25/04/2024

TOPICS COVERED

1. **EVMs' control units do not recognise parties or names: SC (25 April) (GS Paper II: Election)**
2. **RBI orders Kotak Bank to stop adding customers online (25 April)   (GS Paper III: Banking)**
3. **India's 'first Kinnar sarpanch' in Lok Sabha fray from Damoh (25 April) (GS Paper I: Society)**
4. **The conflict, from Nebuchadnezzar to Netanyahu (25 April)   (GS Paper II: IR)**
5. **On the National Clean Air Programme   (GS Paper III: Environment)**

EVMs' control units do not recognise parties or names: SC (25 April)   (GS Paper II: Election)

- The Supreme Court discussed the microcontrollers in electronic voting machines (EVMs), referring to them as "agnostic" because they do not recognize political parties or candidates.
- Justice Sanjiv Khanna, leading the two-judge Bench, highlighted that **microcontrollers only identify the buttons pressed by voters on the ballot units, not the parties or candidates associated with them.**
- The interchangeability of buttons was noted, meaning that a party assigned to one button in a constituency might be assigned to a different button in another constituency, with the programming being done at the manufacturer stage.
- The case addressed concerns raised in petitions claiming that the **EVM system lacked transparency and was susceptible to rigging.**
- The court firmly stated that disclosing the EVM source code could lead to misuse and compromise integrity, emphasizing that such action would pose significant problems.
- Justices Khanna and Dipankar Datta reserved judgment on April 18 but reconvened with additional questions for the Election Commission (EC), particularly regarding the security and functionality of EVMs **and VVPATs (Voter Verifiable Paper Audit Trail).**
- Deputy Election Commissioner Nitesh Kumar Vyas appeared before the court to respond to the specific queries raised, which totaled five in number.

- This development occurred amidst preparations for the second phase of the Lok Sabha election scheduled for April 26.
- Mr. Vyas, responding to the first query, mentioned that all three units of an Electronic Voting Machine (EVM) - the **ballot units, control units, and Voter Verifiable Paper Audit Trails (VVPATs) - contained their own microprocessors.**

- When asked whether these microcontrollers were reprogrammable, Mr. Vyas stated they were "**one-time programmable" during manufacturing, indicating they could not be changed or accessed physically afterwards.**
- Advocates representing the petitioner Association for Democratic Reforms, namely Prashant Bhushan, Cheryl D'Souza, and Neha Rathi, expressed doubts regarding the EC's claim about the non-reprogrammability of the microprocessors.
- They contested the assertion, suggesting that the EC's statement was questionable in terms of whether the microprocessors could indeed be reprogrammed or accessed despite the EC's assertions.
- The Tiwa tribe is a native community in Assam, India, known for their rich cultural heritage.
- They celebrate the Yangli festival, usually held in January, to mark the end of harvest and welcome spring.
- During the festival, Tiwa tribals perform traditional dances that are central to their culture.
- Bormarjong village in Assam is a significant location for the Yangli festival celebrations among the Tiwa tribe.
- The festival includes various cultural activities like **dance performances, rituals, and communal feasting.**

RBI orders Kotak Bank to stop adding customers online (25 April)   (GS Paper III: Banking)

- The Reserve Bank of India (RBI) has directed Kotak Mahindra Bank **to stop onboarding new customers through its online and mobile banking channels.**
- The directive also **prohibits Kotak Bank from issuing fresh credit cards.**
- Existing customers of Kotak Bank, including credit card holders, can still avail services as usual.
- The RBI's action is based on significant concerns arising from its IT examination of the bank for the years 2022 and 2023.
- The central bank highlights Kotak Bank's failure to address these concerns comprehensively and promptly.
- **Serious deficiencies and non-compliances were observed in various areas including IT inventory management, user access management, data security, and business continuity and disaster recovery measures.**
- The RBI found Kotak Mahindra Bank deficient in IT risk and information security governance for two consecutive years.
- **Kotak Bank was significantly non-compliant with corrective action plans issued by the RBI for 2022 and 2023.**
- Frequent and significant outages were observed in Kotak Bank's Core Banking System (CBS) and digital banking channels over the last two years.
- **A service disruption occurred on April 15, 2024, causing serious inconvenience to customers.**
- The bank lacked necessary operational resilience due to its failure to build IT systems and controls in line with its growth.
- Despite continuous engagement with the RBI to address concerns, the outcomes were unsatisfactory.
- Rapid growth in digital transactions, including credit card transactions, added strain to Kotak Bank's IT systems.
- The RBI imposed restrictions on Kotak Bank to prevent prolonged outages.
- Kotak Bank stated it is adopting new technologies to strengthen its IT systems and will work with the RBI to resolve issues promptly.

