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India's Riparian relations

- There has been an **increase in the magnitude, the frequency and the intensity of floods** in many parts of the world.
- Nearly a **third of Pakistan** is experiencing significant damage, with a spread of diseases and severe water shortages after intense flooding.
- **Assam** experienced one of its worst floods in June, 2022 which affected over 30 districts.
- Flooding is a recurring problem in some districts in **Assam and Bihar**, which makes it difficult to **address poverty and achieve Millennium Development Goals**.

Riparian state

- Literally, Riparian means anything **located on or related to the banks of a river**.

International laws

- The customary international law **principle of non-use of one's territory to harm another state applies to situations where a shared natural resource is used**.
- This means that all states have a binding obligation **not to release water to cause floods in another co-sharer**.
- The obligation to manage floods creates other procedural norms that support the management of floods, such as notification of planned measures, the exchange of data and information, and public participation.
- The **International Court of Justice (ICJ)** ruled in the case of **Argentina vs Uruguay (2010)** that it is customary international law for countries to conduct **transboundary environmental impact assessments (TEIA)** when planning measures or projects that will have a significant impact on the shared watercourse.
 - The ICJ noted that the state in control of an affected party must notify the party of the results of the TEIA assessment so that the

party can **participate in the process of ensuring that the assessment is complete.**

Co-operation with respect to flood control includes:

- Collection and exchange of relevant data;
- Preparation of surveys, investigations and studies and their mutual exchange;
- Planning and designing of relevant measures;
- Execution of flood control measures;
- Operation and maintenance of works;
- Flood forecasting and communication of flood warnings;
- Setting up of a regular information service charged to transmit the height of water levels and the discharge quantities.

India's concern over Brahmaputra

- India is concerned about the potential consequences of China's excessive water releases from the Brahmaputra River as a "**dam controller.**"
 - China holds **considerable leverage** over India in relation to the Brahmaputra River, which flows between **India and Bangladesh.**
- There is **no comprehensive sub-basin or all basin-level mechanism** to deal with water management of the Brahmaputra.
- **Neither India nor China are party to** United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses (UNWC) 1997 or the United Nations Economic Commission for Europe (UNECE) on the Protection and Use of Transboundary Watercourses and International Lakes 1992 (Water Convention).
 - UNWC deals with **harmful water conditions and emergencies.**
 - **Article 27** states that watercourse states should take all appropriate measures to prevent or mitigate conditions that may be harmful to other watercourse states, including floods or ice conditions.
- India has a **memorandum of understanding (2013) with China** that allows the sharing of hydrological information during the flood season.
 - However, **India is not allowed access to information about China's activities in its Basin.**

- If India were to become a party to the UNWC or the Water Convention, this would pave the way for a **bilateral treaty on the Brahmaputra**.

Flood Management in India-Nepal

- Flooding is a recurring problem in the **Koshi and Gandak river basins** shared by India and Nepal.
- The **intensity and magnitude of flooding** is rising because of heavy seasonal precipitation and glacial retreat, which are all affected by human-induced stressors.
- The two neighbours need to work together to **manage the basin and flood risk**, since it is important to view the river basins as a single entity.
 - However, India considers data on transboundary rivers as **classified information**, which is one of the key challenges in developing cross-border flood warning systems.
- The **India-Nepal Koshi agreement of 1954** is aimed at reducing devastating flooding in the river basin.
- The treaty-based **joint bodies** have also tried to refine the early warning systems for flood forecasting.

Flooding is a natural phenomenon that cannot be prevented entirely, but it can be made worse by the lack of transparency in the **sharing of hydrological information between riparian states**. This can make it difficult to understand the magnitude of flooding. In light of the cataclysmic floods in Pakistan and the visible effects of climate change, it is important that all riparian states comply with all the procedural duties pursuant to the no harm rule.

Blocking Subsidy To India's Fishermen

- Several forums have expressed grave concern over the **presence of 1,000 Chinese trawlers in the Arabian Sea**, each capable of hauling in more than 500 metric tons of fish.

- Some of these forums include All Kerala Fishing Boats Operators Association and the All-India Purse Seine Association.

Status of Fishing Industry in India

- According to **CMFRI (Central Marine Fisheries Research Institute) Census 2016**, the total marine fisherfolk population is 3.77 million comprising 0.90 million families, in 3,202 fishing villages in India.
 - 67.3% of such families were under **BPL (Below Poverty Line) category**.
- Indian **Exclusive Economic Zone (EEZ)** hosts a potential marine fishery resource of about 3.921 million tonnes.
- **63% of traditional fishers** have always been governed by their traditional value systems, practising only subsistence fishing through the ages.
- The **fisheries potential** is about 4.4 million tonne and the marine capture production in 2019 was 3.8 million tonnes.

