

● POLITY

● ECONOMICS

● TECHNOLOGY

● ECOLOGY

POLITY AND GOVERNANCE

Sc To List Before Polls Pleas To Verify Count In All Evms

CONTEXT: A series of petitions have sought a complete count of VVPAT slips as opposed to the current practice of verification of votes in only a few EVMs in each Assembly segment through the slips

BACK GROUND: India's elections use Electronic Voting Machines (EVMs) alongside VVPATs (Voter Verifiable Paper Audit Trail) for added security. When you cast your vote on an EVM, a printed slip shows your chosen candidate. This slip is briefly visible for verification before being stored securely in the VVPAT.

Ballot tally

Voter Verifiable Paper Audit Trail (VVPAT) is an independent system attached with the Electronic Voting Machines that allows the voters to verify that their votes are cast as intended.



- Petitioners have moved top court, seeking that the EC be directed to count all VVPAT slips. They also propose simultaneous VVPAT verification

- On July 17, 2023, the top court had sought the response of the EC on a plea filed

by the Association for Democratic Reforms

- EC had said counting of 100% VVPAT slips would pose a great difficulty due to the amount of time it would take

- Court to hear petitioners before first phase of election

VVPATs offer several benefits:

- Voters can confirm their vote was registered correctly.
- Increased trust in elections due to the extra layer of security.
- Paper slips enable audits if needed.

Discussions are ongoing about VVPATs, with some advocating for matching more VVPAT slips with EVM data for enhanced verification.

Certain individuals and NGOs have approached the supreme court demanding 100% VVPAT machines before elections.

MAJOR POINTS

Background on VVPAT Verification Petitions Before the Supreme Court:

1. Petitioners Seek Complete Count of VVPAT Slips:

Several petitions have been filed urging the Supreme Court to mandate the cross-verification of votes in all Electronic Voting Machines (EVMs) by counting every Voter Verifiable Paper Audit Trail (VVPAT) slip, as opposed to the current practice of verifying votes in only a few EVMs per Assembly segment.

2. Supreme Court Agrees to List Petitions Before Lok Sabha Election:

The Supreme Court has agreed to list these petitions ahead of the upcoming Lok Sabha election, acknowledging the importance of the issue.

3. Current Practice of Verification:

Presently, votes cast in only five polling stations of each Assembly constituency are verified through VVPAT slips.

4. Assurances from the Bench:

Justice Sanjiv Khanna, heading the Bench, assured petitioners' counsels that the case would be listed for hearing in the week following the next, with only limited availability for detailed hearing in the upcoming week.

5. Reference to Previous Supreme Court Judgment:

The petitions refer to a 2013 judgment in Subramanian Swamy v Election Commission of India, which emphasized the importance of transparency in the electoral process and mandated the introduction of VVPATs in EVMs to restore voter confidence.

6. Challenges to EC Guidelines:

One of the petitions challenges a guideline by the Election Commission mandating sequential verification of VVPATs, proposing simultaneous verification to expedite the process.

7. Concerns Raised Over VVPAT Verification Efficiency:

Despite significant investment in VVPATs, concerns have been raised over the efficiency of verification processes, with only a fraction of VVPAT slips being verified.

8. EC's Response:

The Election Commission, in its affidavit, defended the existing verification process, asserting the integrity of EVMs and ruling out the need for redesigning VVPATs.

9. Difficulty in 100% VVPAT Verification:

The EC argued that conducting 100% verification of VVPAT slips would pose significant logistical challenges.

CONCLUSION: The ongoing petitions regarding the verification of VVPAT slips in India's electoral process underscore the importance of transparency and accountability in maintaining the integrity of democracy. With the Supreme Court agreeing to list these petitions before the upcoming Lok Sabha elections, there is a significant opportunity to address concerns and enhance confidence in the electoral process. As the debate continues, striking a balance between ensuring thorough verification procedures and addressing logistical challenges will be crucial in upholding the democratic principles upon which India's electoral system is built.

CRACKING
CIVIL SERVICES
NO MORE A
DIFFICULT TASK
COME JOIN WITH US

 **VEDHIK**
IAS ACADEMY
The New Learning Mantra



POLITY AND GOVERNANCE

Firms Without Profits Donated Through Electoral Bonds

CONTEXT: The analysis of data on electoral bond purchasers and encashers from April 12, 2019, to January 24, 2024, reveals suspicions of money laundering and tax evasion among 45 companies that donated bonds totaling ₹1,432.4 crore, with one political party encashing ₹1,068.4 crores (almost 75% of these bonds), raising concerns about the transparency and integrity of the electoral bond scheme as highlighted by the Reserve Bank of India and the Finance Ministry.

