** The ECI ensures independent and fair elections, earning global accolades for its democratic standards.
- Judicial Safeguards: The Supreme Court has reinforced the importance of free and fair elections as a basic structure of the Constitution and addressed issues like electoral bonds and criminalization.



- **Gender Inclusion:** In 2024, women's voter registration reached 948 women per 1,000 men, with turnout surpassing men in 19 states. Reservation for women in legislative bodies is set to commence in 2029.
- **Persistent Challenges:** Black money, political criminalization (46% of Lok Sabha members with criminal cases), and ineffective anti-defection laws hinder electoral reforms.
- **Proposed Reforms:** ECI has suggested caps on political party expenditures, state funding for parties, and a National Election Fund to ensure transparency and fairness.
- **Election Commission Law:** Passed in 2023, the law formalized service conditions for Election Commissioners but raised concerns over their neutrality and independence.
- **Future Outlook:** The ECI, despite challenges, remains a cornerstone of Indian democracy. Strengthening cooperation across institutions is vital for India to elevate its democratic stature globally.

In defence of India: IE Ideas

Science

Easy Explanation

India is focusing on strengthening its defense ties with like-minded Asian countries to counter China's growing military dominance. Recent agreements, such as air-to-air refueling with Australia and joint production of stealth equipment with Japan, reflect this urgency. China's massive investments in defense, including commissioning 70 submarines between 1995 and 2020, have created a significant gap in military capabilities that no single Asian nation, including India, can bridge alone. This has led to increased reliance on the U.S. presence in Asia to balance power.

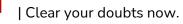
China's rhetoric of "Asia for Asians" aims to consolidate its regional dominance, but most Asian nations see through this and favor greater security cooperation with the U.S. However, America's ability to maintain dominance is being tested by its commitments in Europe, the Middle East, and Asia. Additionally, the U.S. faces challenges in scaling up its military production to meet rising demands across these regions.

India, recognizing this shifting global defense dynamic, has signed agreements with the U.S., France, and others to modernize its defense industry and increase arms exports. However, to close the defense capability gap with China, India must accelerate reforms in defense production and leverage international partnerships effectively.

Key Takeaways

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- India's Strategic Shift: India is enhancing defense partnerships with Asian nations, focusing on interoperability and industrial collaboration, as seen in agreements with Australia and Japan.
- **China's Growing Dominance:** China's military advancements, including its vast defense production capacity, outpace its neighbors, necessitating collective security efforts.
- **U.S. Role in Asia:** While the U.S. remains a key player in balancing Asian power dynamics, its commitments in Europe and the Middle East strain its focus and resources in Asia.
- **Global Defense Industry Reshaping:** The U.S. and Europe are reorganizing defense supply chains to meet rising global demands, presenting opportunities for India.
- India's Defense Modernization: India has signed defense roadmaps with global powers and is reforming its defense industry with an emphasis on private sector involvement and exports.
- **Urgent Need for Reforms:** To counter China's military strength and capitalize on global defense opportunities, India must accelerate domestic defense production and reforms.



Polity

Easy Explanation

The **One Nation One Subscription (ONOS)** initiative aims to provide all government-run higher education institutions (HEIs) in India with equitable access to 13,000 scholarly journals through a unified platform. Currently, HEIs subscribe to journals through multiple library consortia or individually, leading to overlaps and high costs. The ONOS platform, launching on January 1, 2025, will consolidate access, streamline subscriptions, and reduce expenses.

The initiative, funded with ₹6,000 crore for three years, addresses key goals like expanding journal access to 1.8 crore students and researchers, eliminating duplicate subscriptions, leveraging better bargaining power with publishers, and gaining insights into journal usage. It aligns with the **National Education Policy (NEP) 2020**, which emphasizes research and innovation. Additionally, the government plans to negotiate Article Processing Charges (APCs) to reduce publishing costs for Indian researchers.

Key Takeaways

1. What is ONOS?

A central initiative to provide government HEIs unified access to 13,000 journals from 30 major international publishers, starting January 2025.

- 2. Current Scenario:
 - HEIs access journals through 10 different library consortia or individual subscriptions.
 - About 2,500 HEIs access 8,100 journals, leading to high costs and inefficiencies.

3. Objectives of ONOS:

- Expand journal access to students and researchers.
- Avoid duplication in subscriptions, reducing costs.
- Use collective bargaining to secure better deals, reducing the initial cost from ₹4,000 crore to ₹1,800 crore annually.
- Monitor journal usage to optimize resource allocation.

4. Budget and Implementation:

- ₹6,000 crore approved for three years (2025–2027).
- o INFLIBNET will implement the initiative.
- Institutions can still subscribe individually to journals not covered under ONOS.
- 5. Next Steps:
 - Negotiate Article Processing Charges (APCs) to reduce publication costs for Indian authors, who paid ₹380 crore in APCs in 2021.
 - \circ $\;$ Decision pending on whether private HEIs will also be included.

6. Alignment with NEP 2020:

- \circ Supports research excellence and complements the National Research Foundation (NRF).
- Aims to build a robust, cost-effective research infrastructure in India.

Israel-Hezbollah ceasefire deal: IE Explained

International Relations

Easy Explanation

| Clear your doubts now.

The ceasefire between **Israel and Hezbollah** in Lebanon is holding, based on principles similar to the **2006 UNSC Resolution 1701**. Both sides are to withdraw to their respective positions (Hezbollah north of the Litani River and Israel south of the Blue Line), leaving the Lebanese Army as the sole armed force in South Lebanon. A notable addition to this agreement is the involvement of the **United States and France** in monitoring implementation, along with Lebanon, Israel, and the UNIFIL. However, Hezbollah's complete disarmament is not part of the agreement, and Israel retains the right to strike if Hezbollah breaches the ceasefire.

The ceasefire reflects strategic priorities for Israel, including focusing on Iran, replenishing military resources, and separating its battles against Hamas and Hezbollah. For Hezbollah, the ceasefire allows it to regroup and regain its socio-political base while maintaining influence in Lebanon.