Concerns of Fisher Folk

- Only about **\$300 million per year** is offered to the Indian small fishers in comparison to the massive subsidies of \$7.3 billion by China, \$3.8 billion by the EU and \$3.4 billion by the US.
- **Low capacity** of the Indian boats that could haul just 10 tonnes of fish per trip.
 - **Chinese boats** in Indian Arabian Sea **are extracting petroleum hydrate resources** from the sea bottom, which could contain reserves that last more than 300 years.
- Traditional fisheries involve fishing households uses a relatively **small amounts of capital**.
- Fishing activity in EEZ (Exclusive economic zone) is restricted in a zone of **0-80 m depth**.
 - Near shore water fishery has reached optimum yield levels.
- Only **37%** (59,000) of the Indian **fishing vessels are mechanised** and the rest are non-motorised fishing crafts.
 - The latter category comprises traditional catamarans, dhonis, machwas, masula boats, dugout canoes and plank-built boats.

Schemes launched in fisheries sector by Government of India

Pradhan Mantri Matsya Sampada Yojana (PMMSY)

- It was launched by **Department of Fisheries**, Union Ministry of Fisheries, Animal Husbandry and Dairying in **2020**.
- **Aim:** To double the income of fish farmers and fishers in the country.
- The PMMSY is an **umbrella scheme** with two separate Components namely:
 - Central Sector Scheme (CS) and
 - Centrally Sponsored Scheme (CSS).
- The **Centrally Sponsored Scheme (CSS) Component** is further segregated into non-beneficiary oriented and beneficiary orientated subcomponents/activities under the following **three broad heads**:
 - Enhancement of Production and Productivity
 - Infrastructure and Post-harvest Management
 - Fisheries Management and Regulatory Framework
- The Government **financial assistance** will in turn be shared between Centre and State/UTs in the following ratio:
 - **The North Eastern & the Himalayan States:** 90% Central share and 10% State share.
 - **Other States:** 60% Central share and 40% State share.
 - **Union Territories (with legislature and without legislature):** 100% Central share (No UT Share).

Objectives:

- To be **enhance Fish Production** from 13.75 million metric tons (2018-19) to 22 million metric tons by 2024-25.
- To achieve **sustained average annual growth** of about 9% in fish production is.
- To **increase in the contribution of GVA** of fisheries sector to the Agriculture GVA from 7.28% in 2018-19 to about 9% by 2024-25.
- **To Double export earnings** from the present Rs.46,589 crores (2018-19) to about Rs.1,00,000 crores by 2024-25.

- To enhance **productivity in aquaculture** from the present national average of 3 tons to about 5 tons per hectare.
- **To Reduce post-harvest losses** from the reported 20-25% to about 10%.
- **Doubling of incomes of fishers and fish farmers.**
- To generate about **15 lakhs direct gainful employment opportunities** and thrice the number as indirect employment opportunities along the supply and value chain.
- To enhance the **domestic fish consumption** from about 5 kg to about 12 kg per capita.
- **To encourage private investment** and facilitation of growth of entrepreneurship in the fisheries sector.

Fisheries and Aquaculture Infrastructure Development Fund (FIDF)

- FIDF envisages **creation of fisheries infrastructure facilities** both in marine and inland fisheries sectors and augment the fish production.
- **Aim:** To augment the country's fish production to the level of about 20 million tonnes by 2022-23.
- It comes under the aegis of the **National Fisheries Development Board (NFDB)**, Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India.

Objectives:

- Creation and **modernization of capture & culture fisheries** infrastructure
- Creation of **Marine Aquaculture Infrastructure**
- Creation and **modernization of Inland Fisheries** Infrastructure
- **Reduce post-harvest losses** and improve domestic marketing facilities through infrastructure support.

- To **bridge the resource gap** and facilitate completion of ongoing infrastructure projects.

Kisan Credit Card (KCC) – Animal Husbandry and Fisheries:

- **Objective:** To meet the short-term credit requirement of rearing of animals, Birds, and fisheries etc.
- **Eligibility:**

Inland Fisheries and Aquaculture

Fishers, Fish Farmers (individual & groups/ partners/ share croppers/ tenant farmers), Self Help Groups, Joint Liability Groups and women groups.