BACK GROUND: Introduced in 2018, electoral bonds aimed to boost political funding transparency but allowed anonymous donations. A joint analysis by The Hindu and researchers scrutinized 2019-2024 bond purchases, finding suspect funding sources. 45 donating companies raised red flags, including those with low profits, excessive donations, negative taxes, or lacking financial data—suggesting potential money laundering or tax evasion. The Reserve Bank of India expressed initial concerns over anonymity enabling malpractices, later validated by the Supreme Court's February 2024 ruling, deeming the scheme unconstitutional. This analysis likely influenced the decision, highlighting flaws in the electoral bond system.

Electoral Bonds and Suspect Donations: A Cause for Concern

Companies with Negative or Near Zero Profits Donated Heavily

- A joint analysis by The Hindu and researchers identified 45 companies that donated electoral bonds to political parties, with sources of funds raising suspicion.
- 33 of these companies donated ₹576.2 crore, with the BJP receiving ₹434.2 crore (nearly 75%).
- These companies had negative or near zero net profits after tax for seven years (2016-17 to 2022-23).
- The aggregate net losses of these companies exceeded ₹1 lakh crore.
- 16 companies paid zero or negative direct taxes, raising concerns about potential fronts or misreported finances. This suggests possible money laundering.

Losses no bar

Electoral bond donations by firms, their net profits, direct taxes and share of bonds donated to the ruling party

Rank	Company name	Total amount of electoral bonds purchased ₹ cr	Share of electoral bonds donated to BJP (%)	Sum of net profits, FY17 to FY23 ₹ crore	Sum of direct taxes paid, FY17 to FY23 ₹ crore
CATEGORY A: SUM OF NET PROFITS, 2016-2017 TO 2022-2023 <= 0 (POSITIVE DONATION WITH ZERO PROFIT/NET LOSS)					
1	Bharti Airtel Ltd.	198	99.7	-76954.7	-8250
2	Dhariwal Infrastructure Ltd.	115	21.7	-299	0
3	S E P C Power Pvt. Ltd.	40	12.5	-147.9	0.8
4	D L F Luxury Homes Ltd.	25	100	-128.2	-19.3
5	P R L Developers Pvt. Ltd.	20	50	-1550.5	-4.7
6	S D Corporation Pvt. Ltd.	17	100	-10.4	26.4
7	Eugia Pharma Specialities Ltd.	15	100	-28.9	-7.2
8	Mytrah Energy (India) Pvt. Ltd.	19	52.6	-86.8	-126.3
9	Satec Envir Engg. (India) Pvt. Ltd.	12	100	-146.4	-1.6
10	Athena Infrastructure Ltd.	10	100	-198.6	70
11	Bright Star Invsts. Pvt. Ltd.	10	100	-492.5	110.5
12	Chandrajyoti Estate Developers Pvt. Ltd.	10	100	-22.3	1.1
13	Pegasus Properties Pvt. Ltd.	10	100	-91.3	17.1
14	Piramal Capital & Housing Finance Ltd.	10	100	-16376.6	-5178.5
15	Selene Constructions Ltd.	10	100	-52.4	15.3
16	Sylvanus Properties Ltd.	10.5	100	-278.6	80.3
17	Greenko Energy Projects Pvt. Ltd.	8	100	-120.3	12.7
18	Warora-Chandrapur-Ballarpur Tollroad Ltd.	7	100	-4.6	4.9
19	Oriental South Delhi Hotels Pvt. Ltd.	5	100	-49.1	0
20	Village De Nandi Pvt. Ltd.	5	100	-48	0
21	U M Cables Ltd.	4.5	88.9	-19.4	8.3
22	Omkar Realtors & Developers Pvt. Ltd.	4.5	66.7	-1560	9.3
23	Taquito Lease Operators Pvt. Ltd.	4	100	-167.4	-0.2
24	Arvind Beauty Brands Retail Pvt. Ltd.	3	100	-111.7	-13.2
25	S N S Clothing Pvt. Ltd.	2	100	-0.7	0.1
26	Chowgule & Co. Pvt. Ltd.	2	85	-413.9	128.5
27	Gannon Dunkerley & Co. Ltd.	1.5	100	-121.9	-42.1
28	Inox Leisure Ltd.	1	100	-283.5	-17.1
29	J N S Instruments Ltd.	1	100	-35	0
30	Panacea Biotec Ltd.	1	100	-466.6	53.3
31	Arihant Enterprises Ltd.	0.4	100	-0.3	0
32	Dempo Industries Pvt. Ltd.	0.2	75	-1.9	6.7
33	Geojit Investment Services Ltd.	0.1	25	-3.48	0.64
	TOTAL	581.7	74.7		
CATEGORY B: DONATION AMOUNT HIGHER THAN SUM OF NET PROFITS, 2016-2017 TO 2022-2023					
1	Qwik Supply Chain Pvt. Ltd.	410	91.5	144.1	62.45
2	Madanlal Ltd.	185.5	94.6	2.07	-3.11
3	Nexg Devices Pvt. Ltd.	35	100	28.85	14.99
4	A B N L Investment Ltd.	10	100	8.97	4.69
5	Pragati Enterprises Ltd.	3.5	100	0.02	0
6	Shree Krishna Infrastructure Ltd.	2	100	0.16	0.04
	TOTAL	646	93		
CATEGORY C: DONATION AMOUNT POSITIVE BUT SUM OF DIRECT TAXES, 2016-17 TO 2022-23 <= 0 (ZERO OR NEGATIVE DIRECT TAXES)					
1	M K J Enterprises Ltd.	192.4	14	60.33	-10.62
2	Patel Highway Mgmt. Pvt. Ltd.	1	100	24.86	-1.53
3	A B C India Ltd.	0.4	100	11.85	-2.24
	TOTAL	193.8	14.6		
CATEGORY D: NO DATA ON PROFITS OR TAXES AVAILABLE					
1	Bharti Infratel Services Ltd.	12	16.7	NA	NA
2	Kamal Trading Co. Ltd.	3.5	57.1	NA	NA
3	Jai Suspension Systems Ltd.	0.9	100	NA	NA
	TOTAL	16.4	29.9		
	Grand total (45 companies)	1437.9	74.3		

