● POLITY ● ECONOMICS ● TECHNOLOGY ● ECOLOGY

POLITY AND GOVERNANCE

EVM's Control Units Do Not Recognise Parties Or Names: SC

CONTEXT: The Supreme Court emphasized that Electronic Voting Machines (EVMs) are designed with "agnostic" microcontrollers that do not recognize political parties or candidates but only register the buttons pressed by voters, highlighting the system's integrity and security measures against rigging, with the court also stressing the importance of not disclosing the EVM source code to prevent potential misuse.

EVM Control Units and Microcontrollers:

- The Supreme Court described the microcontrollers in EVMs as "agnostic" and emphasized that they do not recognize political parties or candidates.
- Justice Sanjiv Khanna noted that the microcontrollers only register the buttons pressed by voters on the ballot units.
- The interchangeability of buttons across constituencies was highlighted, with Justice Khanna explaining that parties do not have fixed button numbers across different areas.

Case Background and Integrity of EVMs:

- The case addressed concerns about the transparency and vulnerability of the EVM system to rigging.
- The court stressed the importance of maintaining the integrity of EVMs and refraining from disclosing their source code to prevent potential misuse.

Judicial Proceedings and EC's Responses:

- The Bench of Justices Khanna and Dipankar Datta reserved judgment on April 18 but reconvened to seek further clarification from the Election Commission (EC).
- Deputy Election Commissioner Nitesh Kumar Vyas responded to queries about the placement and programmability of microcontrollers in EVMs.
- Vyas explained that EVMs consist of three units, each with its microprocessor: ballot units, control units, and VVPATs.
- He clarified that the microcontrollers are "one-time programmable" during manufacturing and addressed questions regarding the storage of EVMs and VVPATs in sealed strongrooms for a statutory period after vote counting.

CONCLUSION: The Supreme Court's affirmation of the "agnostic" nature of microcontrollers in Electronic Voting Machines (EVMs) underscores the system's impartiality, focusing solely on recording voters' choices without bias towards any political entity. This transparency, coupled with stringent measures to safeguard the integrity of EVMs and protect against potential rigging, reflects a commitment to fair and democratic electoral processes. The court's caution against disclosing the EVM source code further reinforces the importance of maintaining trust and credibility in electoral systems.

ECONOMICS

RBI Tells Kotak Bank Not To Onboard New Customers Online

CONTEXT: The Reserve Bank of India restricted Kotak Mahindra Bank from onboarding new online customers and issuing credit cards due to IT security concerns.

RBI RESTRICTS KOTAK MAHINDRA BANK'S ONLINE ONBOARDING AND CREDIT CARD ISSUANCE

- **Reason for Restriction:**
  ◦ IT Security Concerns Identified by RBI
    ▪ Deficiencies in IT examinations for 2022 & 2023
    ▪ Bank's failure to address concerns promptly
  ◦ Specific Issues Identified
    ▪ IT inventory management issues
    ▪ Data security shortcomings
    ▪ Weak business continuity and disaster recovery plans
- **Restrictions Imposed:**
  ◦ Cease and desist from:
    ▪ Onboarding new online customers
    ▪ Issuing new credit cards
- **Services for Existing Customers:**
  ◦ Uninterrupted service for existing customers
  ◦ Existing credit cards continue to function
- **Response from Kotak Mahindra Bank:**
  ◦ Implementing new technologies to strengthen IT systems
  ◦ Continued collaboration with RBI for swift resolution

CONCLUSION: The RBI's restrictions aim to safeguard customer information and financial systems while prompting Kotak Mahindra Bank to strengthen its IT infrastructure. This move highlights the importance of robust cybersecurity measures in the banking sector. It will be interesting to see how quickly Kotak Mahindra Bank addresses the concerns and regains the ability to onboard new online customers and issue credit cards.

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Hot Button

CONTEXT: The Election Commission of India (ECI) is addressing concerns about low voter turnout due to heat exposure during elections by forming a task force with various government bodies to assess and mitigate heat risks, including providing shaded areas, hydration options, and medical services at polling booths, while also emphasizing the need for increased awareness and data collection on heat-related health issues.

Issue of Heat Exposure and Voter Turnout:

- The Election Commission of India (ECI) is concerned that ambient heat discouraged voters from participating in the recent general election's first phase on April 19.
- To address this, the ECI has formed a task force with representatives from various government bodies like the India Meteorological Department (IMD), Ministry of Health and Family Welfare, and National Disaster Management Authority.