The beneficiaries must have owned or should be a lessee any of the fisheries related activities

Possess necessary license for fish farming and fishing related activities, and any other State specific fisheries and allied activities.

Marine Fisheries:

Beneficiaries listed at above, who own or lease registered fishing vessel/boat.

Possess necessary fishing license/permission for fishing in estuary and sea, fish farming/marine culture activities in estuaries and open sea and any other State specific fisheries and allied activities.

Extended KCC facilities to Animal husbandry and fisheries farmers with benefit of **interest subvention (2%) to bank and prompt repayment incentives (3%)** to such of the farmers to meet their working capital needs under Kisan Credit Card scheme.

12th ministerial conference-WTO

- At the 12th Ministerial Conference, held in June 2022 in Geneva, WTO members signed **Agreement on Fisheries Subsidies**.
- It **prohibits harmful fisheries subsidies** on overfishing, deep sea fishing, and illegal, unreported and unregulated (IUU) fishing.
- It sets new rules to protect global fish stocks in a manner that also recognizes the needs of fishers in **developing and least-developed countries (LDCs)**.

India's concern

- India and the developing world need a **15-year transition period** for phasing out subsidies.
 - But the draft required all developing countries withdraw subsidies that contributed to overfishing and overcapacity **within 7 years of the agreement coming into force or 2030, whichever is earlier**.
- **Indian demand for curbs on non-specific fuel subsidies** given by developed countries with industrial fleets had been completely ignored.
 - These subsidies amount to as much as **22% of the total fisheries subsidies**.
- India proposed that **assistance on** construction, acquisition, vessels up-gradation etc. need to be given for the traditional low-income fishers' transition to a secure livelihood in a **25-year window**.
 - However, this provision **was removed from the final agreement** and will now need to be renegotiated again within four years.
- **India's Stance:** The **MC11 (11th Ministerial Conference)** decision on fisheries subsidies clearly mandates that there should be an appropriate and effective special and differential treatment for developing countries.

Indian fishery subsidies are a real-time assistance to fishers to engage in livelihood fishing for food for family. Stopping this assistance could push millions of families into absolute poverty.

BIMSTEC .vs. SAARC

Trends in global affairs suggest **growing resistance towards regional cooperation**, once considered a preferred means for propelling economic prosperity among participating countries. Events such as the Brexit and the US' scrapping of the Trans-Pacific Partnership in 2017 reflect the global mood. However, contrary to global patterns, South Asian countries have shown an increased interest in regional cooperation. Setting up of the BBIN (Bangladesh, Bhutan, India, Nepal) subregional cooperation in the aftermath of the Kathmandu Summit of 2014 is a case in point.

- The South Asian region covers roughly **three percent of the world's total land area** and is home to around **21 percent of the population**.
- The region has a **diverse socio-economic setup**, including major economic powers such as India as well as a large number of poor people who live on less than a dollar per day. It also has a **large young demographic**, in search of employment.
- Before 1947, India, Pakistan and Bangladesh were one integral nation, and the countries in the region had **close sociocultural linguistic linkages**.
- The countries, therefore, are **closely tied in their socio-political states** as they **face similar threats and challenges**. For example, most of the countries in the region have to deal with terrorism.
- To face such challenges, the South Asian countries must cooperate. The European and ASEAN experience is testimony to the contribution of regional cooperation in the economic growth of the countries.

South Asian Association of Regional Cooperation (SAARC)

- SAARC has **eight member countries**: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.
- SAARC was first envisioned in the late 1970s by Gen. Ziaur Rahman, the military dictator of Bangladesh.
- Initially, **India was apprehensive about SAARC** because it perceived the grouping to be an attempt by its smaller neighbours to unite against it.
- It feared that the association might lead to Asia's own Cold War, creating a pro-Soviet---anti-Soviet rift.

- Eventually, India agreed to join SAARC due to the interest expressed by the neighbouring countries. The first SAARC meeting took place in Dhaka in 1985, and there have been 18 summits till date.

Objective

- SAARC is aimed at **promoting the welfare of the people**; accelerating **economic growth**, social progress and **culture development**; and strengthening **collective self-reliance**.
- The organisation also seeks to **contribute to mutual trust and understanding** among the member countries.
- Other objectives include **strengthening cooperation** with other developing countries, and cooperating with international and regional organisations with similar aims and purposes.