NA: No information available

Donations Exceeding Declared Profits

- Six companies donated ₹646 crore, with the BJP receiving ₹601 crore (93%).
- While they had positive net profits overall, the donated amounts significantly exceeded their aggregate net profit.
- These companies (category B) could also be acting as fronts or misreporting financials.

Positive Profits, Negative Direct Taxes

- Three companies donated ₹193.8 crore, with the BJP receiving only ₹28.3 crore (around 15%).
- These companies had positive net profits but reported negative direct taxes in aggregate (2016-17 to 2022-23).
- This suggests potential tax evasion (category C).

Companies with No Financial Data

- Three companies donated ₹16.4 crore.
- They had no reported data on net profits or direct taxes paid for the entire seven-year period.
- This raises concerns about shell companies potentially involved in money laundering (category D).

RBI's Concerns Highlighted

- Internal communications from 2017 reveal the RBI's doubts about the electoral bond scheme.
- The RBI raised concerns about anonymous donations and potential violation of money laundering prevention measures.
- The Finance Ministry, however, proceeded with the scheme in 2018.
- The data from these companies appears to vindicate the RBI's concerns.

Scheme Ruled Unconstitutional

- The electoral bond scheme continued until January 2024 before the Supreme Court deemed it unconstitutional.

CONCLUSION: the analysis of electoral bond data from April 2019 to January 2024 has raised serious concerns about the integrity and transparency of political funding in India. The identification of 45 companies engaging in suspect donations, particularly those with negative profits, excessive contributions, or lacking financial data, underscores the potential for money laundering and tax evasion within the electoral bond scheme. The findings echo initial reservations expressed by the Reserve Bank of India, whose concerns about anonymous donations and compliance with anti-money laundering measures appear justified. With the Supreme Court's ruling deeming the scheme unconstitutional, there is a pressing need for reform to ensure accountability and fairness in political financing practices.

POLITY AND GOVERNANCE

Fiscal Battle

CONTEXT: The Supreme Court of India is considering a case that raises important questions about the balance of power between the central government and state governments in India, specifically regarding borrowing limits.

BACKGROUND: Kerala argues it can borrow freely under the Constitution, while the Centre wants to limit state borrowing for national fiscal health. The Supreme Court will decide how much power the Centre has and if the current revenue system hurts states like Kerala.



MAJOR POINTS:

Centre-State Fiscal Tension:

- The dispute arises from differing views on managing India's fiscal health, specifically regarding borrowing by state governments.

Kerala's Challenge:

- Kerala filed a lawsuit challenging the central government's (Centre's) power to limit state borrowing.
- The state argues that Article 293 of the Constitution grants them the right to borrow within limits set by their legislature, with the Centre's consent only required for specific situations (like outstanding central loans).
- Kerala further objects to including borrowings by state-owned enterprises and public account liabilities in the Centre's "Net Borrowing Ceiling."

Centre's Justification:

- The Centre aims to maintain national fiscal health by curbing state borrowing.
- They argue unlimited borrowing by states could:
 - Increase overall government debt.
 - Raise borrowing costs for everyone.
 - Limit access to credit for the private sector ("crowding out").

Fiscal Responsibility and Budget Management Act (FRBM Act):

- A 2018 amendment to the FRBM Act capped total government debt (Centre + States) at 60% of GDP.
- The Centre wants to prevent states from using "off-budget" borrowings (e.g., by state-owned enterprises) to bypass borrowing limits.

Current Revenue Sharing System:

- Kerala argues the current system penalizes states with high

The
More
You Learn,
The
More
You Earn



social spending (like Kerala itself).