Key Takeaways

- 1. Ceasefire Details:
 - Resembles the 2006 UNSC Resolution 1701.
 - Both forces have 60 days to withdraw to designated positions.
 - Hezbollah disarmament not included.
- 2. Why Israel Agreed:
 - Refocus on Iran while avoiding a prolonged war with Hezbollah.
 - Prevent overextension of military resources.
 - Separate fronts against Hamas and Hezbollah.

3. Regional Dynamics:

- Hezbollah's position in Lebanon remains strong with socio-political influence.
- US and French involvement in monitoring ceasefire adds new oversight but without combat troops.
- o Iran's backing of Hezbollah aligns with its broader strategy to maintain regional influence.

4. Broader Implications:

- Iran may prioritize diplomacy with the US and Arab nations, reducing Hezbollah's immediate vulnerabilities.
- Israel is freed up to intensify its campaign in Gaza and other Iranian proxy regions like Syria, Iraq, and Yemen.

5. Stability Outlook:

 Despite the ceasefire, deep-seated issues, including territorial disputes and Hezbollah's entrenched position, mean long-term stability in Lebanon and northern Israel remains uncertain.

New moiré superconductor opens the door to new quantum materials: TH Science

Science

Easy Explanation

Scientists are exploring **moiré materials**, created by slightly twisting two layers of the same material, which results in unique patterns and unusual quantum properties like superconductivity. A recent study found that **twisted bilayer tungsten diselenide (tWSe2)**, a semiconductor-based moiré material, exhibits superconductivity. Unlike traditional superconductors, this material achieves superconductivity through **strong electron-electron interactions** rather than electron-lattice interactions.

Superconductivity is a state where electrical resistance drops to zero. It occurs in moiré materials due to **flat energy bands** that allow electrons to interact more strongly, forming **Cooper pairs**, which move without resistance. In tWSe2, this phenomenon is more stable than in graphene-based systems, making it a promising candidate for future applications.

Key Takeaways

1. What Are Moiré Materials?

- \circ $\,$ Created by twisting two layers of the same material slightly.
- This misalignment forms **moire patterns** and alters the material's properties, such as superconductivity.

2. Why tWSe2 is Special:

- Made by stacking and twisting layers of tungsten diselenide, a semiconductor.
- Its superconductivity emerges from **electron-electron interactions** when electronic states are half-filled.

3. How Superconductivity Works:

- **Flat energy bands** in moiré materials slow down electrons, increasing their interactions.
- These interactions form **Cooper pairs**, which travel without scattering, eliminating resistance.

4. Unique Properties of tWSe2:

- **Transition Temperature**: –272.93°C, comparable to high-temperature superconductors.
- It can switch between superconducting and insulating states by altering electronic properties.
- **Stability**: Unlike graphene-based moiré materials, tWSe2 maintains superconductivity after temperature changes.

5. Why This Matters:

- Opens new avenues for exploring superconductivity in semiconductor-based systems.
- Provides insights into quantum materials with potential applications in energy transmission and advanced technologies.

A primer on plastic pollution treaty talks: TH Science

Environment

Easy Explanation

A critical round of negotiations is underway in Busan, South Korea, to finalize a **legally binding treaty on plastic pollution**. The main debate revolves around whether to limit plastic production globally. While 66 countries and the EU, led by Norway and Rwanda, support controlling plastic production and promoting recycling, major plastic-producing nations like Saudi Arabia oppose such measures.

Global plastic production is projected to rise by 70% by 2040 without intervention. Negotiators also need to decide on reducing or banning **single-use plastics**, eliminating **hazardous chemicals in plastics**, and whether these changes will be mandatory or voluntary. Most countries agree on the need for better recycling systems, redesigning plastics for reusability, and helping countries financially comply with new measures. However, industries argue that the treaty should acknowledge plastics' societal benefits while addressing pollution.

Activists like Greenpeace stress the importance of bold leadership to set strict limits on production and ensure a **non-toxic future**, while industry leaders hope for practical and globally consistent policies.



1. The Treaty's Objective:

- Create a legally binding agreement to curb **plastic pollution**.
- Focus on plastic design, production, consumption, and end-of-life management.

2. Core Contentions:

- Plastic Production Limits: Supported by 66 nations and the EU; opposed by major producers like Saudi Arabia.
- Decisions on banning **single-use plastics** and **toxic chemicals** remain unresolved.
- Debate over whether measures should be **mandatory or voluntary**.

3. Current Global Plastic Trends:

 Without policy change, global plastic production could reach 736 million tons by 2040, a 70% increase from 2020.

4. Shared Agreements:

- Promote recyclable and reusable plastic designs.
- Invest in **plastic waste management** and **recycling systems**.
- Support waste pickers transitioning to safer jobs and provide funding mechanisms for compliance.
- 5. Stakeholder Perspectives:
 - Activists: Demand bold actions to reduce production, eliminate toxic chemicals, and focus on sustainable solutions.
 - Industries: Seek an agreement recognizing plastics' societal benefits while promoting recycling and reuse.

6. What's at Stake:

- A missed opportunity to unite globally on practical solutions.
- The potential for a treaty that creates a **sustainable future** by reducing plastic pollution while balancing economic considerations.

Schooling in India in times of poor air quality: TH Editorial

Environment

Easy Explanation

In Delhi, schools were asked to switch to online classes under the Graded Response Action Plan (GRAP) to combat air pollution. However, this measure raises questions about its scientific rationale and benefits. Poor air quality affects all age groups, and there's little evidence that switching to online classes protects children since indoor air quality at home is often no better than at school. For some underprivileged children, schools with air purifiers provide better air quality and access to mid-day meals.

Online learning, especially for young children, isn't a viable substitute for physical schooling, leading to learning and nutritional losses. Similarly, face mask mandates for children during poor AQI need a nuanced approach, considering age and pre-existing health conditions, as masks may not always be beneficial and can cause discomfort.

Instead of school closures, efforts should focus on mitigation measures like halting outdoor activities, using air purifiers in classrooms, and adopting personalized protective measures. Schools should not rely on GRAP measures to close, as physical classes ensure better learning continuity and overall well-being for students.