Assessment of Heat Conditions and Measures Taken:

- The task force will assess local heat and humidity conditions five days before each polling phase and collaborate with State electoral bodies to ensure polling booths have adequate facilities.
- The IMD's criteria for declaring heat wave conditions focus on temperature deviations but may not capture the actual experience of ambient heat.

Risks of Heat Exposure and Vulnerable Populations:

- Even without a declared heat wave, people face risks if humidity increases the wet-bulb temperature beyond 30°C and they spend extended time outdoors.
- Certain areas, especially semi-planned or unplanned locations, can exacerbate heat stress due to factors like poor ventilation and lack of shaded resting spots.

Incentivizing Voting through Heat Management:

- The ECI aims to incentivize voting by minimizing heat exposure similar to measures taken in education, such as the midday meal scheme.
- Suggestions include adjusting polling dates and hours and ensuring booths have shaded waiting areas, hydration options, sanitary facilities, fruits, first-aid kits, wheelchairs, and medical services.

Additional Measures and Collaboration:

- It's crucial for the ECI to increase voter awareness about heat management protocols without encroaching on the duties of Accredited Social Health Activists.
- The Health Ministry should collect and share data on heat-related health issues to enable long-term countermeasures.

CONCLUSION: The Election Commission of India's proactive approach to addressing heat-related concerns impacting voter turnout demonstrates a commitment to ensuring fair and accessible elections. By forming a task force and implementing measures such as providing shaded areas and hydration options at polling booths, the ECI is not only mitigating immediate heat risks but also fostering greater public awareness and collaboration across government bodies. These efforts not only incentivize voting but also prioritize the well-being of voters, marking a significant step towards enhancing the democratic process in challenging environmental conditions.

The Conflict, From Nebuchadnezzar To Netanyahu

CONTEXT: There are historical, religious, and geopolitical factors contributing to the conflict between Iran and Israel, and the potential impact of this conflict on India's "act west" policy, regional stability, economic interests, and domestic considerations are important.

BACKGROUND: the conflict between Iran and Israel has deep historical roots, stretching back to ancient times with figures like Nebuchadnezzar and historical events like the destruction of the first Jewish temple. This conflict has evolved through centuries, influenced by religious, geopolitical, and ideological factors. The recent tensions and direct confrontations between these two nations reflect a complex and longstanding enmity that continues to impact regional dynamics and international relations, including India's strategic interests in the Middle East.

Historical Roots of Conflict:

- The conflict between Iran and Israel traces back to ancient times, notably marked by Nebuchadnezzar's actions in 586 BC.
- Nebuchadnezzar's destruction of the first Jewish temple and subsequent events laid the groundwork for the longstanding animosity.

Modern Dynamics and Hostilities:

- Despite occasional alliances, the Iran-Israel conflict intensified after the Islamic Revolution in 1979.
- Both nations consider each other existential threats, leading to a buildup of weapons and hostile rhetoric.

Proxy Wars and Regional Impact:

- Iran supports proxies like Hezbollah, Hamas, and Houthis, while Israel engages in covert operations against Iranian influence.
- Recent direct confrontations have escalated tensions and created a "new normal" with dangerous implications.

Historical Context and Religious Factors:

- The conflict also stems from historical events like the Zionist movement, partition of Palestine, and Arab-Israeli wars.
- Religious sentiments and perceptions, such as the Khaybar incident, further fuel animosity and influence regional dynamics.

Strategic Motives and Global Impact:

- Iran aims to rally Muslim support globally through the Palestine Cause, while Israel seeks regional superiority.
- The conflict's potential impact on global alliances, oil production, and regional stability is significant.

Potential Impact on India:

- India's "act west" policy could be affected by an Iran-Israel conflict, impacting expatriates and multilateral initiatives.
- With a sizable Muslim population and geopolitical considerations, India has a stake in avoiding a direct conflict.

CONCLUSION: The conflict between Iran and Israel, with its historical, religious, and geopolitical complexities, has significant regional and global implications. India's "act west" policy faces challenges due to this conflict, underscoring the need for diplomatic finesse and strategic planning to safeguard its interests, regional stability, and international partnerships amidst evolving geopolitical dynamics.

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The Indian Seafarer Deserves Better In Choppy High Seas

CONTEXT: In light of rising piracy, exploitation, and contractual issues, India is pushing for better international cooperation and improved protections for its vast seafaring workforce.