- Goods and Services Tax (GST) replaced a major source of state revenue, making fiscal space even more crucial.

The Stakes:

- The Supreme Court will decide the balance between:
- Maintaining national fiscal discipline.
- Upholding states' fiscal autonomy under the Constitution.
- Addressing potential inequities in the revenue sharing system.

CONCLUSION: The case before the Supreme Court of India underscores the complex interplay between central government authority and state autonomy in fiscal matters. As Kerala challenges the Centre's power to restrict state borrowing, key issues such as national fiscal health, state autonomy under the Constitution, and the impact of revenue-sharing systems come to the forefront. The court's decision will not only shape the future borrowing limits for states but also determine the broader dynamics of fiscal responsibility and equity in India's governance structure. Balancing these considerations will be crucial in ensuring both national fiscal discipline and states' ability to address their unique socio-economic needs within a cooperative federal framework.

- In November 2023, the Court warned Patanjali against such advertising and threatened penalties.

Patanjali defied the Court:

- Held a press conference defending their products (November 2023).
- Issued misleading newspaper advertisements in December 2023 and January 2024.

Possible reasons for Patanjali's defiance:

- Lack of government action against the misleading Covid-19 claims in 2020.
- Government's presence at the Coronil promotion event in 2021, lending credibility to Patanjali's claims.
- Lack of any restraining order from the government despite Court warnings.
- This suggests potential government support or lack of strict enforcement, emboldening Patanjali to continue their misleading advertising practices.

CONCLUSION: The Supreme Court's firm stance against Patanjali's misleading advertisements is a positive development for public health. However, the government's mixed messaging, with its initial inaction and presence at a promotional event, has created a concerning gap in enforcement. Moving forward, stricter collaboration between the judiciary and the government is crucial to ensure that commercial interests don't compromise public health. Only through clear and unified action can consumers be protected from falling prey to false claims and misinformation.

WE AIM TO INSPIRE YOU

POLITY AND GOVERNANCE

Should State Governments Borrow More?

CONTEXT: The discussion centres on State governments' borrowing, particularly Kerala's recent appeal to the Supreme Court regarding borrowing constraints, and addresses the impact of heightened government expenditure on social sectors, COVID-19 economic relief measures, and the necessity for increased investment in higher education and research to cultivate a knowledge-based economy.

THE GIST

- In a recent development, the Government of Kerala has approached the Supreme Court for a resolution of the following question: how much can the State government borrow from the market to bridge the excess of its expenditures over receipts?
- State governments receive funds from three sources: own revenues (tax and non-tax); transfers from the Union government as shares of taxes and as grants; and market borrowings.
- The concerns about debt-financed government expenditures are often exaggerated. Economists in the Keynesian tradition have shown that government borrowing can generate a virtuous cycle if the borrowed resources are deployed effectively to create new incomes and jobs.

POLITY AND GOVERNANCE

Dangerous Game

CONTEXT: The Patanjali Ayurveda controversy revolves around its misleading advertisements, especially regarding Coronil's claims to cure COVID-19 and other diseases, highlighting concerns about commercial interests potentially superseding public health and safety, as addressed by the Supreme Court of India and the government's response.

BACK GROUND: Patanjali faces contempt for misleading Covid cure ads. Despite promising to stop, they kept making false health claims and criticizing real medicine. The government's inaction, including attending a Patanjali promotion event, may have emboldened them to defy the Court's warnings.



TIME LINE TO PRESENT MATTER

Patanjali Ayurved's Misleading Advertisements

- February 2023: Supreme Court issued a contempt notice against Patanjali for misleading Covid-19 cure ads violating advertising regulations.
- November 2023: Patanjali assured the Court they would stop making such claims.

Despite assurances:

- In February 2021, Government Ministers attended a Patanjali press conference promoting their Covid-19 product, Coronil, as a "cure" (against advertising rules).
- Throughout 2022, Patanjali continued advertising false cures for various diseases and criticizing evidence-based medicine.



BACK GROUND:

Dispute erupts over state borrowing! Kerala seeks Supreme Court's help to determine how much a state can borrow to cover spending gaps. The central government argues for a 3% limit on borrowing compared to state income (GSDP). Kerala claims this restriction weakens their financial autonomy and hinders fulfilling basic obligations, arguing it's a violation of federalism.

MAJOR POINTS

Should State Governments Borrow More?

Centre vs State Borrowing Row

- The central government and the state governments of India disagree on how much states can borrow from the market.
- Kerala has approached the Supreme Court to challenge the Centre's limit of 3% of a state's GSDP on borrowing.
- Kerala argues this curbs their ability to meet financial obligations and violates federalism.

Why States Spend More?

- States handle most spending on social services like health and education.
- In 2022-23, state spending on social services was ₹19,182 billion compared to the Union government's ₹2,230 billion.