1. Impact of School Closures:

- Switching to online classes due to poor AQI causes learning loss, nutritional loss, and no real respite from air pollution.
- Schools, especially with air purifiers, may offer better air quality than many homes.

2. Online Learning Concerns:

- Online classes are not a substitute for physical learning and benefit only **EdTech platforms**.
- Younger children face **excessive screen time**, which can harm their development.

3. Face Masks and Air Quality:

- A uniform mask mandate for children lacks scientific support.
- Masks should only be recommended based on individual health conditions and not imposed universally.
- Functional air purifiers in schools negate the need for masks.

4. Suggested Measures for Schools:

- Keep schools open and functional, with mitigations like halting outdoor activities during poor AQI.
- Allow children with health conditions to **opt out** while ensuring others continue learning in classrooms.

5. Wider Social Concerns:

- GRAP measures often disproportionately impact the poor and vulnerable, leading to wage losses and increased inequality.
- School closures due to air pollution must be **delinked from GRAP**, as their costs outweigh the benefits.

6. Call for a Nuanced Approach:

- Policies on air quality and school functioning should be **people-centric** and focused on ensuring children's welfare.
- Physical classes must remain the norm, with innovative solutions for continuity in learning during adverse conditions.

The right to work deleted: TH Text&Context

Sociology

Easy Explanation

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) provides rural households a legal right to 100 days of work per year, linked to unique job cards. Recent trends show a worrying surge in worker deletions from job cards. The Act mandates a due process for deletions, including independent verification and worker notification. However, in practice, mass deletions have occurred without adhering to these protocols, often attributed to reasons like "Not willing to work," "Duplicate Applicant," or "Non-existent in Panchayat." Many of these deletions coincide with the implementation of Aadhaar-based Payment Systems (ABPS), suggesting administrative pressure to boost compliance metrics.

Data shows inconsistencies, such as workers deleted under "Not willing to work" despite having worked or demanded work in the same year. In some cases, entire villages were not reclassified as urban, yet subsets of workers were deleted under "Village becomes urban." Such arbitrary deletions undermine workers' legal right to employment, highlighting the need for stricter adherence to guidelines, independent audits, and transparency in the process.



1. Worker Deletions and Guidelines:

- Deletions are allowed for reasons like permanent migration, duplicate job cards, or forged documents.
- Proper verification and worker notification are legally required but are often bypassed.

2. Surge in Deletions:

- Deletions surged by 247% in 2022-23, coinciding with the rollout of Aadhaar-based Payment Systems (ABPS).
- Over the last four years, 10.43 crore workers' names have been deleted, with many deletions appearing arbitrary.

3. Questionable Reasons for Deletion:

- "Not willing to work" was the most cited reason, accounting for 83% of deletions in the current financial year, despite evidence of workers demanding or doing work.
- Reasons like "Village becomes urban" were inconsistently applied.

4. Impact on Workers:

- o Arbitrary deletions violate workers' right to guaranteed employment under MGNREGA.
- Many deletions were conducted without workers' knowledge or Gram Sabha involvement, as mandated by law.

5. Recommendations for Improvement:

- Conduct independent audits and regular reviews of deletion processes.
- Ensure transparency by involving Gram Sabhas, training officials, and including worker representatives in decision-making panels.
- Strengthen grievance redressal systems and ensure adherence to the Act's verification protocols to uphold employment rights and social justice.

29th November 2024

What is Centre's new mission to promote natural farming?-Indian Express Explained

Economy(Agriculture)

Easy Explanation

The National Mission on Natural Farming (NMNF), approved by the Union Cabinet, aims to promote chemical-free farming by using natural inputs derived from livestock and plants. It builds on the earlier Bhartiya Prakritik Krishi Paddhati (BPKP) and has a total budget of ₹2,481 crore. The scheme will establish 2,000 model demonstration farms and train 18.75 lakh farmers in natural farming methods. An additional 7.5 lakh hectares will be brought under natural farming, focusing on districts with high fertilizer use and areas along the Ganga. It seeks to reduce costs for farmers, improve soil health, and mitigate climate risks. Key differences from earlier programs include a larger budget, greater farmer participation, and a focus on developing certification and branding for chemical-free produce.

Key Takeaways

- 1. **Objective**: Promote chemical-free, livestock-based farming.
- 2. **Budget**: ₹2,481 crore, with ₹1,584 crore from the Centre and ₹897 crore from states.
- 3. Training: 2,000 demonstration farms; 18.75 lakh farmers to be trained.
- 4. Coverage: Additional 7.5 lakh hectares; focus on high-fertilizer districts and Ganga areas.

- 5. Goals: Lower costs, rejuvenate soil health, address climate risks, and certify natural produce.
- 6. Difference: Larger scope and budget compared to earlier programs, with standardized certification for chemical-free products.

Socialist, secular in Preamble-Indian Express Explained

Polity

Easy Explanation

The Supreme Court of India has upheld the inclusion of the words "socialist" and "secular" in the Preamble of the Constitution, dismissing petitions that challenged their insertion during the Emergency through the 42nd Amendment Act of 1976. The Court noted that while the original Preamble adopted in 1949 did not include these terms, their addition reflects the evolving interpretation of India's constitutional values. It reasoned that "secularism" in India means the State maintains neutrality toward all religions, neither supporting nor penalizing any faith, while "socialism" refers to the pursuit of economic and social justice without hindering private enterprise. The Court also highlighted that challenging the amendment after 44 years lacked justification and that these terms have not impeded legislative or policy actions by elected governments.