- The bank assured existing customers of uninterrupted services, including credit card, mobile, and net banking.

India's 'first Kinnar sarpanch' in Lok Sabha fray from Damoh (25 April)   (GS Paper I: Society)

- **Durga Bai Majhwar, also known as Durga Mausi,** recently concluded Navami rituals at her home in Kanhwara village, Madhya Pradesh, marking the end of the nine-day Hindu festival of Navratri.
- She dresses up as the goddess Durga and is preparing for a performance at the Maa Sharda Temple in Maihar.
- Durga Mausi, aged 36, claims to be India's first sarpanch from the transgender or Kinnar community.
- She is running as an Independent candidate from the Damoh Lok Sabha constituency against BJP's Rahul Lodhi and Congress' Sarwar Singh Lodhi.
- Despite a month-long campaign, she takes a day off to participate in the Navami rituals.
- Durga Mausi was elected sarpanch of her village in 2014, encouraged by the villagers who were facing various problems.
- She is also a sage, holding the position of mahamandaleshwar of a Kinnar Akhara.
- While Durga Mausi is not the first transgender person in Madhya Pradesh to achieve electoral success, **Shabnam Mausi became India's first Kinnar MLA in 2000 by winning the Sohagpur bypoll seat.**
- Kamla Jaan, also known as Kamla Mausi, won the mayoral election in Katni city in 1999 but had to step down in 2002 after a court ruled her election illegal due to her being registered as male in the electoral rolls at the time.

'We are not a curse'

- Durga Bai Majhwar did not receive formal education due to societal discrimination against people like her in the Kinnar community.
- She considers Kamla Jaan her guru and started working with her at the age of 14.
- Despite facing societal challenges and discrimination, she asserts that people from her community are not a curse as perceived by society.
- Durga Mausi worked with her community for about 10 to 12 years before being encouraged to join politics when she was around 25 or 26 years old.
- She claims that it was the people of Damoh who urged her to contest in the Lok Sabha elections, prompting her to run from Damoh instead of her own constituency, Khajuraho.

- Durga Mausi's campaign involves support from fellow Kinnar community members and the general public, with workers and disciples joining her on bikes and Scooties during campaigning.
- Confident in her abilities, she believes she can give tough competition to candidates from major political parties.

Up against PM

- Despite claiming to contest as an Independent candidate in the Lok Sabha election, Durga Bai Majhwar's poll affidavit indicates that she is actually running on a ticket from the Indian People's Adhikar Party.
- She has expressed her support for Himangi Sakhi, another member of the Kinnar community, who is contesting the Lok Sabha election from Varanasi against Prime Minister Narendra Modi.

BJP Minority Morcha leader expelled for criticising PM's speech (25 April)

- Usman Ghani, the Bikaner BJP Minority Morcha district chief, was expelled from the party for six years.
- He expressed displeasure at Prime Minister Narendra Modi's recent remarks made at a rally in Rajasthan.
- Modi suggested that if the Congress comes to power, it would "redistribute" wealth to Muslims, which Ghani found objectionable.
- Ghani, being a Muslim himself, condemned the remarks and expressed disappointment.
- He mentioned that Muslims he approached for votes questioned him about Modi's remarks and looked for answers.
- Ghani also noted that the Jat community is upset with the BJP and voted against it in certain constituencies.
- The BJP's State disciplinary committee chairman, Onkar Singh Lakhawat, stated that Ghani's actions tarnished the party's image, leading to his expulsion.

No forests or animals will be left if human-wildlife conflicts continue: (SC 25 April)

The Supreme Court highlighted the danger posed by human-wildlife conflicts to forests and wildlife.