BACKGROUND: The global shipping industry relies heavily on Indian seafarers, who comprise a significant portion of the workforce (around 9.35%). However, these seafarers face numerous challenges and risks, threatening their safety and well-being. Recent incidents of piracy, exploitation by foreign recruiters, and unfair contractual terms have heightened concerns.

CHALLENGES FACED BY INDIAN SEAFARERS

- **Piracy on the Rise:**
  ◦ Recent attacks off the coast of Somalia highlight a resurgence of piracy.
  ◦ India calls for vigilance, proactive measures, and international cooperation to combat piracy.
- **Exploitation by Unethical Recruiters:**
  ◦ Over 200 cases of seafarer exploitation reported since 2020.
  ◦ Indian seafarers lured with false promises and subjected to unfair treatment.
  ◦ International coordination needed to address these issues.
- **Unfair Contractual Terms:**
  ◦ Many Indian seafarers lack legal representation and are unaware of their rights.
  ◦ India advocates for improved contractual conditions for seafarers.

Geopolitical Tensions and their Impact

- **Increased Risk of Attacks:**
  ◦ Incidents like the seizure of MSC Aries and the detention of MT Heroic Idun highlight vulnerabilities.
  ◦ Rising geopolitical tensions further complicate maritime security.
- **Kidnappings and Violence:**
  ◦ The Maritime Union of India reported a 40% increase in kidnappings in the Gulf of Guinea.
  ◦ Indian seafarers face dangers like assault, injury, and threats.

Initiatives to Improve Seafarer Safety

- **India's "Human Rights at Sea" Program:**
  ◦ Launched by the Indian government and the National Human Rights Commission (NHRC).
  ◦ Aims to address issues like illegal detentions and stranded seafarers.
- **International Cooperation:**
  ◦ India pushes for broader collaboration through the International Maritime Organization (IMO).
  ◦ Focuses on tackling piracy, armed robbery, and other maritime threats.

The Need for Change

- **Support for Indian Seafarers:**
  ◦ Despite the risks, many remain committed to their careers.
  ◦ Improved rights and protection are crucial to retain manpower.
- **India's Growing Role in the Maritime Industry:**
  ◦ India aims to increase its share of the global seafaring population to 20%.
  ◦ Recent events highlight the need for enhanced security measures.

CONCLUSION: The Indian government's efforts to improve the lives of seafarers through the "Human Rights at Sea" program and international cooperation via the IMO are a positive step in the right direction. However, addressing these challenges requires a multi-pronged approach. Stronger enforcement mechanisms are needed to hold rogue recruiters and ship owners accountable. Additionally, investing in training and education for seafarers on their rights and safety measures will empower them to navigate these challenges more effectively. By prioritizing seafarer well-being and working collaboratively with the international community, India can ensure a safer and more just future for its vast seafaring workforce, who are vital to the continued success of the global shipping industry.

INTERNATIONAL RELATIONS

Tensions Grow In West Asia, A Heavily Militarised Region

CONTEXT: The escalating tensions and heavy militarization in West Asia, driven by conflicts such as the Israel-Gaza conflict, hostilities between Iran and Israel, attacks involving Iran-backed militias, and broader regional crises contributed to increased arms imports and military spending in the region.

Background of West Asia is a significant global supplier of extractive resources, particularly for energy consumption, emphasizing the importance of peace in the region. However, escalating tensions stemming from conflicts like the Israel-Gaza conflict, Iran-Israel hostilities, and proxy conflicts involving Iran-backed militias have intensified the region's militarization and instability.

Heavily Militarized Region West Asia is among themost heavily militarized regions globally, as evidenced by its substantial arms imports and military expenditures. The Stockholm International Peace Research Institute's data highlights West Asia's prominence as a major importer of arms, with the United States being a key supplier.

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Recent Crises and Escalations Recent escalations include Iran's full-scale military attack on Israel in response to an earlier Israeli strike on an Iranian compound, leading to increased hostilities. Meanwhile, ongoing conflicts like the Israel-Gaza conflict and unresolved issues in Yemen, Lebanon, Syria, and Cyprus contribute to the region's volatile state.

Military Expenditure and GDP Share West Asia's military spending as a percentage of GDP is notably high, with countries like Saudi Arabia, Qatar, Jordan, Oman, Kuwait, and Israel consistently allocating significant portions of their GDP to defense. Despite fluctuations, the region's military expenditure remains substantial, reflecting its focus on defense capabilities.