Key Takeaways

- Supreme Court Decision: The Supreme Court upheld the inclusion of "socialist" and "secular" in the Preamble, rejecting challenges to their constitutionality.
- 2. **42nd Amendment (1976)**: The words were added during the Emergency via the 42nd Amendment, which introduced significant changes to the Constitution.
- 3. Original Preamble: Initially, the Preamble did not contain "socialist" or "secular," despite attempts during the Constituent Assembly debates to include them.
- 4. Interpretation of 'Secular':
 - Evolving Meaning: Originally considered imprecise, "secularism" in India has come to mean that the State neither endorses nor opposes any religion.
 - Secular Ethos: Reflects ideals like fraternity, equality, and individual liberty. 0
- 5. Interpretation of 'Socialist':
 - Unique Indian Context: Denotes economic and social justice, ensuring no citizen is 0 disadvantaged due to social or economic circumstances.
 - Private Sector Growth: Does not restrict private enterprise, which has flourished in India.
- 6. Delay in Challenge: The Court noted the unjustified delay of 44 years in challenging the amendment.
- 7. Impact on Governance: The inclusion has not restricted elected governments from enacting policies, as long as they do not infringe upon constitutional rights or alter the Constitution's basic structure.
- 8. Court's Reasoning: The additions align with the Constitution's evolving nature and the ideals it seeks to promote, reinforcing India's commitment to secularism and socialism as guiding principles.

Constitution is not at ease with civilisation-Indian Express Editorial

Polity

Easy Explanation

197

As India's Constitution turns 75, debates arise about its alignment with the nation's civilizational identity. Critics argue that constitutionalism, emphasizing values like secularism and civic nationalism, often conflicts with India's ancient civilizational ethos. They claim post-independence constitutional frameworks reflect colonial legacies, seeking to reform native identities rather than embracing their richness. Replacing civilizational consciousness with constitutional values risks erasing collective memory, historical awareness, and cultural self-identity, making society vulnerable to external influences. While the Constitution anchors governance, India's pluralism is more deeply rooted in its **dharmic heritage** and collective values than in constitutional prescriptions. A balanced approach, preserving civilizational identity alongside constitutionalism, is proposed to ensure resilience and continuity.

Key Takeaways

- 1. Constitution vs. Civilizational Identity:
 - Critics argue that constitutional values like secularism conflict with India's civilizational ethos.
 - Post-independence frameworks are seen as extensions of colonial legacies.

2. Civic Nationalism:

• Civic nationalism, emphasizing allegiance to constitutionalism, may alienate traditional identity markers like religion, language, and culture.

3. Risks of Erasing Civilizational Consciousness:

- Replacing civilizational memory with constitutionalism could:
 - Denude society of its cultural self-identity.
 - Make it vulnerable to external or hostile influences.
 - Erase collective memory and historical awareness.

4. Lessons from Neighbors:

- The presence of constitutions has not prevented political instability in neighboring countries like Pakistan and Bangladesh.
- India's resilience lies more in its **dharmic pluralism** than its constitutional framework.

5. Balance Needed:

- Advocates for a middle path that respects civilizational heritage while upholding constitutional values.
- Ensures the Constitution adapts to evolving needs without undermining India's cultural foundations.

It looks forward, rooted in civilisation-Indian Express Editorial

Polity

Easy Explanation

India's Constitution reflects a synthesis of civilizational ethos and modern constitutionalism, offering a forward-looking agenda while learning from the past. Critics argue that the Constitution disconnects from India's rich civilizational heritage, but the Constituent Assembly debates reveal deep awareness and respect for India's cultural history. The framers consciously adopted democratic principles like equality, liberty, and secularism to counter the regressive aspects of ancient practices, such as caste-based discrimination and gender inequality.

The Constitution's emphasis on diversity and tolerance aligns with civilizational values like **Vasudhaiva Kutumbakam** (world as one family) and **dharma** (righteousness). Borrowing elements from global governance systems, the Constitution adapts them to Indian needs, ensuring protection of fundamental



rights and fostering democracy. It rejects uncritical glorification of the past, balancing civilizational pride with a progressive outlook.

Key Takeaways

- 1. Civilizational Roots:
 - The framers respected India's civilizational history, referencing its 5,000-year journey and cultural ethos.
 - Ancient assemblies and concepts like Lakshman Rekha (separation of functions) influenced modern governance ideas.

2. Progressive Outlook:

- The Constitution emphasizes equality, liberty, and individual dignity, addressing inequalities of caste and gender in ancient practices.
- Secularism and individualism were consciously incorporated to modernize governance while preserving pluralism.

3. Learning from Global Practices:

- Democratic elements were borrowed from systems like British parliamentary democracy and U.S. fundamental rights, adapted for India's diversity.
- Unlike Western doctrines, the framers rejected **due process**, opting for context-specific restrictions.

4. Balancing Past and Future:

- Pride in India's civilizational heritage coexists with a rejection of uncritical revivalism.
- Values like tolerance, diversity, and acceptance are central to both the civilizational ethos and the Constitution.

5. Critique of Fundamentalism:

- Attempts to revive past values uncritically are labeled as fundamentalism.
- The framers focused on setting a future-oriented agenda for governance, rooted in modernity yet respectful of tradition.

6. Constitution as a Living Document:

• The Constitution evolves with societal needs while upholding its core values, reflecting the spirit of a vibrant and diverse nation.

7. Civilisation and Constitution in Harmony:

• The Constitution embodies **dharma**, not as religion but as righteousness, integrating ancient values into modern governance.

The Indian Constitution, far from being a colonial legacy, integrates civilizational wisdom with modern democratic ideals, aiming to shape an inclusive, progressive, and diverse nation.

Wikipedia and ANI's defamation suit-The Hindu Text and Context

International relation

Easy Explanation

Asian News International (ANI) has filed a defamation suit against Wikimedia Foundation Inc. and three Wikipedia administrators, alleging that defamatory content on ANI's Wikipedia page tarnished its reputation. ANI contends that its edits to the page were reversed by other editors and claims Wikimedia violated obligations under India's IT Act. Wikimedia, which only provides technical infrastructure,



maintains that Wikipedia is a community-driven platform with guidelines ensuring content reliability through verifiable sources. The case raises concerns over safe-harbor provisions for intermediaries and potential harm to Wikipedia's democratic and anonymous editing structure. Any judicial interference could deter editors and undermine Wikipedia's reputation.

Key Takeaways

- 1. Charges by ANI:
 - ANI alleges its Wikipedia page contains defamatory content.
 - o Claims Wikimedia administrators actively reversed edits made by ANI-affiliated editors.
 - Argues Wikimedia violated intermediary obligations under India's IT laws.

