

WEEKLY UPDATES – (17thDec-23rdDec)

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ENVIRONMENT

Oil Spills

Context: Oil spill occurred in Ennore region of Chennai after Cyclone Michaung-induced floods.

- As per Indian Coast Guard, Oil spill originating from Chennai Petroleum Corporation Ltd. refinery has spread across 20 square kilometres into the sea.

What are Oil Spills?

- It is the **release of a liquid petroleum hydrocarbon** into environment, especially marine areas.

What are the causes of Oil Spills?

- Equipment breaking down due to human errors; deliberate acts by illegal dumping; natural disasters like hurricanes, etc.

What are the impacts of oil spill?

Destroys insulating ability of fur on mammals and impacts water repelling qualities of a bird's feathers.

Impacts immune system and reproduction of dolphins and whales by oil inhalation.

Health problems like heart damage, immune system effects, headache due to strong odour, skin irritation, etc.

Obstruct passage of sunlight into sea, thereby destroying photosynthesising phytoplankton.

Impacts mangrove forests as they can no longer shield coastlines.

What are the technological solutions developed for Oil spills?

- **Oilzapper** –
 - An **eco-friendly technique of using the bacteria** to get rid of oil sludges and oil- spill.
 - Developed by – **The Energy and Resources Institute (TERI)**
- **Oilivorous-S** –
 - It has an **additional bacterial strain** that makes it more effective against sludge and crude oil with high-sulphur content.
 - Jointly developed by – **TERI and Indian Oil Corporation Ltd.**
- Usage of bacteria – Paraperlucidibaca, Cycloclasticus, Oleispira, Thalassolituus Zhongshania

What are the steps taken to prevent Oil Spills?

- India National Oil Spill Disaster Contingency Plan by Indian Coast Guard.
- Merchant Shipping Act, 1958 has provision of Prevention and Containment of Pollution of sea by oil.

- **India is party to conventions –**
 - Global International Convention for Safety of Life at Sea (SOLAS)
 - Prevention of Pollution of marine environment from Ships (MARPOL)
 - International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001 (**Bunker Convention**)
- **Oil Spill India (OSI)** – An international forum on oil spill prevention, preparedness, response and restoration systems

Algae-assisted Carbon Capture

Context: IIT Jodhpur's innovative technology uses algae-assisted fuel cells to capture carbon dioxide, treat wastewater and generate power.

- 1st time that the integration of algae Microbial fuel cells (MFC) with flue gas carbon capture has been attempted anywhere.

Algae-assisted Carbon capture method:

- An **indirect method** for converting **CO₂ into carbonates** and then use it for algal growth.
- Aim – To generate power, algae biomass and treat water by utilising algae-assisted MFC for **flue gas carbon capture**.

Flue gas – the gas produced from the **flue or chimneys** of thermal power stations and other industrial plants.

- **Working –**
 - CO₂ from the flue gas is absorbed by the wastewater supplemented with sodium bicarbonate and generates **flue-gas-derived bicarbonates (FGDBs)**.
 - FGDB helps in growth of **algae Chlorella vulgaris** which is thermo-tolerant and can grow in wastewater.
 - Algae-assisted MFC is then used to **generate electricity**.
- **Significance –**
 - More **inorganic carbon** can stay in the water.
 - 1 tonne of algae captures **180 tonnes of flue gas CO₂**.
 - For a cubic meter of wastewater and FGDB in MFC, they got energy of 0.0066 kWhr.
- **Limitations** – A tonne per day of CO₂ capture requires **2 sq. km algae culture area** (aerial) in vertically aligned pipes.

Microbial fuel cells (MFC):

- A **bio-electrochemical device**
- Generates electricity by harnessing the **metabolic activity of microorganisms**.

- When microorganisms **break down organic matter** as in wastewater into simpler molecules, **electrons are released** in the process.
- If these electrons are made to flow through an external circuit, you get electric current.

Flying Squirrel | Namdapha National Park

Context: A nocturnal flying squirrel has resurfaced in Arunachal Pradesh after going missing for 42 years.

Flying Squirrel:

- They are **nocturnal** species.
- A special membrane between their front and back legs that allows them to glide through the air between trees.
- **Habitat** –
 - Northern and southern flying squirrels – North America
 - Namdapha flying squirrel – Temperate and tropical forests of India and other parts of Asia.
 - Namdapha flying squirrel – Last found in the **Namdapha Tiger Reserve** in Arunachal Pradesh.
- Diet – Omnivores
- IUCN Status – Critically endangered

Namdapha National Park:

- **Location** –
 - State: **Arunachal Pradesh**
 - Close proximity to **Indo-Myanmar-China tri-junction**
 - Located between – Dapha bum range of the **Mishmi Hills and the Patkai range**.
- **4th largest national park** in India
- Namdapha river originates here and meets **Noa-Dehing river** (a tributary of the Brahmaputra)
- Declared as a **Tiger Reserve** in 1983
- Climate – Varies from **tropical to subtropical, temperature and arctic**
- **Biodiversity** –
 - **Only park** in the World to have the **4 Feline species of big cat** (Tiger, Leopard, Snow Leopard and Clouded Leopard)
 - **Hoolock Gibbons**, the only ‘ape’ species found in India is here.
- **Other Protected Areas in Arunachal Pradesh** –
 - Pakke Tiger Reserve
 - Mouling National Park
 - Kamlang Tiger Reserve
 - Itanagar Wildlife Sanctuary
 - Eagle Nest Wildlife Sanctuary

POLITY

Parliamentary Dysfunction

Context: The central theme highlights parliamentary dysfunction due to procedural stagnation and a historical cycle of disruptions. The ongoing impasse, evidenced by the suspension of MPs, underscores the need for a nuanced institutional response and a redefined role for the Opposition in shaping parliamentary discourse. The article advocates procedural changes to grant the Opposition more influence, fostering collaboration and preserving public trust in Parliament.