Labor Force Engagement in Military The region also stands out for the percentage of its labor force engaged in the military, surpassing other regions like Europe and Central Asia. This indicates a significant reliance on military personnel and resources, possibly due to ongoing conflicts, security concerns, and geopolitical dynamics.

Factors Driving Arms Demand The consistent demand for arms in West Asia can be attributed to various factors, including domestic insurgencies, transnational terrorism, boundary disputes, and strategic considerations related to projecting power and influence. Foreign policies and regional alliances also play a role in shaping arms acquisitions and military strategies.

Impact of Arab Spring and Regional Dynamics The aftermath of the Arab Spring has contributed to increased militarization, with lingering effects on regional stability and security. The region's geopolitical complexities, coupled with historical rivalries and ongoing conflicts, further contribute to its status as a heavily militarized and volatile area.

POLITY AND GOVERNANCE

On The National Clean Air Programme

CONTEXT: Despite aiming to significantly reduce air pollution by 2024, India's National Clean Air Programme (NCAP) faces hurdles in implementing clean air action plans and utilizing allocated funds.

THE GIST

- Most cities proactively submitted their CAAPs yet their implementation has been inconsistent. On average, only 60%

of the allocated funds have been used thus far, according to the Ministry.

- Implementation delays hinder NCAP's success, particularly delays in approvals from the competent authorities.

- Beyond the need for data and models, swift implementation on the ground is essential. For this, implementation agencies should seek to reduce bureaucratic red tape by utilising shared, standardised technical evaluations.

BACKGROUND: In 2019, the Indian government launched the National Clean Air Programme (NCAP) with an ambitious goal: a 20-30% reduction in particulate matter (PM) concentration in the air by 2024 (compared to 2017). This target was later extended to 2026, aiming for a 40% reduction.

WHAT IS THE NCAP?

CHALLENGES IN IMPLEMENTING INDIA'S CLEAN AIR ACTION PLANS (CAAPS):

- **Underutilization of Funds:** While the Ministry allocated ₹10,422.73 crore, on average only 60% has been used. Cities like Visakhapatnam and Bengaluru haven't spent any or a negligible amount.

- **Implementation Delays:** Bureaucratic hurdles, lengthy approval processes, and unclear timelines are causing delays.

- **Lack of Standardized Procedures:** The absence of standard operating procedures creates confusion and slows down implementation.

- **Effectiveness Concerns:** Recent findings about the ineffectiveness of some solutions (like smog towers) make decision-makers hesitant to invest.

SCIENTIFIC TOOLS FOR EFFECTIVE AIR QUALITY MANAGEMENT

Understanding Pollution Sources:

- **Emissions Inventory (EI) Studies:**
- Identify and quantify local pollution sources.
- Forecast future emissions based on various factors.
- Help develop targeted control strategies.
- Limitation: Assessing transboundary pollution (e.g., stubble burning outside Delhi).

- **Source Apportionment (SA) Studies:**
- Provide detailed analysis of various pollution sources, including distant ones.
- Limitations:
  - Not suitable for predictive analysis.
  - Require significant resources (specialized personnel, equipment).
  - Cannot distinguish between sources with similar chemical signatures (e.g., diesel trucks).

Bridging the Gaps: Air Quality (AQ) Modelling

- Informs our understanding of pollution dispersion, including from distant sources.
- Ideally, cities should use EI and SA data to:
- Pinpoint air pollutants.
- Develop targeted mitigation measures.

Current Challenges:

- Only 37% of cities have completed EI and SA studies.

- Many cities lack knowledge of the effectiveness of proposed mitigation measures.
- NCAP relies on concentration data, not considering pollution sources outside city limits.
- Existing control measures often focus only on primary PM emissions, neglecting secondary precursors.
- Lack of decision-support systems for AQ forecasting (except in Delhi, Pune, Mumbai, Ahmedabad).

CONCLUSION: while India's National Clean Air Programme (NCAP) represents a crucial step towards addressing air pollution, its effective implementation faces significant challenges. The underutilization of allocated funds, bureaucratic delays, and the need for standardized procedures highlight the complexities involved in achieving clean air goals. Scientific tools like Emissions Inventory (EI) studies, Source Apportionment (SA) studies, and Air Quality (AQ) modeling offer valuable insights, but their limited adoption and gaps in knowledge persist. Addressing these challenges requires collaborative efforts, streamlined processes, and a focus on evidence-based strategies to achieve meaningful and sustainable improvements in air quality across the nation.