2. Wikipedia's Editing Guidelines:

- Anyone can edit, but edits must follow strict guidelines.
- Content must be backed by reliable, verifiable sources.
- Original research or unpublished analyses are prohibited.

3. Protection Mechanisms:

- Controversial pages may have restricted editing access, like 'extended confirmed protection' or 'full protection.'
- Only qualified users or administrators can edit such pages.

4. Wikimedia's Role:

- Provides technical infrastructure but does not control content or editor actions.
- Administrators and editors are elected by the community.

5. Safe-Harbor Concerns:

- Wikimedia's safe-harbor status under Indian IT laws is at stake.
- Loss of this status could expose Wikimedia to legal liabilities.

6. Potential Impact:

- o Judicial intervention in forcing editor disclosures may harm Wikipedia's reputation.
- Editors may fear retaliation, jeopardizing Wikipedia's community-driven structure.

Do new schemes ahead of elections amount to 'voter bribes'?-The Hindu Editorial

Polity

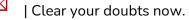
Easy Explanation

The introduction of schemes like Maharashtra's Mukhyamantri Majhi Ladki Bahin Yojana, offering direct benefit transfers (DBTs) to women before elections, has sparked debates on whether they constitute voter bribes. Critics argue that while such schemes address immediate needs, they risk diverting resources from essential welfare programs like health, education, and employment. Proponents highlight that these interventions cater to vulnerable groups and reflect political responsiveness. The main concerns lie in the lack of evaluation mechanisms, potential corruption, and whether these cash transfers effectively contribute to long-term welfare. Labeling these schemes as "bribes" oversimplifies their role in India's welfare framework.

Key Takeaways

1. The Scheme:

- Maharashtra launched a ₹1,500/month cash transfer for low-income women ahead of elections.
- Similar schemes exist in other states, targeting vulnerable groups.



- Critics view such schemes as election tactics or "voter bribes."
- Concerns include diverting funds from essential welfare like education, health, and employment.

3. Support:

- Supporters argue they address immediate needs for marginalized groups.
- Cash transfers, like maternity benefits, serve specific vulnerable populations effectively.

4. Evaluation and Corruption:

- Weak evaluation systems hinder transparency and accountability.
- Cash transfers risk middlemen exploitation due to limited rural banking infrastructure.

5. Comparison to Other Welfare:

- Programs like MNREGA offer more robust self-targeting and long-term benefits.
- Direct cash transfers lack systemic approaches to address broader socio-economic challenges.

6. Larger Debate:

- \circ The focus should be on integrating such schemes into a comprehensive welfare system.
- The need for reforms to balance short-term relief and long-term empowerment remains crucial.

Census 2025 as a comprehensive citizen registry-The Hindu Editorial

Polity

Easy Explanation

The 2025 Census will update the National Population Register (NPR) as a step toward establishing the National Register of Indian Citizens (NRIC). Mandated under the Citizenship Act, the NRIC aims to create a verified registry of Indian citizens to enhance national security, streamline identity verification, reduce fraud, and improve the targeting of welfare programs. Unlike Aadhaar, which is inclusive of all residents for identity verification, the NRIC exclusively focuses on citizenship verification. While promising benefits, the process raises concerns about privacy, data misuse, exclusion risks, and logistical challenges. Lessons from Assam's NRC experience emphasize the need for transparency, robust data protection, and public awareness.

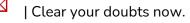
Key Takeaways

1. 2025 Census and NPR Update:

• The 2025 Census will update the **National Population Register (NPR)** as a precursor to creating the **National Register of Indian Citizens (NRIC)**.

2. Mandate and Purpose of NRIC:

- Mandated by the Citizenship Act 1955 (Section 14A), the NRIC aims to establish a comprehensive registry of Indian citizens.
- **Objectives**: Enhance national security, streamline identity verification, reduce fraud, and improve the targeting of welfare programs to eligible recipients.
- 3. Process of Establishing NRIC:
 - \circ Data Collection:
 - Demographic data during Census houselisting operations.
 - Biometric data collection may be excluded due to existing Aadhaar data.
 - Public Engagement:
 - Inviting public claims and objections to ensure transparency.



Verification and appeals process for residents to challenge records.

• Finalization:

- Detailed inquiries into citizenship status.
- Issuance of identity cards documenting citizenship as mandated by the Citizenship Act.

4. Difference Between Aadhaar and NRIC:

- Aadhaar:
 - A 12-digit unique identification number issued to **all residents**, regardless of citizenship.
 - Used for identity verification in services like banking, subsidies, and digital identity.
- NRIC:
 - Aims to verify and document citizenship status.
 - Exclusive to Indian citizens, serving as a definitive record of citizenship.
 - Complementary but distinct roles in governance and security infrastructure.

5. Assam NRC Experience:

- Assam updated its NRC in 2019 to identify illegal immigrants, especially from Bangladesh.
- Challenges Faced:
 - Accuracy and fairness issues due to stringent documentation requirements.
 - Many rural and less-educated residents were unable to meet criteria.
- Implications:
 - Highlights potential humanitarian and administrative challenges for a nationwide NRIC.
- 6. Concerns and Challenges:
 - Data Privacy:
 - Potential misuse of demographic and biometric information.
 - Despite Supreme Court guidelines, robust data protection is critical.
 - **Risk of Exclusion**:
 - Communities with limited documentation may be unfairly excluded.
 - Verifying citizenship on a large scale poses logistical and administrative hurdles.
 - Need for Streamlined Procedures:
 - Importance of efficient processes and targeted public awareness campaigns.
- 7. Citizen Vigilance and Engagement:
 - Active Participation:
 - Citizens should stay informed and proactive in verifying their records.
 - Understanding rights and providing accurate information is crucial.
 - Ensuring Inclusivity:
 - Public engagement helps ensure the NRIC process is inclusive, equitable, and effective.
 - Transparency and fairness depend on widespread citizen involvement.

8. Complementary Systems:

- Aadhaar and NRIC serve different but complementary purposes in India's identity infrastructure.
- Aadhaar focuses on identity verification for residents.
- **NRIC** focuses on citizenship verification for Indian citizens.