Key Highlights:

- The parliamentary dysfunction is rooted in the absence of procedural mechanisms for deliberation on contentious issues.
- The ongoing impasse between the government and the Opposition has led to the suspension of 141 MPs.
- The Opposition demands a statement from the Home Minister regarding a security breach, while the government defers to the Speaker's directions.
- Disruptions in Parliament have historical roots, dating back to the 1960s, and have evolved into a political tool.
- The institutional response to disruptions has been simplistic, focusing on penalizing MPs rather than addressing the underlying issues.

Key Challenges:

- Procedural stagnation in the parliamentary system has led to a cycle of disruptions and disciplinary actions.
- The government's control over the legislative agenda limits the Opposition's role, contributing to parliamentary standoffs.
- The current approach of penalizing MPs for disruptions is deemed ineffective in ensuring the smooth functioning of Parliament.

Terms and Phrases:

- Parliamentary dysfunction
- Security breach
- Disruptions as a political tool
- Institutional response
- Legislative and fiscal priorities
- Opposition's role and space in Parliament
- Procedural stagnation
- Westminster parliamentary principle
- No-confidence motion
- National legislature

Key Examples and References:

- Suspension of 141 Opposition MPs in the ongoing winter session of Parliament.
- Historical instances of MPs like Ram Sewak Yadav and Mani Ram Bagri being warned and suspended for disruptions.

- Speaker Chatterjee's remark in 2005 on the difficulty of regulating proceedings if a group of members disrupts the House.

Key Facts and Data:

- Disruptions in parliamentary proceedings by MPs began in the 1960s.
- The current parliamentary system reflects pre-independence British templates.
- Private members get two-and-a-half hours every Friday for discussion, but there is no mechanism for a group of MPs to require a specific discussion.

Critical Analysis:

- The article highlights the historical context and evolution of parliamentary disruptions.
- It critiques the current institutional response, emphasizing the need for a more nuanced approach.
- It challenges the existing view of Parliament as a platform primarily for the government to transact business.

Way Forward:

- Proposes a change in parliamentary procedures to allow the Opposition to set the agenda for debate.
- Suggests incorporating specific days in the parliamentary calendar for Opposition-led discussions.
- Urges Parliament to find better solutions for fostering debate to prevent the erosion of public faith.

Central Goods and Services Tax (Second Amendment) (CGST) Bill, 2023 | GST Appellate Tribunal (GSTAT)

Context: Both Lok Sabha and Rajya Sabha passed Central Goods and Services Tax (Second Amendment) (CGST) Bill, 2023.

What is the amendment?

- To change qualification for members of **GST Appellate Tribunal (GSTAT)**
- To raise **age limit of President and Members of GSTAT**.

CGST Act 2017 provides for levy and collection of CGST on intra-state supply of goods and services. Act also allows central government to set up GSTAT on recommendation of GST Council.

GST Appellate Tribunal (GSTAT):

2nd Appellate authority within GST framework

Purpose – for hearing appeals against orders passed by Appellate Authority (1st authority) under CGST Act, 2017 and State GST Acts.

Composition – president, a judicial member, and 2 technical members.

Eligibility for judicial member – a judge of High Court, or a district judge or additional district judge having served for at least 10 years.

Powers – Same as Civil Court for trying a case

Key changes introduced by Bill:

- **Change in qualification for members of GSTAT –**
 - Allows advocates with at least 10 years of experience to be appointed as judicial member.
 - They must have substantial experience in matters relating to indirect taxation.
- **Age limit –**
 - Minimum age to be appointed as a member or president of GSTAT will be **50 years**.
 - Increases age limit for president of GSTAT from 67 to 70 years, and for members from 65 to 67 years.

Central Industrial Security Force (CISF)

Context: Ministry of Home Affairs (MHA) has asked the Central Industrial Security Force (CISF) to take security charge of the Parliament building from the Delhi Police.

Central Industrial Security Force (CISF):

- An **armed** force of the Union
- Established under **Central Industrial Security Force Act, 1968**.
- Headquarters – Delhi
- Headed by – An IPS officer with the rank of **Director-General**.
- 1st induction – Fertilizer Corporation of India manufacturing plant in Trombay, Maharashtra (1969)
- One of **7 Central Armed Police Forces (CAPF)**.
- Only CAPF with a dedicated **firefighting** wing.
- Initially, its remit was restricted to protecting government-owned industries, but this was expanded to include joint ventures and private undertakings in 2009.
- CISF also provides consultancy services to the private sector.
- It is a **compensatory cost force**, which means that it bills its clients for the services it provides.

CISF has the largest percentage of women in its force, in comparison to all other CAPFs.

Central Armed Police Forces (CAPF):

- Ministry – **Ministry of Home Affairs**.

- **7 security forces under CAPF –**
 - Central Reserve Police Force (CRPF)
 - Assam Rifles (AR)
 - National Security Guard (NSG)
 - Sashastra Seema Bal (SSB)
 - Indo-Tibetan Border Police (ITBP)
 - Border Security Force (BSF)
 - Central Industrial Security Force (CISF)

Questionable searches under the Money Laundering Act

Context: The Supreme Court's interpretation of the Prevention of Money Laundering Act (PMLA) emphasizes a strict application tied to scheduled offences and the definition of "proceeds of crime." Criticism of the Enforcement Directorate's actions highlights the need for probity and fairness, urging consistency in procedures. The issue raises concerns about potential abuse of authority and its impact on federalism, necessitating clear jurisdictional delineation.