POLITY AND GOVERNANCE

Why Was The BJP Candidate Declared Winner In Surat?

CONTEXT: The BJP's candidate won the Surat Lok Sabha constituency seat unopposed after the Congress candidate's nomination papers, along with others', were rejected due to alleged issues with proposers' signatures, prompting legal challenges and a call for more efficient handling of election disputes.

THE GIST

- Section 36 of the RP Act sets out the law with respect to the scrutiny of nomination papers by the Returning Officer (RO). However, it specifies that signature of the candidate or proposer found not genuine is grounds for rejection.
- Nilesh Kumbhani had filed three sets of nomination papers. A BJP worker objected to Mr. Kumbhani's nomination alleging that the signatures of his proposers were not genuine.
- There have been at least 35 candidates who have been elected unopposed to the Lok Sabha.

LAW FOR NOMINATION (SECTION 33 OF RP ACT)

- An elector above 25 years can contest Lok Sabha elections.
- Proposers must be electors from the same constituency.

- Recognized party candidates need one proposer; unrecognised parties and independents need ten.
- Candidates can file up to four nomination papers with different proposers.

NOMINATION SCRUTINY (SECTION 36 OF RP ACT)

- RO should not reject nominations for non-substantial defects.
- Non-genuine signatures of candidate or proposer can lead to rejection.

CURRENT ISSUE

- Congress candidate's nomination rejected due to alleged non-genuine proposer signatures.
- RO sought clarification within a day, but proposers couldn't appear for scrutiny.
- Subsequent substitute candidate's nomination also rejected.

LEGAL RECOURSE

- Congress alleges coercion on proposers, seeks EC intervention.
- EC unlikely to act; legal recourse through filing an election petition in Gujarat High Court.
- High Courts mandated to conclude trials within six months, which is often not followed.

CONCLUSION: The BJP candidate was declared the winner in Surat's Lok Sabha constituency due to the rejection of the Congress candidate's nomination papers and subsequent substitute candidate's nomination. The issues with the proposers' signatures led to legal challenges, highlighting the need for more efficient handling of election disputes. While legal recourse is available through the Gujarat High Court, the process underscores the importance of adhering to nomination laws and ensuring transparent scrutiny to uphold the integrity of electoral processes.

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RBI Deputy Governor Rabi Sankar Gets 1-Year Extension

CONTEXT: The Indian government extends RBI Deputy Governor T. Rabi Sankar's tenure by one year, recognizing his service since 1990.

- RBI Deputy Governor T. Rabi Sankar's term extended by the government for one year.
- The extension announced through a statement by the central bank.
- The re-appointment effective from May 3, 2024, or until further orders, whichever is earlier.
- Mr. Sankar initially appointed as Deputy Governor in May 2021 for a 3-year term.
- He has been with the RBI since 1990.

Powerful Antidote To Toxins In Cobra, Krait Venoms Developed

CONTEXT: Scientists have developed a promising antidote to toxins in cobra and krait venoms using human antibodies, marking a significant step towards a universal antivenom for snakebites.

Problem with Current Antivenom Production

- Current method involves injecting animals with snake venom and collecting their antibodies.
- Issues include variability in antibody effectiveness and potential allergic reactions in humans.

Scientific Breakthrough

- Scientists opted for human antibodies instead of animal-derived ones.
- Developed potent antibody 95Mat5 targeting three-finger toxins (3FTxs) in snake venoms.

Diverse Snake Venom Challenge

- Venoms in India vary widely, requiring different antivenoms for different regions and species.
- Scientists aimed for a solution effective across regions and snake species.

Screening Human Antibodies

- Synthesized toxin variants in the lab for antibody screening.
- Screened billions of human antibodies for effectiveness against toxins.

Antibody Testing

- Tested antibody 95Mat5 against various snake venoms in vitro and in vivo.
- Found the antibody effective against most venom types except king cobras' venom.

Potential Impact

- Antibody 95Mat5 could be a crucial component in future antivenoms for mambas and cobras.
- Represents a step towards a universal antivenom for diverse snake venoms worldwide.

CONCLUSION: The development of the potent antibody 95Mat5 marks a significant advancement in antivenom technology, offering hope for a more effective and universal solution to combat the diverse and deadly toxins found in cobra and krait venoms. This breakthrough underscores the potential to save numerous lives globally and addresses the critical need for improved snakebite treatments in regions where these reptiles pose a significant threat to human health.

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