- Justice B.R. Gavai emphasized the need to strike a balance between the rights of both animals and humans.
- The case pertained to the demarcation of boundaries of Assam's Pobitora wildlife sanctuary and settlement of rights of villagers residing within it.
- The Assam government formed a special committee chaired by the Chief Secretary (Forests) to survey and suggest alterations in sanctuary boundaries.
- The proposed alterations aim to protect the rights of both wildlife and human inhabitants.
- The State's proposals will undergo scrutiny by the National Board of Wildlife and the Supreme Court.
- The court ordered inclusion of the Chief Wildlife Warden and the Field Director of Pobitora wildlife sanctuary in the special committee to represent wildlife concerns.
- The proposed changes in sanctuary boundaries aim to address issues related to settlers' land and the increasing rhinoceros population.
- Justice Gavai stressed considering the human aspect alongside environmental concerns.
- Previously, the apex court had stayed the Assam government's decision to denotify the Pobitora wildlife sanctuary.

Powerful antidote to toxins in cobra, krait venoms developed (25 April)

- Snake bites cause over 100,000 deaths annually and leave around 400,000 people permanently disabled.
- Most affected are low and middle-income countries like India and those in Africa.
- India alone accounts for an average of 58,000 deaths per year due to snake bites.
- Snakebite is often referred to as a "poor man's disease," receiving less attention despite its devastating impact.
- Limited access to healthcare in affected regions results in inadequate treatment and higher mortality rates.
- In 2017, the World Health Organization (WHO) recognized snakebite envenoming as a top-priority neglected tropical disease, aiming to raise awareness and address the crisis.

Animals in the middle

- Current production of antivenom involves injecting horses with snake venom.
- Antibodies produced in the horses' blood are collected for use in antivenom.
- Horses' blood may contain antibodies against other microorganisms besides snake venom.
- This results in variability and the need for larger doses of antivenom.
- Human reactions to antivenom, including adverse or allergic reactions, are more likely due to antibodies from another animal source.

A variety of venoms

- A group of scientists funded by the Wellcome Trust aimed to address concerns with traditional antivenom production.
- They decided to bypass using animals and instead focused on developing human antibodies.
- They synthetically created a broadly applicable human antibody against snake toxins.
- Their research, published in Science Translational Medicine, outlined their approach.
- Kartik Sunagar, a lead author of the study, highlighted the diversity of snake venoms in India.
- Venoms from the same species across regions may require different antivenoms for neutralization.
- Even within the same geographic area, antivenom may only work against certain venoms, not others.
- The goal was to find a solution that could work across regions and species by developing human antibodies.

Screening billions of antibodies

- The scientists focused on three-finger toxins (3FTxs), which are abundant and lethal components found in elapid venoms.
- Elapids are a family of snakes including cobras, kraits, and mambas, known for their medical relevance due to their venom.
- They specifically targeted α-neurotoxins, a type of 3FTxs that affect receptors in human nerve and muscle cells.
- These toxins hinder receptors from responding to acetylcholine, a neurotransmitter crucial for muscle function, causing paralysis and potentially death.
- Joseph Jardine, an antibody expert at Scripps Research Institute, led the initial search for the best antibody targeting these toxins.
- They synthesized variants of long-chain 3FTxs in the lab and screened billions of human antibodies expressed on yeast cells for optimal toxin binding.

- This screening process allowed them to identify antibodies with the most effective binding to the toxins, surpassing what an animal's immune system could produce.
- After multiple rounds of screening, they narrowed down a selection of antibodies that reacted broadly with various 3FTx variants.

All but king cobra

- Nicholas Casewell's group at the Liverpool School for Tropical Medicine tested antibodies in vitro in human cells to neutralize toxins, leading to the discovery of antibody 95Mat5.
- Dr. Sunagar's group tested 95Mat5 in vivo in mice to assess its effectiveness against lethal doses of α-bungarotoxin found in many-banded krait venom.
- They also injected mice with venom from king cobras, black mambas, and monocled cobras, all elapid snakes with venom containing 3FTx-L variants, to test the antibody's efficacy.
- 95Mat5 showed effectiveness against all snake venoms tested, except for king cobras where it delayed but did not prevent death.
- Notably, the antibody fully protected mice from venom of black mambas, despite only 17% of the venom composition consisting of 3FTx-L toxin.
- Irene Khalek, a scientist at Scripps Research Institute and study author, expressed surprise at the efficacy against black mamba venom, suggesting a potential synergistic effect in neutralizing other toxins present in the venom.