Highlights:

- **Supreme Court Interpretation:** The Supreme Court's unique interpretation of the Prevention of Money Laundering Act, 2002 (PMLA) has raised concerns, limiting its application to "wrongful and illegal gain of property" related to scheduled offences.
- **Definition of "Proceeds of Crime":** The Court emphasized that for the PMLA to apply, the property must qualify as "proceeds of crime" under Section 2(1)(u) of the Act.
- **Critical Observations on ED:** Instances of Enforcement Directorate (ED) actions beyond its powers, especially arrests, led to severe criticism. The court highlighted the need for the ED to function with "utmost probity, dispassion, and fairness."

On ED's power under PMLA

An upshot of the judgment by the Supreme Court on the validity of certain provisions under the Prevention of Money Laundering Act

- The offence of money laundering is as heinous an offence as terrorism
- Section 3 (definition of money laundering), Section 24 (reverse burden of proof), and Section 5 (attachment of property) to stay
- Stringency in granting bail under the Act is legal and not arbitrary
- It is not mandatory to give an Enforcement Case Information Report (ECIR) in every case as it was not an FIR
- The statements made to ED are considered admissible
- Provision of attachment of property of accused as proceeds of crime 'balances' the interests of the accused and the State
- The question of enactment of PMLA amendments through the Money Bill route is to be decided by a larger Bench



Challenges:

- **Inconsistent ED Practices:** The Court noted the lack of consistent and uniform practices within the ED, especially in furnishing written copies of arrest grounds, raising concerns about procedural irregularities.
- **Abuse of Authority:** The ED's conduct in conducting searches, seizures, and arrests outside its powers resulted in strong criticism, pointing to potential abuse of authority.

Terms and Phrases:

- **Scheduled Offence:** Offences specified in the schedule of the PMLA Act to which the Act's provisions apply.
- **Proceeds of Crime:** Property derived or obtained as a result of criminal activity relating to a scheduled offence.

Quotes and Statements:

- "If the offence so reported is a scheduled offence, only in that eventuality, the property recovered by the Authorised Officer would partake the colour of proceeds of crime..."
- "The ED, mantled with far-reaching powers under the stringent Act of 2002, must be seen to be acting with utmost probity, dispassion, and fairness."

Examples:

- **Vijay Madanlal Choudhary Case:** The Supreme Court's interpretation in the Vijay Madanlal Choudhary case set the precedent, emphasizing the need for the existence of "proceeds of crime" for PMLA application.
- **Pankaj Bansal Case:** The Court's criticism of the ED's style of functioning in the Pankaj Bansal case highlighted the importance of adherence to probity and fairness.

Critical Analysis: The Court's focus on the stringent application of PMLA provisions, especially tying them to scheduled offences and the definition of "proceeds of crime," reflects a commitment to precision and legal rigor. The criticism of ED practices underscores the significance of maintaining ethical standards in enforcement agencies.

Way Forward:

- **Procedural Consistency:** Enforcement agencies, particularly the ED, need to establish consistent and uniform practices, ensuring transparency and adherence to legal procedures.
- **Judicial Scrutiny:** Ongoing cases, especially those involving political implications, should undergo thorough judicial scrutiny to prevent potential abuse of authority and protect the principles of federalism.
- **Clarity on Jurisdiction:** The ED's jurisdiction, especially in non-scheduled offences like illegal mining, should be clarified to avoid overreach, respecting the powers vested with the State governments

GOVERNANCE

Case Study: School of Happiness in Assam

Context: Assam's Bodoland Territorial Region (BTR) is set to launch the International School of Peace and Happiness, a pioneering institution dedicated to teaching lessons on humanity and societal happiness.

School of Happiness: A Backgrounder

- **Bodoland Territorial Council's Initiative:** The Bodoland Territorial Council (BTC), which governs the BTR, has been planning this project for a year.
- **Addressing Regional Conflicts:** The BTR has experienced ethnic conflicts and extremism. The school aims to instill human values and co-existence in a region marked by diverse faiths, cultures, and ethnicities.
- **BTC's Vision:** It emphasizes the need for formal schooling in peace-building and happiness to create peace ambassadors for conflict resolution.

Genesis of the School

- **Pilot Project:** The concept originated from the Bodoland Happiness Mission, a pilot project introduced a year ago.
- **Training Peace Volunteers:** Around 400 youth and community leaders were trained as peace and happiness volunteers at Bodoland Community Counselling Centres.
- **Training Focus:** The program included awareness of social issue-related laws, bias removal, self-awareness, counselling techniques, and stress management.

One person, one vote, one value

Context: The central idea revolves around the crucial role of delimitation in preserving political equality within liberal democracies. It addresses challenges such as population growth disparities, gerrymandering, and the need for a comprehensive legal framework. The way forward emphasizes urgent and comprehensive delimitation, protection of state interests, and continuous monitoring to ensure a fair and inclusive democratic representation.

Highlights:

- **Political Equality in Liberal Democracies:** In liberal democracies, political equality extends beyond the opportunity to participate; it includes ensuring that each citizen's vote holds equal value.
- **Types of Dilution:** Quantitative dilution is observed when population deviations among constituencies result in unequal representation. Qualitative dilution, on the other hand, occurs through gerrymandering, impacting the chances of minority representation.
- **Constitutional Safeguards:** Articles 81, 170, 327, 330, 332 of the Constitution establish safeguards to guarantee political equality. They empower Parliament to enact laws related to delimitation and address concerns of both quantitative and qualitative dilution.
- **Role of Delimitation Commissions:** Delimitation commissions, formed periodically, play a crucial role in maintaining population-representation equality by adjusting constituency boundaries.