9. Future Implications:

• The NRIC has the potential to significantly impact governance, security, and welfare distribution.

| Clear your doubts now.

 Addressing challenges proactively is essential to prevent adverse effects on vulnerable populations.

Stigma of HIV and birth of biomedical waste regulations-The Hindu Science

Science

Easy Explanation

The discovery of HIV/AIDS and the subsequent public fear significantly influenced the development of biomedical waste management regulations globally. In the U.S., the 1987 "Syringe Tide," where medical waste washed up on beaches, spurred the enactment of the **Medical Waste Tracking Act (1988)**, marking the first systematic regulation of hospital waste. Similarly, in India, the first HIV case in 1986 coincided with the enactment of the **Environmental Protection Act**, but hospital waste was not classified as hazardous until the **Biomedical Waste (Management and Handling) Rules of 1998**. This legislation empowered pollution control boards to oversee waste management. India's biomedical waste regulations have since evolved, with significant updates in 2016 and minor revisions in 2020, ensuring stricter protocols for segregation, treatment, and disposal of hospital waste.

Despite progress, challenges such as mishandling of waste in rural areas and occupational hazards for healthcare workers persist. The HIV crisis underscored the importance of safe healthcare practices and served as a catalyst for reform.

Key Takeaways

1. HIV and Waste Regulations:

- The global HIV epidemic heightened awareness about healthcare waste risks.
- In the U.S., the 1988 Medical Waste Tracking Act introduced stringent biomedical waste guidelines.
- In India, the **1998 Biomedical Waste Rules** marked the first recognition of hospital waste as hazardous.

2. India's Timeline:

- **1986**: Environmental Protection Act enacted; first HIV case identified.
- **1998**: Biomedical Waste Rules introduced; empowered pollution control boards to regulate waste.

3. Regulatory Evolution:

- Four amendments to India's biomedical waste rules.
- Major updates in **2016** and refinements in **2020** improved waste management technology and protocols.

4. Ongoing Challenges:

- $_{\odot}$ $\,$ Mishandling of waste, particularly in rural and under-resourced areas.
- Continued occupational hazards for healthcare workers.
- Gaps in compliance and enforcement.

5. Positive Outcomes:

- The HIV crisis catalyzed reforms, leading to safer and cleaner healthcare environments.
- Biomedical waste management has improved significantly but requires continuous oversight and innovation.

30th November 2024



Polity

Easy Explanation

The Jama Masjid in Sambhal, Uttar Pradesh, built in 1526 by a Mughal official under Babur, is recognized as India's oldest surviving Mughal mosque and is protected by the Archaeological Survey of India (ASI). Despite its historical significance, the mosque is currently embroiled in a legal dispute sparked by petitioners who claim that the site originally housed the Shri Hari Har temple, which was allegedly demolished to construct the mosque. These petitioners argue that remnants of the temple architecture are evident in the mosque's structure and cite local beliefs related to Hindu mythology, particularly the prophecy of Kalki, the tenth avatar of Lord Vishnu, appearing in Sambhal during the current age, Kali Yuga.

The Supreme Court has directed the mosque's management committee to escalate the matter to the Allahabad High Court, halting the district court's proceedings until the High Court provides further instructions. Historical evidence is mixed, with some historians supporting the temple claims based on architectural elements and material reuse, while others dismiss these assertions, emphasizing the lack of concrete historical records and suggesting that architectural similarities are common due to cultural exchanges over centuries.

Key Takeaways

- 1. Historical Significance:
 - Jama Masjid in Sambhal is the oldest surviving Mughal mosque in India, established in 1526 by a Mughal official under Babur.
 - It is one of the three mosques from Babur's reign that have survived to the present day, alongside the Kabuli Bagh Mosque in Panipat and the Mir Baqi Mosque in Ayodhya.

2. Legal Dispute:

- Petitioners claim that the mosque was built on the site of the Shri Hari Har temple, which they assert was demolished.
- The Supreme Court has intervened, instructing the mosque's committee to appeal to the Allahabad High Court and suspending the district court's proceedings pending the High Court's decision.

3. Historical Claims and Evidence:

- Supporters of the temple claim cite architectural features and materials believed to be repurposed from the original Hindu temple.
- ASI reports from the 19th century and recent historians like Meenakshi Jain suggest evidence of temple remnants within the mosque structure.
- Conversely, historians like Howard Crane and Sohail Hashmi argue that architectural similarities do not necessarily indicate the presence of a temple and emphasize the lack of definitive historical documentation supporting the temple claims.

4. Architectural Insights:

- The mosque features elements typical of Mughal architecture, including a high pishtaq and rectangular prayer chambers, but also shows influences from local artisans and architectural styles.
- Debates exist over whether certain architectural features indicate prior Hindu structures or are common elements in Islamic architecture influenced by various cultures.

5. Cultural and Religious Implications:

- The dispute highlights broader tensions over historical narratives and religious heritage in India.
- Claims involving the prophecy of Kalki's appearance add a layer of mythological significance to the legal and historical arguments.

6. Previous Legal Precedents:

• Similar disputes have arisen before, with a title suit filed in Moradabad court in 1878, which was dismissed due to insufficient evidence and questionable witness credibility.

7. Local Perspectives:

 Residents and local historians present differing views, with some supporting the temple claims based on observable architectural elements and historical accounts, while others refute them, emphasizing the mosque's uninterrupted use by the Muslim community for centuries.

Notre Dame to reopen soon: What has changed?-Indian Express Explained

International relations

Easy Explanation

Notre-Dame Cathedral in Paris is set to reopen on **December 7, 2024**, over five years after a devastating fire severely damaged its roof, spire, and interior. Built in 1163, this Gothic masterpiece is renowned for its architectural elements like rib vaulting, flying buttresses, and stained-glass windows. The 2019 fire, believed to have been caused by an electrical fault or negligence, destroyed key sections but spared the bell towers and facade. Its restoration was made possible through over \$882 million in global donations.