RBI Expenditure Categories

- The RBI categorizes government spending as developmental (social services, economic services) or non-developmental (interest payments, pensions).
- State developmental spending has significantly risen over the past two decades.

Kerala's Spending Pattern

- Kerala dedicates 40-50% of its budget to social sectors, historically higher than the national average.
- A large portion goes towards salaries for teachers, nurses, and other government employees.
- However, Kerala's spending on infrastructure development (capital expenditure) is low at 10.6% of the budget.

Sources of State Funding

- State governments receive funds from three sources:
- Own tax and non-tax revenue
- Union government transfers (tax shares and grants)

- Market borrowings

Kerala's Case

- In 2020-21, Kerala increased spending to aid pandemic recovery, partly due to relaxed borrowing norms.
- Union government transfers to Kerala have declined, while state revenue remains stagnant.
- To meet its current budget, Kerala needs to borrow 3.4% of its GSDP, exceeding the Centre's limit.

The Argument for More Spending

- Kerala argues more government spending is needed, especially on higher education and research, to boost the economy.
- A portion of government borrowing comes from domestic savings, which could be productively utilized.
- Increased spending can create a virtuous cycle if invested effectively.

CONCLUSION: The debate between the central government and Kerala regarding borrowing limits highlights the complex issue of balancing a state's need for social spending and economic development with fiscal responsibility. While Kerala's historical focus on social sectors is commendable, concerns about low capital expenditure and rising pension outlays require careful consideration.

The Supreme Court's decision will be crucial in determining the appropriate balance between federal autonomy and central control over state finances. Ideally, the Centre and states can find a collaborative approach that allows states like Kerala to invest in strategic areas like higher education and research, while ensuring responsible borrowing practices. This could involve increased transparency in spending, exploring innovative financing mechanisms, and potentially revising the current borrowing limit formula to better reflect a state's specific circumstances. Ultimately, the goal should be to empower states to drive inclusive growth without jeopardizing long-term financial stability.



**MASTER
THE NEW
LEARNING
MANTRA**

www.vedhikiasacademy.org

POLITY AND GOVERNANCE

Smaller Citizens: How To Bridge The Gaps In India's Education System

CONTEXT: In the context of persisting educational challenges highlighted by recent reports and scholarly works, including issues of dropout rates, inadequate infrastructure, and the neglect of marginalized communities like Scheduled Tribes, scholars emphasize the urgent need for inclusive and locally responsive education policies to address deep-rooted inequalities and ensure the realization of education's democratic potential in India.



Bridging the Gaps in India's Education System: Key Issues and Solutions

Educational Disparity and Dropouts

- A recent survey by Pratham revealed deficiencies in basic skills among rural students aged 14-18.
- Dropout rates increase with age, with 32.6% of 18-year-olds not in school.
- Scheduled Tribes (STs) are the most disadvantaged group in education access and completion.

Analysis: These statistics highlight a significant gap in educational attainment, particularly for marginalized communities.

Importance of Local Context

- The book "Politics of Education in India" emphasizes the need for education systems to consider local realities.
- This includes using tribal dialects in instruction and incorporating traditional knowledge.
- A one-size-fits-all approach fails to address the specific needs of diverse communities.

Analysis: Recognizing and integrating local contexts is crucial for improving educational relevance and engagement for ST students.

Improving Pedagogy for Tribal Children

- Malli Gandhi emphasizes the need for "improvised pedagogy" and mother-tongue instruction for ST education.
- Synchronization between school activities and students' lives is essential to improve educational relevance.

Analysis: Culturally sensitive teaching methods and materials that

connect with students' experiences are key to enhancing learning outcomes.

The Role of Bureaucracy in Education Delivery

- Akshay Mangla's book "Making Bureaucracy Work" explores how bureaucracy impacts rural education.
- Informal rules and local adaptations can sometimes lead to better educational service delivery.
- However, bureaucratic hurdles and lack of community engagement can hinder progress.

Analysis: Effective education delivery requires a well-functioning bureaucracy that adapts to local needs while adhering to quality standards.

Addressing Systemic Inequalities

- Krishna Kumar's book "Smaller Citizens" highlights persistent inequalities in education based on gender, caste, and socioeconomic background.
- Unequal spaces within educational institutions further marginalize disadvantaged groups.

Analysis: Achieving educational equity requires addressing deep-rooted social inequalities and ensuring inclusive school environments.

The Need for Transformation

- Apoorvanand, in "Education at the Crossroads," calls for a fundamental transformation of the education system.
- Educational institutions must promote social transformation and dismantle inequalities.
- Equitable distribution of resources is crucial for achieving educational democracy.

Analysis: Long-term solutions require a systemic overhaul that prioritizes equal access, quality education, and social justice within the education system.