Challenges:

- **Population Growth Disparities:** Unequal population growth among states poses a challenge, leading to quantitative dilution where the weight of votes varies significantly.
- **Impact of Gerrymandering:** Gerrymandering can qualitatively dilute the value of votes, particularly affecting minority representation. Techniques like cracking, stacking, and packing can be employed to manipulate electoral boundaries.
- **Issues with Freezing and Variation Allowance:** The freezing of population figures and the allowance for a 10% variation have resulted in imbalances, allowing deviations from the ideal population-representation ratio.

Terms and Phrases:

- **Dilution Types:** Understanding the distinctions between quantitative and qualitative dilution is essential for addressing challenges in the democratic process.
- **Legal Framework:** Key legal terms include gerrymandering, the Delimitation Commission, Two Member Constituencies (Abolition) Act, 1961, 42nd Amendment Act, 1976, and the Sachar Committee Report, which provide the foundation for delimitation processes.

Statements:

- **Population Growth Variations:** Differences in population growth among states create a significant gap in the value of votes, impacting the democratic principle of equal representation.
- **Issues with Freezing and Variation Allowance:** The freezing of population figures and the allowance for variation contribute to imbalances in representation, requiring careful consideration in the delimitation process.

Examples and References:

- **Impact of Delimitation on SC-Reserved Seats:** Delimitation's impact on Scheduled Caste (SC)-reserved seats, especially concerning the majority Muslim population, highlights the complexities of fair representation.
- **Discrepancies in Muslim Representation:** Discrepancies between the percentage of Muslim MPs in Parliament (4.42%) and their overall population (14.2%) underscore the qualitative dilution in the representation of minority communities.

Facts and Data:

- **Population Growth Between 1971 and 2011:** Disparities in population growth across states, with some experiencing over 125% growth, contribute to the quantitative dilution of votes.
- **Representation Disparity:** The average representation disparity, where an MP in some states represents significantly more people than in others, reflects the challenges in achieving equal representation.

Critical Analysis:

Threats to Democracy:

Both quantitative and qualitative dilution pose significant threats to the democratic process, undermining the principle of equal political representation.

Challenges with Freezing and Variation Allowance:

The freezing of population figures and the allowance for variation may result in continued imbalances, demanding a critical evaluation of the current delimitation framework.

Impact on Minority Representation:

The qualitative dilution of votes has a notable impact on minority representation, requiring a nuanced approach in delimitation to address these disparities.

Way Forward:

- **Urgent Delimitation:** Urgent delimitation is necessary to rectify population-representation deviations and uphold the principles of equal representation in a timely manner.
- **Comprehensive Delimitation:** Future delimitation processes must consider both quantitative and qualitative aspects, ensuring a comprehensive approach to achieve fair representation.

- **Protecting State Interests:** Special attention is required to protect the interests of states with slower population growth, balancing the need for representation across regions.
- **Continuous Monitoring and Adjustments:** Regular monitoring and adjustments in delimitation processes are essential for maintaining a robust and inclusive democratic system. Continuous adaptation to demographic changes will help address evolving challenges in representation.

Tax 'HFSS' foods, view it as a public health imperative

Context: The article advocates for the immediate implementation of High Fat Sugar Salt (HFSS) taxes in India to tackle health risks, emphasizing their role in encouraging healthier choices, driving industry reformulation, and reducing the economic strain on healthcare. It positions HFSS taxation as a vital public health imperative to address market failures and promote a sustainable food system.

Highlights:

- **Rising Health Risks:** High Fat Sugar Salt (HFSS) foods contribute significantly to health issues like obesity, diabetes, and high blood pressure. The global burden of Non-Communicable Diseases (NCDs) in India has surged from 38% in 1990 to 65% in 2019, with 1.2 million deaths annually attributed to dietary risks.
- **Economic Impact:** Overweight and obesity's economic impact in India was estimated at \$23 billion in 2017, expected to rise to \$480 billion by 2060. The ultra-processed food sector in India grew at a compounded annual growth rate of 13.4% between 2011 and 2021.
- **Global Trend of Taxation:** Many countries, including Denmark, France, Hungary, Mexico, South Africa, the UK, and the US, have implemented taxes on HFSS foods to combat obesity. Colombia's recent "junk food law" serves as a model for other nations.
- **Market Failures and Externalities:** The consumption of HFSS foods leads to negative externalities in the form of increased healthcare expenditures, imposing societal costs. Taxes are proposed as a targeted tool to curb detrimental consumption habits, reducing societal burdens.
- **Need for HFSS Tax:** The article argues for taxing HFSS due to market failures, negative externalities, and internalities. Unlike sin goods, HFSS taxation aims to incentivize the industry to reformulate products for healthier alternatives and prompt consumers to choose a healthier diet.
- **Designing Effective HFSS Tax:** Properly designed HFSS taxes can be non-regressive and fiscally neutral. Differentiated tax rates based on nutritional quality can incentivize product reformulations. The goal is to make healthier alternatives more affordable and accessible.
- **Inconsistencies in GST Rates:** Current GST rates on ultra-processed foods do not align with nutritional content. Uniform tax rates overlook variations in sugar, salt, and nutritional impact, limiting their impact on altering consumption patterns.
- **Public Health Imperative:** HFSS taxation is positioned not just as an economic or fiscal policy concern but as a public health imperative. Effective taxes, combined with nutrition literacy and food labeling, can combat overweight and obesity, fostering a more sustainable and equitable food system.

Challenges:

- **Resistance from Industry:** The food industry may resist HFSS taxes, viewing them as detrimental to profits. Balancing industry interests with public health objectives poses a challenge.

- **Designing Optimal Tax Rates:** Determining the right tax rates that effectively deter HFSS consumption without being regressive requires careful consideration and analysis.
- **Consumer Awareness:** Ensuring that consumers are aware of the health implications of HFSS foods and understand the purpose of taxes is crucial for the success of such interventions.