An 'impossible' find

- Andreas Hougaard Laustsen-Kiel, head of the Tropical Pharmacology Lab at the Technical University of Denmark, praised the study, highlighting its well-executed nature.
- Laustsen-Kiel suggested that the discovered antibody could be a crucial component of future antivenoms targeting mambas and cobras in Africa and Asia.
- He referenced a separate study published in Nature Communications, where scientists found a similar broadly neutralizing antibody against long-chain α-neurotoxins from snakes.
- Dr. Sunagar expressed surprise at the possibility of creating an antibody capable of neutralizing entire snake venoms due to their complexity.

Closer to a universal solution

- In the study, scientists discovered why their antibody, 95Mat5, was effective against their target toxins.
- Crystal structures of the antibody and the toxins revealed that the antibody bound to the toxins where they would normally bind to human nerve and muscle cells.

- This binding prevented the toxins from interacting with their target receptors, thus neutralizing their deadly effects.
- While the antibody works against a specific toxin found in the venom of many dangerous snakes, it represents a small step toward developing a universal antivenom.
- The scientists aim to identify antibodies against other toxins present in snake venoms, such as those from vipers.
- By discovering antibodies for multiple toxins, they hope to create a universal solution for combating the majority of snake bites worldwide.

The conflict, from Nebuchadnezzar to Netanyahu (25 April)   (GS Paper II: IR)

Several historical, religious and geopolitical factors have sharpened the Jewish-Persian conflict, which can impact India's 'act west' policy if it flares up

- The recent direct projectile exchanges between Iran and Israel echo historic animosity dating back to ancient times.
- Assyrian king Nebuchadnezzar, who lived from 642 to 562 BC, played a significant role in this animosity.
- In 586 BC, Nebuchadnezzar destroyed the first Jewish temple and sacked the Jewish kingdom of Judea.
- He also took citizens of Judea captive to Babylonia, contributing to the longstanding conflict between the Jewish people and their neighbors.
- Nebuchadnezzar is described in Jewish scripture as the "Destroyer of Nations," highlighting the impact of his actions on history.

A long enmity

1. **Historical Roots**: The enmity between Israel and Iran traces back to ancient times, dating to the era of the Assyrian king Nebuchadnezzar who destroyed the Jewish temple in 586 BC.

2. **Long-standing Conflict**: This hostility has persisted for over 26 centuries, with brief periods of alliance during the Pahlavi era in Iran in the last century.

3. **Islamic Revolution's Impact**: The establishment of the Islamic Republic in 1979 restored the historical animosity, with Iran consistently denouncing Israel as the "smaller Satan" and advocating for its destruction.

4. **Pursuit of Weapons**: Iran has pursued weapons of mass destruction, including drones, missiles, and nuclear weapons, while Israel views Iran as an existential threat and vows to prevent it from acquiring nuclear capabilities.

5. **Proxy Conflicts**: Both countries have engaged in proxy conflicts through non-state actors like Hezbollah, the Houthis, and Hamas, with Iran supporting them against Israel while Israel retaliates with military campaigns.

6. **Strategic Dynamics**: Until recently, the conflict remained mostly covert, with Israel targeting Iranian and Hezbollah presence in Syria, and Iran backing proxies against Israel. However, recent direct confrontations indicate a shift in this dynamic.

7. **Recent Escalation**: The recent escalation began with an airstrike in Damascus, suspected to be carried out by Israel, followed by Iran's retaliation with drones and missiles on Israeli targets. Israel then responded with an airstrike on an Iranian airbase in Isfahan.

8. **New Normal**: This escalation has set a new precedent, marking the first direct confrontation between the two enemies and potentially signaling a dangerous escalation in the conflict.