The
More
You Learn,
The
More
You Earn



www.vedhikiasacademy.org



INTERNATIONAL RELATIONS

Nine Dead, 1,000 Injured As 7.4-Strong Quake Hits Taiwan

CONTEXT: A powerful earthquake struck Taiwan, killing at least nine people and injuring over 1,000.



BACKGROUND:

- This is the strongest earthquake to hit Taiwan in 20 years.
- Strict building regulations and public awareness are believed to have prevented a larger catastrophe.
- The deadliest earthquake in Taiwan's history struck in 1999 with a magnitude of 7.6 and killed around 2,400 people.

EARTHQUAKE IN TAIWAN

- Deaths and Injuries:
 - At least nine people were killed.
 - More than 1,000 people were injured.
- Damage:
 - Dozens of buildings were damaged.
 - Massive landslides were triggered by the quake, isolating some areas.
- Earthquake Details:
 - Magnitude: 7.4
 - Date: Wednesday
 - Time: Just before 8:00 AM local time (0000 GMT)
 - Epicenter: 18 km south of Taiwan's Hualien City
 - Depth: 34.8 km

POTENTIAL IMPACT:

- **Economic**
 - Disruptions to businesses and infrastructure.
 - Repair and reconstruction costs.
 - Decline in tourism, especially around Hualien county.
- **Geopolitical:**
 - Potential impact on Taiwan's semiconductor manufacturing.
 - Increased tensions with China.
- **Positive:**
 - Recognition of Taiwan's disaster preparedness programs.
 - Fostering of social cohesion during recovery efforts.

CONCLUSION: While the full extent of the damage remains to be seen, Taiwan's experience with this earthquake offers valuable insights. The island nation's adherence to strict building codes and its investment in public disaster awareness programs likely mitigated the severity of the event. Looking ahead, the focus will shift to recovery efforts, and Taiwan's success in rebuilding its infrastructure and supporting its people will be crucial. The international community will be watching closely, and Taiwan's response could serve as a model for other earthquake-prone regions.

INTERNATIONAL RELATIONS

To Attack Or To Restrain: Israel's Strikes Leave Iran In A Strategic Dilemma

CONTEXT: In the escalating tensions between Israel and Iran, marked by recent Israeli airstrikes targeting Iranian and Hezbollah assets in Syria and Lebanon, Israel's Defense Minister emphasizes a proactive strategy to counter perceived threats, while Iran faces a delicate balance between avoiding open conflict and maintaining its regional influence amidst mounting pressure from Israeli attacks.



BACKGROUND: Iran-backed militias like Hamas and Hizbollah have continued to needle Israel since the October 7, 2023 attack on Israel. Israel has responded by launching an all out attack on Hamas in Gaza, which has resulted in huge civilian casualties and mounting international isolation of Israel. This has resulted in Israel's Prime Minister losing popularity and hence its response to escalate the conflict by targeting senior Iranian leadership in Syria and Lebanon, trying to send home a message to the Iranian leadership.

MAJOR POINTS.

Escalating Tensions and Multi-Front Conflict:

- Israel's Defense Minister Yoav Gallant describes the situation as a "multi-front war" involving offensive and defensive actions against perceived enemies.
- Recent Israeli airstrikes targeted an annex of Iran's Embassy in Damascus, resulting in casualties including a senior Iranian General, as well as a weapons depot in northern Syria, resulting in further casualties among Syrian soldiers and Hezbollah fighters.

Strategic Approach: Octopus Doctrine:

- Israel views Iran as its primary adversary, considering it the central hub for anti-Israel non-state actors in the region,

including Hamas, Hezbollah, Houthis, and the Islamic Jihad.

- Israel's response after an October 7 cross-border attack by Hamas involves two main objectives: continuing the conflict in Gaza to neutralize Hamas's military capabilities and intensifying the shadow war with Iran.
- Former Prime Minister Naftali Bennett's analogy portrays Iran as the "head" of the octopus and the militias as its "tentacles," indicating Israel's strategy to target both.

International Fallout and Domestic Pressures:

- Extended conflict in Gaza has led to international isolation for Israel, with significant civilian casualties triggering global condemnation and a UN Security Council resolution for an immediate ceasefire.
- Despite military backing from the Biden administration, diplomatic tensions between Israel and the US are escalating.
- Israeli Prime Minister Benjamin Netanyahu faces domestic pressure amid calls for resignation and early elections, potentially influencing Israel's strategic decisions.

Iran's Dilemma and Strategic Restraint:

- Iran's response to Israeli attacks has been restrained due to concerns about avoiding open regional conflict and the risk of drawing the US into war.
- However, Iran's strategic restraint may empower Israel by weakening Iran's deterrence capabilities.
- The recent attack on Iran's consulate in Damascus, resulting in the death of a top Quds Force commander, highlights Iran's dilemma of needing to respond to Israeli aggression without escalating into open conflict.