Terms/Phrases:

- **HFSS Foods:** High Fat Sugar Salt foods, known for their negative impact on health.
- **Negative Externalities:** Detrimental effects of HFSS consumption on society, leading to increased healthcare costs.
- **Internalities:** Harm caused to individuals due to limited understanding influenced by marketing.
- **Market Failures:** Situations where the market does not efficiently allocate resources, leading to suboptimal outcomes.
- **Non-regressive Tax:** A tax that does not disproportionately burden lower-income individuals.
- **Nutritional Quality:** The nutritional content and health impact of food products.

Statements:

- “The imperative for taxing HFSS arises from significant market failures associated with their consumption, contributing to negative externalities and internalities.”
- “HFSS taxation in India should be both non-regressive and fiscally neutral, creating a level-playing field between HFSS and their healthier alternatives.”

Critical Analysis:

The article provides a comprehensive overview of the health and economic challenges associated with HFSS consumption in India. It effectively argues for the implementation of HFSS taxes as a public health imperative and highlights the need for well-designed, non-regressive tax policies. The emphasis on creating a fiscal environment that incentivizes healthier choices and product reformulation adds depth to the analysis.

Way Forward:

- **Collaborative Approach:** Engage stakeholders, including the food industry, health professionals, and policymakers, to collaboratively design and implement effective HFSS tax policies.
- **Continuous Evaluation:** Regularly assess the impact of HFSS taxes on consumption patterns, health outcomes, and industry practices, making adjustments as needed.
- **Public Awareness Campaigns:** Launch campaigns to educate the public about the health risks associated with HFSS foods and the purpose of taxation, fostering informed choices.
- **International Best Practices:** Learn from and adapt successful strategies from countries that have effectively implemented HFSS taxes to address obesity and improve public health.
- **Research and Innovation:** Encourage research on the nutritional content of food products and innovative ways to reformulate HFSS items for healthier alternatives.

INTERNATIONAL RELATIONS

Veto Power in UNSC

Context: A recent UN resolution vote, where 153 countries voted in favor and 10 against, including the USA's support for Israel, underscores the influence of a few nations in global decisions.

This voting pattern brings into focus the veto powers within the UN Security Council (UNSC) and their persistence for over seven decades.

What is the Veto Power in the UNSC?

Exclusive Membership: The UNSC comprises five permanent members (P5) – the USA, UK, France, Russia, and China – along with 10 non-permanent members.

Power of Resolutions: Unlike the General Assembly, resolutions passed by the UNSC are legally binding.

Veto Mechanism: Any P5 member can veto a resolution, blocking its adoption even with the required majority support.

Rationale behind Veto Power for Permanent Members

- **Post-WWII Context:** The P5, instrumental in forming the UN after World War II, were granted special rights, including veto power, as recognition of their role.
- **Strategic Necessity:** The veto was considered vital to ensure the participation of these major powers in global peacekeeping efforts.

Formation and Evolution of the UN and Veto Power

- **Foundational Discussions:** The structure of veto power was developed during key meetings like the Dumbarton Oaks and Yalta Conferences.
- **FDR's Influence:** President Franklin D. Roosevelt envisioned the UN as a post-war peacekeeping body, with the 'Four Policemen' (USA, USSR, UK, and China) at its core.
- **USA's Diplomatic Efforts:** The United States employed strategies, including intelligence, to secure veto power in the UN Charter.

Debate and Criticism of the Veto Power

- **Global Dissatisfaction:** The exclusive nature of veto power has been a point of contention for many countries.
- **Resistance to Change:** Attempts to expand the P5 or modify veto rights have been largely unsuccessful due to the vested interests of the permanent members.
- **Acknowledging Changes:** The increase in non-permanent UNSC members in 1965 was a nod to the changing international environment.
- **Reforms agenda:** Proposals include making all 15 seats temporary with five-year terms, encouraging open competition for seats, and imposing lobbying and term limits.

Conclusion

- **Continued Discussions:** The use of veto power in the UNSC remains a contentious issue, reflecting the complex nature of global politics.
- **Adapting to Modern Times:** As the world's political landscape evolves, there may be growing pressure to reform the UNSC's structure and veto mechanism to better align with the current global order.

Trade Negotiations

Context: The article underscores the overlooked role of foreign policy and diplomacy in contemporary discussions on India's trade policy. It highlights the evolving diplomatic strategies and negotiations, particularly in the context of the multilateral trading system, emphasizing India's transformation from a "rule-taker" to a "rule-shaper" on the global stage. The successful handling of the G20 Summit is presented as evidence of India's progressing transition from a balancing power to a leading power.

Highlights:

- **India's Rising Prominence:** The article highlights India's growing influence on the global stage, especially evident at COP26 with Prime Minister Modi's strategic initiatives for low-carbon development.
- **Neglected Discourse:** The author emphasizes the overlooked aspect of foreign policy and diplomacy in contemporary discussions on trade policy in India.

Challenges:

- **Trade Policy Oversight:** The neglect of understanding the multilateral trading system's workings despite India's significant trade-to-GDP ratio.
- **Complex Negotiations:** The challenge of formulating a negotiating position that aligns with the multitude of stakeholders in India.

Terms/Phrases:

- **Integrated Framework:** The theoretical model introduced by Ambassador Mohan Kumar to analyze India's negotiating briefs and diplomatic motivations.
- **GATT (General Agreement on Tariffs and Trade):** A reference to the foundational international treaty for trade negotiation and the precursor to the World Trade Organization (WTO).
- **Plurilateral Negotiations:** Negotiations involving a subgroup of WTO members, not necessarily the entire membership.

Statements:

- **India's Diplomatic Evolution:** Describing India's shift from being a "rule-taker" to a "rule-shaper" in international negotiations, emphasizing its growing role in shaping global rules.
- **G20 Summit Success:** The G20 Summit's success as proof of India's transformation from a balancing power to a leading power.