The reopening ceremony will feature a blessing by Paris' Archbishop Laurent Ulrich and a psalm sung during the symbolic door-knocking ritual. Restoration efforts have focused on rebuilding the spire and roof, cleaning the centuries-old stone and paintings, and repairing furniture. Emergency workers previously rescued priceless artifacts during the fire, ensuring the preservation of many treasures. The reopening signifies a monumental achievement in heritage restoration

Key Takeaways

- 1. Notre-Dame's Significance:
 - $_{\odot}$ $\,$ Medieval Gothic architecture, completed in the 12th century.
 - Known for iconic features like flying buttresses, stained glass, and gargoyles.

2. 2019 Fire Incident:

- \circ $\;$ Fire destroyed the roof and spire; facade and bell towers survived.
- Possible causes: electrical fault or burning cigarette.

3. Restoration Highlights:

- Rebuilt spire and roof, cleaned stone, paintings, and renovated furniture.
- $_{\odot}$ $\,$ Over \$882 million raised globally, with funds remaining for further projects.

4. Reopening Ceremony:

- Includes President Macron's speech, symbolic door-knocking ritual, and organ blessing.
- \circ $\,$ Marks a return of the cathedral as a cultural and religious hub.
- 5. Preservation Efforts:
 - \circ $\;$ Artifacts like gem-studded chalices were saved during the fire.
 - \circ $\;$ Extensive expert craftsmanship involved in the restoration.

6. Cultural Impact:

• Notre-Dame remains a global symbol of resilience and cultural heritage.



What is Odisha's proposed anti-cheating law?-Indian Express Explained

Governance

Easy Explanation

Odisha is set to introduce the **Odisha Public Examination (Prevention of Unfair Means) Act, 2024** to curb cheating and other malpractices in public exams conducted by state recruitment agencies. This decision follows increasing incidents of exam-related discrepancies, such as question paper leaks and unauthorized venues lacking security. The law seeks to deter individuals, groups, and institutions engaging in such activities for monetary or wrongful gains.

The proposed law defines offenses such as question paper leaks, tampering with answer sheets, violating security protocols, and creating fake websites. Offenses will be cognizable, non-bailable, and punishable by imprisonment of 3 to 10 years and fines ranging from $\gtrless10$ lakh to $\gtrless1$ crore, depending on the severity. Service providers found guilty may face hefty penalties and be barred from conducting public exams for four years. Investigations will be conducted by officers of DSP or ACP rank.

This move aligns Odisha with states like Uttarakhand and Jharkhand, which have implemented similar laws to ensure transparency in public examinations.

Key Takeaways

- 1. Purpose of the Law:
 - To prevent cheating, question paper leaks, and other malpractices in public examinations.
 - To deter organized groups and individuals exploiting exams for monetary gains.

2. Need for the Law:

- Rising complaints about discrepancies in online exams, including question paper leaks and inadequate security at test venues.
- Protests by job seekers demanding fair recruitment processes.

3. Offenses Defined:

- Leaking question papers, unauthorized solutions, tampering with documents, and fake websites.
- Security violations, manipulation in seating arrangements, and holding exams without proper approvals.

4. Punishments:

- \circ Individuals: 3–5 years imprisonment and fines up to ₹10 lakh for unfair means.
- Organized groups: 5–10 years imprisonment and fines of at least ₹1 crore.
- Service providers: Fines up to ₹1 crore, cost recovery of exams, and a 4-year ban on conducting exams.

5. Investigation Authority:

• Only officers of DSP or ACP rank can investigate offenses under the law.

6. Comparisons:

• Odisha joins states like Uttarakhand and Jharkhand in introducing stringent anti-cheating laws to ensure fair public examination practices.

UGC approves flexible degree completion for undergrads: What does it mean?-Indian Express Explained

Sociology

Easy Explanation

| Clear your doubts now.

The University Grants Commission (UGC) has approved **Accelerated Degree Programmes (ADPs)** and **Extended Degree Programmes (EDPs)**, offering undergraduate students the flexibility to complete their courses faster or take extra time, depending on their academic needs. These programmes will be implemented from the 2025-26 academic year, with institutions deciding whether to adopt them.

Under ADPs, students can complete a three-year UG programme in five semesters or a four-year UG programme in six or seven semesters by earning additional credits. Conversely, EDPs allow students to take fewer credits per semester, extending the course duration by a maximum of two semesters. The aim is to accommodate diverse academic abilities, supporting high-achievers to graduate early and helping others progress at a manageable pace.

Institutions will form committees to assess students' eligibility based on academic performance. The same curriculum and exams as standard UG programmes will apply, and degrees will note the modified timelines without affecting academic validity.

Key Takeaways

1. What Are ADPs and EDPs?

- ADPs: Enable faster completion of degrees by earning additional credits.
- **EDPs**: Allow extended time for course completion with fewer credits per semester.
- 2. Timelines:
 - ADPs: Three-year programmes in 5 semesters; four-year programmes in 6–7 semesters.
 - EDPs: Extended by up to 2 additional semesters.
- 3. Objective:
 - Promote equity by supporting high-performers (ADPs) and students facing academic challenges (EDPs).

4. Implementation:

- Institutions will form committees to evaluate applications.
- Up to 10% of seats may be reserved for ADPs, while there's no cap for EDPs.
- Credit requirements and minimum semester credits will follow UGC guidelines.
- 5. Flexibility in Delivery:
 - Courses can be offered online, hybrid, or through additional classes outside regular hours.
 - Advanced courses and micro-credentials can help students fulfil credit requirements.

6. Start Date:

- Programmes will roll out in the **2025-26 academic year**.
- 7. Degree Validity:
 - Degrees remain equivalent to standard UG programmes, with a note on the timeline adjustment.

Everywhere the same smog-Indian Express Editorial

Environment

Easy Explanation

Delhi is facing its worst air pollution crisis, with Air Quality Index (AQI) reaching **severe plus levels** of 491. The smog is not confined to Delhi but extends across **North India, Pakistan, and Bangladesh**, affecting nearly half a billion people. Major contributors to this environmental disaster include **vehicular emissions, industrial activities, crop residue burning, and the use of fossil fuels**. Winter exacerbates the crisis by trapping pollutants close to the ground.