SAARC has come under serious scrutiny in the last few years. Even after three decades of its existence, SAARC's performance has been less than satisfactory, and its role in strengthening regional cooperation is being questioned.

The Failures of SAARC

- **Lack of Trust**- Among the member countries this has been the most significant factor between India and Pakistan. In recent times, Pakistan's non-cooperation has stalled some major initiatives under SAARC.
- **Inadequate & Untimely Implementation**- The South Asia Free Trade Agreement (SAFTA) is often highlighted as a prominent outcome of SAARC, but is yet to be implemented.
- **Absence of a conducive regional environment** - At the 18th SAARC summit in Kathmandu in 2014, initiatives such as the SAARC-Motor Vehicle Agreement (MVA)—crucial for harnessing regional connectivity across South Asia—could be not signed due to Pakistan's dithering. SAARC faced another setback after the 19th summit scheduled to be held in Pakistan in 2016 was suspended for an indefinite period.
- **Perceptions of Threat**- SAARC has faced obstacles in the area of security cooperation. A major hindrance in this regard has been the lack of consensus on threat perceptions.

- **Asymmetry between member countries** - India accounts for nearly 60 percent of SAARC's population, area or GDP. Except for Afghanistan, no other country shares a border with any other SAARC country except India. This obvious asymmetry makes meaningful cooperation that much more problematic.
- **Inadequate mechanisms to resolve disputes**- Disputes among the member countries often hamper consensus building, thus slowing down the decision-making process.
- **Growing Bilateralism**- Bilateralism is an easier option since it calls for dealings between only two countries. Thus, bilateralism decreases the countries' dependence on SAARC to achieve their objectives, making them less interested in pursuing initiatives at a regional level.
- **Shortage of resources** - SAARC faces a shortage of resources, and countries have been reluctant to increase their contributions.
- **Intra-regional investment flows** in goods in the SAARC region remains around five per cent, and in services, barely 0.2 per cent. To put these figures in perspective, the intra-region trade in ASEAN is 26 per cent, and in MERCOSUR, it is 15 per cent.
- **Lack of connectivity**- Trade and other relations between India and Afghanistan are hampered by the fact that they don't share any border and connectivity through Pakistan. Similar is the case between Nepal and Pakistan.

What Next for SAARC?

- To make SAARC more effective, the organisation must be reformed and member countries must reach a consensus regarding the changes required.

Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) In recent years, BIMSTEC has gained popularity among South Asian countries as a platform for regional cooperation. It connects the littoral countries of the Bay of Bengal and the Himalayan ecologies.

- The BIMSTEC region is home to around 1.5 billion people which make up for around 22% of the world's population.
- The region has a combined gross domestic product (GDP) of \$2.8 trillion.

- BIMSTEC held its first-ever military exercise “**MILEX-2018**” in 2018 in Pune, India. It aimed to boost interoperability among forces and exchange best practices in counterterrorism.
- Memorandum of Understanding (MoU) on establishing a **BIMSTEC Grid Interconnection** to enhance energy cooperation among the seven BIMSTEC member states — Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka, and Thailand.

Why BIMSTEC over SAARC? BIMSTEC vs SAARC: At a Glance

SAARC

- Member states - Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan and Sri Lanka.
- A regional organisation looking into South Asia
- Established in **1985**; a product of the Cold War era
- Member countries suffer for mistrust and suspicion
- Suffers from regional politics
- Asymmetric power balance
- Intra-regional trade only 5 percent

BIMSTEC

- Member states—Bangladesh, India, Myanmar, Sri Lanka, Thailand , Nepal and Bhutan
- Interregional organisation connecting South Asia and South East Asia.
- Established in **1997** in the post-Cold War.
- Members maintain reasonably friendly relations
- Core objective is the improvement of economic cooperation among countries
- Balancing of power with the presence of Thailand and India on the bloc
- Intra-regional trade has increased around 6 percent in a decade

- Member countries have generally **cordial relationships**, something patently missing among the SAARC countries.
- It includes **two influential regional powers**: Thailand and India. This adds to the comfort of smaller neighbours by reducing the fear of dominance by one big power.
- The region has countries with the fastest-growing economies in the world. The combined GDP in the region is around US\$2 trillion and will likely grow further.
- **Trade** among the BIMSTEC member countries reached **six percent** in just a decade, while in SAARC, it has remained around five percent since its inception.
- BIMSTEC's primary focus is on **economic and technical cooperation** among the countries of South Asia and South East Asia.
- SAARC is a purely regional organisation, whereas BIMSTEC is interregional and connects both South Asia and ASEAN.
- With the **northeast sharing borders with four BIMSTEC countries**, including Myanmar, the possibility of multiregional cooperation with Southeast Asia and ASEAN makes it an attractive alternative to SAARC.