Examples and References:

- **COP26 Initiatives:** Prime Minister Modi's Panchamrit Action Plan and long-term strategy at COP26 as examples of India's innovative approaches to global challenges.
- **Ukraine-Russia Conflict:** India's strategic independence and moral position during the conflict, showcasing diplomatic effectiveness.

Facts/Data:

- **Trade-to-GDP Ratio:** India's overall trade-to-GDP ratio at 50% in the last decade, underscoring the significance of trade in the economy.

Critical Analysis:

- **Neglected Aspect:** Criticizing the lack of attention given to foreign policy and diplomacy in discussions related to trade policy in India.
- **Balancing Act:** Examining how India balances geopolitical pressures and domestic constraints to advance its national interests in international trade negotiations.

Way Forward:

- **Reviving Multilateral Trading System:** The anticipation of a revival of the multilateral trading system, anchored in the WTO, to pursue a development-based trade agenda.
- **Policy Adjustments:** Considering a more circumspect approach to trade negotiations to balance the risks and rewards, especially in the context of preferential trading systems.

Indian Society

Menaka Guruswamy writes: In India, what women who run need

Context: The article explores the challenges and triumphs of Indian women athletes, particularly runners, revealing their resilience against societal norms and discriminatory practices. Sohini Chattopadhyay's book, "The Day I Became a Runner," serves as a powerful narrative, intertwining the stories of champion women runners with India's political and cultural evolution.

Highlights:

- The article explores the challenges and triumphs faced by Indian women athletes, particularly runners, navigating societal norms, laws, and personal obstacles.
- Sohini Chattopadhyay's book, "The Day I Became a Runner," serves as a lens to understand the history of Indian women through the narratives of champion runners.
- The stories of Mary D'Souza, Kamaljit Sandhu, P T Usha, Santhi Soundarajan, Pinki Pramanik, Dutee Chand, Lalita Babar, and others are intricately woven into the fabric of India's political and cultural landscape.

Challenges:

- Gender norms and societal restrictions circumscribing outdoor activities for women in India.
- Struggles against patriarchy, poverty, identity, caste, and even controversial "sex tests" faced by women athletes.
- The need for safe public spaces, established training programs, and a cultural shift encouraging women's participation in sports.

Terms:

- **Sex test:** A controversial practice involving the testing of biological parameters to define a woman athlete's gender.

- Patriarchy: The social system where men hold primary power and predominate in roles of political leadership, moral authority, and social privilege.
- Stigma: Negative perceptions and attitudes associated with women athletes facing controversial tests or challenges.

Anecdotes:

- Chattopadhyay's own experiences as a woman runner, facing challenges of being the only woman in parks or roads.
- Stories of champion athletes like Mary D'Souza, P T Usha, and others, illustrating their resilience and achievements.

Examples and References:

- Instances of women athletes facing hurdles such as the controversial "sex test" and societal stigmas.
- The case of Dutee Chand challenging and winning against discriminatory rules for female athletes.

Critical Analysis:

- The article critically analyzes the societal and cultural barriers that women athletes face in India.
- It emphasizes the significance of running as a sport that requires substantial investment, including safe spaces and supportive cultural attitudes.

Way Forward:

- Advocate for gender-inclusive sports culture, encouraging more women to participate in running and other athletic activities.
- Promote awareness and challenge discriminatory practices like the controversial "sex tests" to create a more equitable sports environment for women.
- Continue to document and celebrate the stories of champion women athletes as a means of inspiration and advocacy for gender equality in sports.

Opposition today needs to learn from Atal Bihari Vajpayee

Context: The article highlights the evolution of leaders within India's parliamentary democracy, contrasting them with those from dynastic politics. It celebrates Atal Bihari Vajpayee as a prime example, emphasizing his journey from an activist to a mature statesman. The central theme underscores the virtues of leaders emerging organically through democratic processes and the challenges posed by dynastic political practices.

Highlights:

- The article discusses the evolution of leaders within India's parliamentary democracy and contrasts them with those from dynastic politics.
- Atal Bihari Vajpayee is highlighted as an exemplary product of Indian parliamentary democracy, having entered politics as an activist and evolved into a mature statesman.

- Vajpayee's role in the BJP's rise from the fringes to the mainstream during the Congress-dominated era is emphasized.
- The article underscores Vajpayee's oratorical skills, his role in consensus politics, and his commitment to national interests.

Challenges:

- Critique of dynastic politics in the Congress party post-Nehru, seen as a hindrance to embodying leadership values of parliamentary democracy.
- The challenge of maintaining decorum in political discourse, contrasting it with the current cheap antics of the Opposition.

Terms:

- **Dynastic politics:** The practice of political leadership being passed down through family lines.
- **Consensus politics:** The approach of seeking agreement among diverse political parties for effective governance.
- **Oratorical skills:** The ability to deliver powerful and persuasive speeches.

Key Quotes:

- "Leaders are born, they are not made."
- "Dynasts can never fully appreciate and demonstrate the leadership values and principles of parliamentary democracy."
- "Atal ji's greatness is not limited to his prime ministership."

Anecdotes:

- Vajpayee's witty remark to Nehru about having a "split personality" and an "inverted vision."
- Jaitley's mention of Vajpayee's obituary address for Nehru as a quality tribute to a political adversary.

Key Examples and References:

- Vajpayee's journey from a young activist to a mature statesman within the parliamentary system.
- His criticism of Nehru's policies and the BJP's rise during the Congress-dominated era.
- Instances of Vajpayee's leadership during events like the nuclear tests in 1998 and the Kargil War.

References:

- Arun Jaitley's memorial address for Vajpayee, highlighting his oratory skills and leadership in opposition.
- Jaitley's mention of Vajpayee's best orations occurring when he was on the opposition benches.