9. **Historical Factors**: Historical, religious, and geopolitical factors, including the Zionist movement and the Balfour Declaration, have further fueled tensions between Israel and Iran.

10. **Migration and Conflict**: The migration of Jews, particularly Sephardim, to Palestine, along with terrorist activities by Jewish gangs, exacerbated tensions with local Arabs.

- In 1947, the United Nations divided Palestine, creating Israel but leaving out a planned Arab state and Jerusalem.
- Israel took control of Jerusalem, the West Bank, and Gaza after defeating Arab armies in 1967.
- There's a growing global push for a "two-state solution" to resolve the Israeli-Palestinian conflict.
- Iran has been a vocal opponent of Israel, supporting groups like Hamas and Hezbollah against it.
- Iran's military focus and nuclear program are largely aimed at Israel.
- Historic conflicts, like the Muslim victory over Jews at Khayber in 628 AD, contribute to anti-Israel sentiment.
- Iran promotes loyalty among Shia Muslims in various countries, including Lebanon, Yemen, and Iraq, against Israel.

- **The plans by Iran and Israel**
- Iran seeks to rally global Muslim support by championing the Palestine Cause and positioning itself as the defender of Palestinian rights.
- Tehran aims to drive a wedge between Muslim populations sympathetic to Palestine and moderate Arab governments seeking diplomatic solutions.
- Moderate Arab states resent Iran's assertiveness and support for non-state actors, viewing it as disruptive.
- The US has tried to form an anti-Iran alliance, including some moderate Arab states and Israel, known as the "**Abraham Accord**."

> - Abraham, originally known as Abram, is a significant figure in the Abrahamic religions: Judaism, Christianity, and Islam.

- In Judaism, Abraham is considered the founding father of the special relationship between the Jewish people and God.
- Christianity regards Abraham as the spiritual ancestor of all believers, whether they are Jewish or non-Jewish.
- In Islam, Abraham is recognized as one of the prophets in the lineage that starts with Adam and ends with Muhammad.
- Across these religions, Abraham is revered as a key patriarch who played a crucial role in shaping the beliefs and practices of their respective faiths.

- Some speculate that a Hamas attack in October aimed to thwart Saudi Arabia's potential entry into this alliance.
- Iran, lacking a nuclear weapon capability, seeks to delay by engaging Israel in wars through proxies while avoiding direct conflict.
- Israel, with superior military technology, aims for swift, decisive actions to maintain regional dominance.
- Israel has territorial claims on areas like the West Bank, Jerusalem, and the Golan Heights but professes no further ambitions.
- Recent events have raised concerns among Arab and Muslim regimes about regional stability, potential oil disruptions, and security.
- Efforts are underway to secure alliances and mitigate risks, such as Saudi Arabia's engagement with Pakistan for security and Iran's diplomatic outreach to Pakistan.
- A conflict between Israel and Iran could impact India's interests, including economic ties, expatriate communities in the Middle East, and regional stability.
- Such a conflict could disrupt India's "act west" policy and multilateral initiatives like the India-Middle East-Europe Economic Corridor.

Surat symptoms: On the BJP and the elimination of political contest (25 April)

The BJP is resorting to the foulest means to eliminate any opposition

- In Surat, a BJP candidate won the Lok Sabha seat unopposed, highlighting a concerning trend in Indian democracy.
- This trend undermines democracy by eliminating political contestation and the presence of an opposition.
- The BJP's slogan of a "Congress-less India" suggests an authoritarian intent, even if pursued through fair means.
- The election process in Surat was marred by foul play, including the forging of signatures on nomination papers.

- Other instances of eliminating contestation include candidates defecting to the BJP and tampering with ballots.
- The elimination of opposition weakens democratic principles and stifles the exchange of ideas essential for a healthy democracy.
- The BJP should foster a political culture where disagreements are resolved through fair contests rather than the elimination of opposition.