CONCLUSION: As tensions continue to escalate between Israel and Iran, the recent Israeli airstrikes targeting Iranian and Hezbollah assets in Syria and Lebanon have left Iran in a strategic dilemma. While Israel pursues a proactive strategy to counter perceived threats, including escalating conflicts in Gaza and intensifying the shadow war with Iran, Iran faces the challenge of maintaining its regional influence while avoiding open conflict with Israel. With mounting international pressure and domestic challenges for both sides, the delicate balance between restraint and retaliation will significantly shape the future dynamics of the Israel-Iran conflict.

SCIENCE AND TECHNOLOGY

Systems Science For A Better Future

CONTEXT: Pew Research Center's 2023 survey reveals citizens' preference for authoritarian leaders over multi-party democracy, disappointing proponents of democratic governance.

BACKGROUND: In a 2023 survey by the Pew Research Center, authoritarian preferences over multi-party democracy were alarming across various nations, including India (85%), Indonesia (77%), and Brazil (57%). Economic discontentment in democratic countries arises from wealth inequality, with large corporations dictating policy in their favor. Additionally, global environmental degradation poses existential threats, with India particularly affected, ranking lowest in the Environmental Performance Index.

The science of systems

Understanding the Fragmented Sciences

- Fragmentation in sciences hinders understanding due to narrow silos, impeding interdisciplinary learning and comprehensive comprehension of complex systems.
- Specialization leads to experts knowing more about less, resulting in a lack of holistic perspectives on societal functioning.
- The rise of free market fundamentalism treats economics as an ideology, prioritizing capital over human rights and societal well-being.
- Democratic institutions may be weakened by capitalist influences, raising questions about the balance between economic power and democratic governance.
- The breakdown in understanding complex systems is exacerbated by human egos and diverse forces within them.

Embracing Holistic Systems Thinking

- Specialization in sciences leads to a loss of holistic understanding, focusing on parts rather than the interconnected whole.
- Modern science instilled hubris in humanity, leading to attempts to control nature and alter genetic codes, endangering existence.
- In times of uncertainty, people seek certainty from leaders like godmen, dictators, and technologists, leading to misguided policies.
- Isaiah Berlin's analogy of "foxes" and "hedgehogs" highlights the need for thinkers who blend perspectives to understand complex systems.
- A shift towards holistic, self-adaptive systems thinking is needed, emphasizing humility, pattern recognition, and integration of diverse perspectives.

Enterprises for cooperation

The essence of the passage underscores the necessity for organizations to prioritize cooperation over competition in fostering global betterment. It highlights the undervaluation of women's contributions to family and societal well-being, emphasizing their inherent role as caregivers and facilitators of harmonious systems. The call is for a shift towards a more caring approach to improve the world collectively.



MASTER THE NEW LEARNING MANTRA

www.vedhikiasacademy.org

SCIENCE AND TECHNOLOGY

Systems Science For A Better Future

CONTEXT: An IIM-A report urges India to focus on investing in energy sector and expanding infrastructure to attain development by 2047 and net zero emissions by 2070.

BACKGROUND: A study conducted by academics at the Indian Institute of Management, Ahmedabad, funded by the Office of the Principal Scientific Adviser and the Nuclear Power Corporation of India, emphasizes the need for India to prioritize investments in nuclear energy and expand related infrastructure to achieve developed status by 2047 and reach net zero carbon dioxide emissions by 2070. Currently, nuclear energy constitutes only 1.6% of India's energy mix.



HIGHLIGHTS - Energy Scenarios for Net Zero Emissions

- Report outlines various scenarios: high-, medium-, and low-economic growth, nuclear energy thrust, fossil fuel expansion with carbon capture, renewable energy emphasis, and combined approaches.
- Mathematical models predict energy source proportions by 2030 and 2050 for net zero emissions by 2070, considering population development and energy access costs.
- Ideal scenario achieves net zero emissions by 2070, with nuclear power increasing five-fold to 30 GW by 2030 and 265 GW by 2050.
- In this scenario, nuclear power contributes 4% of India's energy by 2030, rising to 30% by 2050, while solar power share declines.
- The report highlights the importance of strategic energy planning to achieve sustainable emissions targets.

Uranium Availability - Challenges in Shifting Energy Sources

- Solar energy comprises 16% of India's capacity, coal 49%. Achieving ideal nuclear figures demands doubled investments and secure uranium access.
- Authors emphasize the need for diverse energy technologies, ruling out a single solution for achieving net zero emissions.
- Coal remains integral, requiring infrastructure for alternative sources like nuclear, flexible grids, and storage for renewable integration.
- India faces a substantial financial requirement of ₹150-200 lakh crore between 2020-2070 for energy transitions.
- Shifting energy sources poses complex challenges, necessitating comprehensive planning and significant investment.