Critical Analysis:

- The article critically analyzes the impact of dynastic politics on embodying democratic leadership values.

- Vajpayee is portrayed as an exemplary leader, emphasizing his oratorical skills, commitment to consensus politics, and prioritization of national interests.

Way Forward:

- Encourage a departure from dynastic politics and foster leadership emerging through democratic processes.
- Advocate for a return to decorum in political discourse and a focus on consensus politics for effective governance.
- Learn from Vajpayee’s legacy, striving for political environments that prioritize national interests over partisan considerations.

Sci & Tech

The regulator’s challenge in the age of AI

Context: The global momentum for AI regulation, acknowledging its transformative impact on sectors. It emphasizes the urgent need for regulatory skill-building to match the evolving risks of AI, especially for regulatory agencies, while highlighting the potential widespread adoption and diverse applications of generative AI across the economy.

Highlights:

Recent Global Efforts:

Global initiatives, including executive orders, legislations, and declarations, underscore the importance of regulatory skill-building in the digital age.

Transformative Impact:

The urgency to rethink regulatory capabilities arises from AI’s transformative impact on sectors like banking, telecommunications, and insurance.

Generative AI Products:

Products showcase vast scope and rapid improvement, indicating potential widespread adoption across the economy.

Challenges:

- **Urgent Skill-Building:** The downstream challenge involves urgently building regulatory skills to match the pace of emerging risks from AI technology.
- **Regulatory Agencies’ Role:** Regulatory agencies, at the forefront, must adapt to AI’s transformative influence in various sectors.

Terms and Phrases:

- **Generative AI:** AI products with the capability to generate content or services, showcasing vast scope and rapid improvement.
- **Algorithmic Auditing:** Audit of each part of a model’s lifecycle to understand workings and identify potential problematic outcomes.

Statements:

- Regulatory agencies, like the **Reserve Bank of India** and the **Securities and Exchange Board of India**, are developing AI tools for regulatory supervision.
- Building regulatory capabilities in-house is challenging; agencies need to be nimble and proactive to acquire necessary skills and evaluate external inputs.

Examples and References:

- Banks and credit card companies are using AI for **fraud detection, risk assessment, and digital marketing**.
- The Indian insurance industry utilizes AI for **risk management**, indicating diverse applications of AI in the economy.

Facts and Data:

- The **Economist Intelligence Unit** reports AI usage in banks, credit card companies, and e-commerce for various purposes, highlighting the technology's growing influence.

Critical Analysis:

- The transformative potential of AI in various sectors necessitates a reevaluation of regulatory capabilities, including **algorithmic auditing** and understanding disclosure-related requirements.
- While private sector incentives may mitigate rapid AI adoption, effective regulation remains crucial for market acceptance and avoiding inadequate reliance on external expertise.

Way Forward:

- Regulators must proactively build capabilities to understand and implement AI regulations, emphasizing the need for systemic development at the scale of the Indian state.
- The central government should take the lead in understanding and replicating the transition from an analog to a digital state, addressing the challenge of developing capabilities for AI regulation.

Cassini Data reveals organic molecules in Enceladus's Plume

Context: A re-analysis of data from the Cassini mission has revealed a complex mix of molecules in the gaseous plumes of Saturn's moon Enceladus.

About Cassini Mission

Details	
Launch Date	October 15, 1997
Mission Agencies	NASA, European Space Agency (ESA), Italian Space Agency (ASI)
Primary Focus	Study of Saturn, its rings, moons, and magnetosphere
Key Objectives	– Study Saturn's atmosphere – Investigate Saturn's rings

	<ul style="list-style-type: none"> – Detailed studies of Saturn’s moons – Explore Saturn’s magnetosphere
Major Achievements	<ul style="list-style-type: none"> – Successful landing of the Huygens probe on Titan – Discovery of geysers on Enceladus – Identification of new moons – Detailed analysis of Saturn’s rings
Enceladus Discoveries	<ul style="list-style-type: none"> – Detection of water-ice geysers erupting from the south pole – Indications of a subsurface ocean – Analysis of organic compounds in the plumes
Significant Milestones	<ul style="list-style-type: none"> – Jupiter Flyby: December 2000 – Saturn Orbit Insertion: July 1, 2004 – Huygens Titan Landing: January 2005
Mission Duration	1997-2017 (including extended missions)

Discovery of Plumes and Initial Analysis

- **Cassini’s Initial Discovery:** In 2005, the Cassini spacecraft discovered large plumes escaping from Enceladus’s southern hemisphere.
- **Source of Plumes:** These plumes are believed to originate from a subsurface ocean through fissures in the moon’s icy surface.
- **Initial Molecular Findings:** Earlier analyses identified water, carbon dioxide, methane, ammonia, and molecular hydrogen in the plume samples.

Re-examination of Cassini Data

- **Research Team:** Led by Jonah Peter from the California Institute of Technology, Pasadena, California.
- **Methodology:** The team re-examined data using a statistical analysis technique, comparing it against a vast library of known mass spectra.
- **Newly Identified Molecules:** The analysis revealed the presence of hydrocarbons like hydrogen cyanide (HCN), acetylene (C₂H₂), propylene (C₃H₆), ethane (C₂H₆), along with methanol and molecular oxygen.

Significant Discovery of Nitrogen

- **Definite Presence of Nitrogen:** The study confirmed the presence of nitrogen in the form of HCN, resolving previous uncertainties due to overlapping signals in mass spectrometry data.

- **Potential for Habitability:** The diverse chemical reservoir under Enceladus's surface suggests conditions that might be consistent with a habitable environment.
- **Support for Microbial Life:** The presence of these compounds, along with mineralogical catalysts and redox gradients, could potentially support microbial communities or complex organic synthesis.
- **Caveat on Life Support:** The ability of these compounds to support life depends on their concentration in Enceladus's subsurface ocean.