Hot button: On the voter and heat exposure (25 April)

Voters must be incentivised by minimising risks due to heat exposure

- The Election Commission of India (ECI) suspects that heat dissuaded voters during the first phase of the general election on April 19.
- A task force has been formed with representatives from the ECI, the India Meteorological Department (IMD), the Ministry of Health and Family Welfare, and the National Disaster Management Authority.
- The task force aims to assess local heat and humidity before each phase of polling and ensure adequate facilities at booths.
- The IMD declares heat wave conditions based on deviations of daytime temperature from the decade-long average, but these declarations may not reflect people's experience of ambient heat.
- People of all ages are at risk if the wet-bulb temperature exceeds 30°C, especially with high humidity.
- Factors like poor ventilation, crowding, lack of shaded resting spots, and heat radiated by asphalt surfaces exacerbate heat stress in semi-planned or unplanned areas.
- Measures similar to the midday meal scheme could incentivize voting by minimizing heat exposure.
- Tweaking polling dates and hours can control physiological adversity for voters commuting between home and polling booths.
- The task force should ensure shaded waiting areas, air flow, oral rehydration options, sanitary facilities, fruits, first-aid kits, wheelchairs, accessible architecture, and medical services at every dozen booths.
- Increasing voters' awareness of heat management protocols and provisions at booths should not encroach on the duties or resources of Accredited Social Health Activists.
- The Health Ministry should collect and share data on heat-related morbidity and mortality to identify problems and institute reliable long-term countermeasures.

The reality of the Swachh Bharat Mission

(25 April)   (GS Paper II: Health and Sanitation)

A scheme fully owned by the state has become a toolkit for privatisation of public health services and continues caste discrimination

- India ranked at the bottom of 180 countries in the Environment Performance Index (EPI) in 2022.
- The EPI assesses countries based on climate change performance, environmental health, and ecosystem vitality.
- It uses 40 performance indicators across 11 issue categories, including air quality and drinking water sanitation.
- The Indian government criticized the ranking, claiming the methodology is flawed and doesn't represent the Indian scenario accurately.
- Over the past decade, the Modi government launched several development campaigns, such as Swachh Bharat Mission and National Clean Air Programme.
- These campaigns aim to improve living standards by addressing issues like water, sanitation, and clean energy.
- However, despite these efforts, there has been an increase in population vulnerability due to air and water pollution.
- The discrepancy between the government's efforts and the worsening environmental conditions raises questions about the effectiveness of these initiatives.

The Swachh Bharat Mission

- The Swachh Bharat Mission (SBM) and SBM 2.0 aim to make Indian cities free of garbage.
- However, sanitation and waste management in India are linked to the caste system, with historically marginalized castes forced to perform sanitation work.
- SBM tried to promote the idea that sanitation is everyone's responsibility but ended up perpetuating caste-based practices.
- The project is politically successful, with no objections raised by opposition parties or communities.
- While the government claims India is open defecation-free, reports indicate otherwise.
- A Comptroller and Auditor General report highlighted poor quality construction of toilets under SBM.
- Some urban areas, especially slums, still lack access to public toilets.
- Even in rural areas, toilet construction is not linked to waste treatment, leading to environmental pollution.
- SBM aimed to reduce manual involvement in waste management by using capital-intensive technologies, but these technologies have failed to deliver.
- Governments outsourced waste management to private players, who often employ marginalized communities for the work.

- The Union government is implementing technological solutions for solid and liquid waste management in cities, such as waste-to-energy plants and biological methanation.
- However, there are few success stories in these initiatives.
- City governments are urged to purchase expensive machinery like road sweeping machines and vehicles for waste transportation, funded by available funds.
- Large contractors are often employed to manage sanitation services, leading to the privatization of public health services.
- Many of the workers employed by these contractors are Dalits, perpetuating caste discrimination.
- There is a severe shortage of sanitation inspectors in municipal corporations across states like Himachal Pradesh, with some municipalities having none at all.
- Similar problems exist in other government programs, contributing to India's poor performance in the Environment Performance Index (EPI).

Development model

- The Environment Performance Index (EPI) reveals flaws in current development processes, highlighting their unsustainability.
- This indicates a need to modify existing development models to address environmental concerns.
- A recent Supreme Court judgment recognized the connection between climate change and fundamental human rights.
- Climate scientists attribute current environmental challenges to human activities and systemic issues.
- To address these challenges effectively, policies need to be aligned with human rights principles.
- Linking policies to human rights can help tackle environmental issues more comprehensively and ethically.