SCIENCE AND TECHNOLOGY

India Among Countries Mulling Telescopes On, Around The Moon

CONTEXT: Astronomers are actively exploring the concept, first proposed in the 1950s, of installing telescopes on the far side of the moon for superior viewing conditions.

BACKGROUND: Astronomers anticipate expanding their observational capabilities by deploying high-resolution telescopes on the moon and in lunar orbit, with initiatives like India's PRATUSH gaining traction. On Earth, challenges arise from atmospheric interference for optical telescopes and electromagnetic 'hiss' for radio telescopes, exacerbated by pollution and terrestrial signals, prompting the need for off-planet observatories.

Lunar Telescopes: A Solution for Radio Interference

- Orbiting radio telescopes exacerbated interference issues by picking up radio noise from Earth along with outer space signals.
- Astronomers consider placing optical and radio telescopes on the moon's far side, away from Earth's radio interference.
- The moon's pristine, airless environment offers clear viewing conditions for optical telescopes during its two-week-long lunar night.
- Radio telescopes on the moon's far side benefit from protection against Earth's radio transmissions and solar plasma winds by the moon.
- Despite past cost concerns, renewed interest in lunar exploration promises to make the moon "the most radio-quiet location in the solar system" for astronomers.

The Cosmic Story: From Big Bang to Dark Ages

- Cosmologists theorize the cosmos began as a small, dense blob that exploded in the Big Bang, evolving into darkness.
- After the Big Bang, the universe was a murky sea of matter with traces of hydrogen and helium, lacking direct evidence.
- Darkness persisted for hundreds of thousands to millions of years until the first stars illuminated the cosmos.
- The cosmic microwave background (CMB), captured by radio telescopes, marks the universe's earliest light, revealing its expansion.
- The period between the CMB scattering and the birth of stars is known as the Dark Ages, characterized by gravitational star and galaxy formation.

Moon-Based Instruments for Cosmic Exploration

- Moon-based instruments are essential for detecting signals from the Dark Ages due to their isolation from starlight interference.
- LuSEE Night, a NASA-Berkeley Lab project, aims to land on the moon's far side to shield from Earth's radio frequency noise.
- Numerous moon-bound instruments, like NASA's Long-Baseline Optical Imaging Interferometer and ESA's radio telescope, are planned for launch.
- China plans to launch a moon-orbiting radio telescope in 2026, with Queqiao-2 serving as a communications relay and radio telescope.
- These initiatives aim to advance understanding of cosmic evolution, studying magnetic activity, gravitational waves, and infrared emissions from the moon.

Indian scientists, in collaboration with ISRO, are developing the radio telescope PRATUSH to study the universe from the moon's far side, bypassing challenges faced on Earth. Initially orbiting Earth, PRATUSH will later head moon wards to capitalize on ideal conditions for observation. This venture promises exciting discoveries in cosmology, including insights into dark energy and the nature of the cosmos.

PRATUSH: PROBING REIONIZATION OF THE UNIVERSE USING SIGNAL FROM HYDROGEN

- PRATUSH, a future radiometer in lunar orbit, aims to unveil the Cosmic Dawn, revealing when and how the first stars formed.
- It will determine the nature and colour of the light from the first stars, shedding light on the universe's early evolution.
- Equipped with a wideband antenna and high-resolution receiver, PRATUSH will record radio emissions across a broad frequency range.
- Its observing strategy involves continuous monitoring of large sky regions to capture beam-averaged radio emission spectra with precision.
- The payload's planned two-year lifetime ensures sufficient sky coverage and signal-to-noise ratio for accurate observations.
- PRATUSH's preferred circumlunar orbit minimizes interference from the ionosphere and solar/terrestrial radio frequencies, optimizing data quality.
- The project is currently in the pre-project study phase, funded by the Indian Space Research Organization.
- PRATUSH represents a pioneering effort to understand the universe's early history, from cold gas to stars and galaxies



**START YOUR
JOURNEY WITH THE
BEST**

COME JOIN WITH US





VEDHIK

IAS ACADEMY

The New Learning Mantra

START YOUR JOURNEY WITH THE BEST

**INDIA'S
TOP MOST
CIVIL SERVANTS
FOR COACHING**

www.vedhikiasacademy.org

Head Office:

Vedhik IAS Academy
Mercy Estate,
MG Road, Ravipuram,
Ernakulam-682 015,

Corporate office:

Vedhik IAS Academy
Samkalp Bhawan, Plot No.15,
Sector 4, Rama Krishna Puram,
New Delhi, Delhi-110022

Regional office

Vedhik IAS Academy
202, Raheja Chambers, 12,
Museum Road. Bangalore -
560001. Karnataka, India.

GCC Office:

Bobscoedu,

Bobsco Trading & Contracting Co. W. L . L
Office 22, Dream Tower 1,
Road: 2701, Adliya, Kingdom of Bahrain
www.bobscoedu.com