CRISPR-Based Therapies: A New Era in Genetic Disease Treatment

Context: Revolutionary Development: The medical world is witnessing a significant breakthrough with the approval of CRISPR-based therapies for sickle-cell disease and β -thalassemia in the U.K. and the U.S.

- **Global Impact:** These advancements hold the potential to transform the lives of millions suffering from these inherited blood disorders.

CRISPR Technology: From Discovery to Application

- **Origins of CRISPR:** Discovered in archaea in 1993, CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats) elements were later found to form an antiviral defense system in bacteria with Cas (CRISPR-associated) proteins.
- **Nobel Prize-Winning Innovation:** Emmanuelle Charpentier and Jennifer Doudna's work on CRISPR-Cas9 as a 'molecular scissor' earned them the 2020 Nobel Prize in chemistry.
- **Eukaryotic Genome Editing:** Subsequent research demonstrated CRISPR-Cas9's ability to edit eukaryotic genomes, paving the way for various applications in genetic therapies and agriculture.

CRISPR in Medicine: Recent Approvals and Applications

- **CRISPR-Based Treatment for Blood Disorders:** The MHRA in the U.K. and the FDA in the U.S. approved 'Casgevy' for treating sickle-cell disease and transfusion-dependent β -thalassemia.
- **Treatment Mechanism:** Casgevy involves modifying a patient's blood stem cells to correct the genetic defect causing sickling, then regrafting them to produce normal red blood cells.
- **Historical Context:** This approval marks a full circle from Linus Carl Pauling's description of sickle-cell disease as a molecular disorder 74 years ago.

Emerging CRISPR Technologies and Approaches

- **Base-Editing:** This technique allows genome editing at the single nucleotide level.
- **Prime Editing:** A newer method that uses a search-and-replace strategy for precise genome modifications.
- **Epigenetic Modifications:** CRISPR systems are also being developed to target epigenetic effects.

Challenges and Future Prospects

- **Safety and Accuracy Concerns:** Issues like off-target events, where CRISPR-Cas9 edits unintended parts of the genome, pose significant challenges.
- **Balancing Risks and Benefits:** While the potential of these technologies is enormous, their risks must be weighed against both short- and long-term benefits.
- **Ongoing Research and Surveillance:** Continuous scrutiny is essential to uncover potential side effects that are currently unknown.

Conclusion

- **Celebrating Advances:** The approval of therapies like Casgevy heralds a new era for millions suffering from genetic diseases.
- **Optimistic Outlook:** The advancements in CRISPR technology signal a promising future in the field of genetic medicine and disease treatment.

Art & Culture

Prehistoric Andriamanelo Cave Art in Madagascar

Context: Unique prehistoric rock art has been found in the Andriamanelo Cave in western Madagascar, marking a first for the island.

It reveals pictorial art with nature, human-like, and animal-like figures.

Andriamanelo Cave Art: Key Features

- **Beyond Basic Symbols:** Previously, Madagascar's rock art mainly featured basic symbols. The new findings depict more complex scenes and figures.
- **Egyptian Religious Motifs:** Some scenes bear a resemblance to motifs from Egypt's Ptolemaic period (300-30 BCE). Major images hint at Egyptian deities like Horus, Thoth, Ma'at, and Anubis.
- **Ethiopian and Afro-Arab Connections:** Symbols and writings suggest cultural links to the Ethiopian and Afro-Arab worlds.
- **Borneo Cave Art Style:** The art shares similarities with a two-millennia-old cave art style from Borneo.
- **Depiction of Extinct Animals:** The art may depict at least three extinct animals of Madagascar, including a giant sloth lemur, elephant birds, and a giant tortoise.
- **Mysterious M-Figures:** The ubiquitous M-shaped symbol matches the Amharic alphabet's "hawt" and is linked to the concept of the "breath of life" in some Austronesian languages.
- **Absence of Modern and Religious Symbols:** The art lacks Christian, Muslim, Hindu symbols, and modern motifs, indicating its ancient origins.

Dating Challenges and Speculations

- **Difficulty in Dating:** Direct dating of the cave art is challenging due to the inorganic nature of the black pigment.
- **Estimated Age:** The presence of extinct animals and absence of modern symbols suggest the art could be around 2,000 years old.
- **Potential Historical Evidence:** The art might provide insights into who colonized Madagascar and when.

Vipassana: the Ancient Buddhist Meditation Practice

Context: A political leader is set to attend a 10-day Vipassana meditation retreat in Punjab, skipping a summons by the Enforcement Directorate.

About Vipassana

	<i>Details</i>
Meaning	“To see things as they really are”
Origin	Rooted in Buddhism, attributed to Gautama Buddha, rediscovered and refined by him over 2,500 years ago.
Historical Roots	Preserved in Theravada Buddhism, especially in Myanmar; based on teachings in the “ <i>Satipatthana Sutta.</i> ”
Technique	Mindfulness or insight meditation focusing on the interconnection between mind and body through physical sensations.
Practice	Observing natural breath and bodily sensations, understanding their impermanent nature, typically taught in 10-day retreats.
Goal	Self-transformation through self-observation, leading to improved mental clarity and insight.
Non-Sectarian	Taught as a universal practice, suitable for all backgrounds.
Global Spread	Popularized globally by S.N. Goenka and others in the 20th century.
Retreats	Offered worldwide, often free of charge, funded by donations.
Scientific Research	Studies show benefits in stress reduction, mental health, and treatment of substance abuse.
Code of Discipline	Includes abstaining from killing, stealing, sexual activity, false speech, and intoxicants during courses.