While solutions like clean cooking fuels, CNG buses, and emission controls have been implemented, they remain insufficient. The lack of preventive measures highlights systemic failures. Air pollution impacts health, causes millions of deaths annually, and hinders sustainable development goals.

This crisis underscores the need for **regional collaboration** among South Asian nations to address shared environmental challenges. Such cooperation could foster trust, enabling discussions on broader issues. Air pollution, as a transboundary issue, necessitates solidarity across borders and states for effective mitigation.

Key Takeaways

- 1. Severity of Crisis:
 - Delhi's AQI hit **491 (severe plus)**, with pollution levels 50 times above WHO's safe limits.
 - The smog affects not just Delhi but **South Asia**, including Pakistan and Bangladesh.
- 2. Health and Environmental Impacts:
 - Causes 2 million deaths annually in India.
 - Leads to long-term health issues like lung and heart diseases and impairs brain development.
 - Threatens India's **Sustainable Development Goals**.

3. Key Pollution Sources:

 Industrial emissions, vehicular pollution, crop residue burning, and use of coal and firewood.

4. Existing Measures:

• Initiatives like LPG access, CNG buses, and clean energy transitions have shown results but are insufficient for long-term relief.

5. Challenges:

- Lack of preemptive action despite decades of warnings and litigation.
- Short-term emergency responses (e.g., lockdown-like restrictions) are inadequate for a chronic issue.

6. Need for Regional Cooperation:

- Air pollution transcends borders, affecting India, Pakistan, and Bangladesh.
- Governments must collaborate across borders and states to tackle the shared crisis.

7. Opportunity for Unity:

- Shared environmental challenges can serve as a **platform for trust-building** between warring neighbors.
- Collective action on air pollution can pave the way for addressing other contentious issues.

THE SLOWDOWN-Indian Express Editorial

Economy

Easy Explanation

India's GDP growth has slowed significantly to **5.4% in Q2 FY2023-24**, down from 6.7% in Q1. This is much lower than the Reserve Bank of India's (RBI) earlier projection of 7% and analysts' expectations of 6.5%. Sectors like **manufacturing, mining, construction, and key services** have registered weaker growth, with urban demand affected by high food inflation and stagnant real wages. While rural demand may improve due to favorable kharif and rabi crop forecasts and increased government capital expenditure, the overall economic momentum remains a concern.



The slowdown poses a dilemma for the RBI, as it now faces the dual challenge of managing persistent inflation and sluggish growth. The central bank is likely to revise its annual growth forecast downward, narrowing its policy options as it tries to balance restrictive interest rates with the need to support economic recovery.

Key Takeaways

- 1. Q2 GDP Growth:
 - Growth slowed to **5.4%**, significantly below expectations (6.5%-7% range).
 - \circ A sharp decline from 6.7% in Q1.
- 2. Sectoral Performance:
 - Mining contracted, and manufacturing grew at just 2.2% (down from 7% in Q1).
 - Slower growth observed in construction, electricity, gas, water supply, and services.

3. Demand Trends:

- o Urban demand weakened by high food inflation and stagnant real wages.
- Private investment activity also moderated.

4. Rural Prospects:

- Favorable kharif output and promising rabi crop outlook may boost rural demand.
- o Government capital expenditure expected to sustain growth momentum.

5. Policy Implications:

- RBI's growth forecast for FY2023-24 (7.2%) likely to be revised downward.
- Balancing growth concerns and inflation control presents a policy challenge for the central bank.

6. Future Outlook:

- Economic momentum may improve in H2 FY2023-24, supported by agricultural output and government spending.
- However, the extent of recovery remains uncertain.

Indians need to share contraceptive responsibility-The Hindu Editorial

Sociology

Easy Explanation

India faces a significant gender disparity in contraceptive responsibility, with male sterilisation (vasectomy) rates stagnating at **0.3%** compared to **37.9% for female sterilisation**, as per National Family Health Surveys (NFHS). Despite the simplicity and safety of vasectomies, misconceptions, male ego, societal norms, and lack of awareness hinder their acceptance. Women disproportionately bear the burden of sterilisation, contrary to goals of gender equality outlined in **Sustainable Development Goal 5**.

Efforts like Vasectomy Day and financial incentives have been insufficient due to illiteracy, misinformation, and inadequate healthcare access in rural areas. Solutions include **school-level sensitisation**, increased cash incentives, awareness campaigns, and learning from countries like South Korea and Bhutan, where progressive norms and accessible services increased male participation. India must strengthen healthcare infrastructure, train professionals, and improve outreach to make male sterilisation a shared and socially accepted responsibility.

Key Takeaways

1. Current Statistics:

- Male sterilisation accounts for 0.3% of contraceptive use, while female sterilisation is 37.9%.
- Vasectomy rates have stagnated for decades despite awareness efforts.

2. Challenges:

- Misconceptions about vasectomies (impact on libido, masculinity).
- Cultural beliefs that contraception is a woman's responsibility.
- Lack of awareness about government cash incentives and no-scalpel vasectomies.
- Unavailability of skilled providers, especially in rural areas.

3. Proposed Solutions:

- **Education and Sensitisation**: Early awareness in schools and peer-group discussions to normalise male responsibility.
- **Cash Incentives**: Increase financial benefits to encourage male participation, as seen in **Madhya Pradesh** and rural Maharashtra.
- **Mass Campaigns**: Use media and social campaigns to debunk myths and promote vasectomy as safe and simple.

4. Global Lessons:

- **South Korea**: High vasectomy uptake due to gender equality and progressive societal norms.
- **Bhutan**: Acceptance through government-run camps and quality services.
- Brazil: Increased prevalence through sustained mass media campaigns.

5. Action Plan:

- Strengthen health infrastructure and train professionals.
- Invest in technical advancements like non-scalpel vasectomies.
- Focus on practical implementation alongside policy intentions.

6. Broader Impacts:

- Equitable contraceptive responsibility promotes gender equality and helps meet **SDG 5**.
- Shared family planning decisions improve overall reproductive health outcomes.