Despite the many successes of BIMSTEC, however, some concerns remain.

- **Infrequency of the BIMSTEC summits**- In its 20 years of existence, the BIMSTEC summit has taken place only thrice. This calls into question the seriousness of the member countries.
- **Delay in the adoption of the Free Trade Agreement (FTA)**, a framework that was agreed upon in 2004, fuels doubts about BIMSTEC's efficacy.
- **Resource Crunch** - Permanent secretariat in Dhaka faces a severe resource crunch, both in terms of money and manpower, which has adversely affected BIMSTEC's performance.

Importance of BIMSTEC : For India

- India's engagement with the BIMSTEC is driven by both internal and external strategic imperatives.

- Internally, the **development and security issues of frontier regions** i.e. the Andaman and Nicobar Islands and the Northeast region are interlinked with nations in the Bay of Bengal subregion.
- Externally, three major policy initiatives guiding India's current regional approach involves the BIMSTEC subregion—the **'Neighbourhood First' policy**, the **'Act East' policy** and the **'Indo-Pacific' construct**.
- The BIMSTEC subregion is where India's **'Act East' policy** Maintaining close and cordial ties with the BIMSTEC nations ensures a smooth eastward drive for India.
- India through BIMSTEC can **provide alternative options to the smaller neighbours** and minimise their dependence on China's infrastructure investment.
- **Geographical proximity** to the Bay of Bengal subregion provides India a natural advantage.
- BIMSTEC caters to the wider concept of **"Indo-Pacific"** and an **Indian Ocean community**, it also includes two ASEAN member states (Myanmar and Thailand) in its ranks, which is crucial for India's key foreign policy priorities.
- **India's key strategic interests** are interconnected with the nations in the subregion and BIMSTEC is a critical platform in securing its interests in the subregion and beyond.
- **Changing geopolitical realities** in the region have brought about a renewed interest in the Bay of Bengal. As the SAARC flounders with **strained India-Pakistan relations**, BIMSTEC allows for a broader playing field.
- China's growing inroads into the Bay of Bengal subregion and the wider Indian Ocean region poses **long-term strategic challenges for India**. Under the Belt and Road Initiative (BRI), Beijing has proposed corridors such as the China-Myanmar Economic Corridor, China-Laos-Thailand Railway Cooperation and the China-Nepal Trans-Himalayan Multi-dimensional Connectivity in and around the Bay of Bengal.
- Re-energising BIMSTEC is **India's emerging regional approach**. This will hopefully inject new dynamism in the sub regional grouping and demonstrate India's greater commitment to the sub regional forum.
- India's initiatives have resulted in some important developments, including the setting up of the **BIMSTEC Energy Centre in Bengaluru** and the **BIMSTEC Business Council**, a forum for business organisations to promote regional trade.

Importance of BIMSTEC : For Other Members

- For **Sri Lanka** subregional grouping is vital to prove its ability to play a larger role in Indian Ocean initiatives.
- For **Bangladesh**, BIMSTEC is a platform for much needed economic development through regional integration. Although the Rohingya issue was not brought up at its summit, the forum does provide an opportunity on the sidelines to address outstanding issues.
- **Nepal and Bhutan** see BIMSTEC as a way to further integrate with the Bay of Bengal region.
- For **Myanmar and Thailand**, which are also part of ASEAN, BIMSTEC allows for a way to address overdependence on China and balance it by providing access to consumer markets in India and other rising BIMSTEC economies.

What Next for BIMSTEC?

- BIMSTEC should **narrow down its areas of focus** from 14 to six — trade and investment, connectivity, energy, people-to-people exchanges, counterterrorism, and the Blue Economy and **enhance the institutional capacity** of its Secretariat.
- BIMSTEC region requires a **Free Trade Agreement (FTA)**. Even with its members having a combined GDP of \$2.8 trillion, intraregional trade in BIMSTEC barely exceeds 5 percent of the total, compared to 30 percent within ASEAN. Negotiations for a BIMSTEC FTA have been dragging on for the last 14 years.
- The Bay of Bengal is one of the least integrated regions in the world. A Thailand-initiated scheme to **“Connect the Connectivities”** under the pending BIMSTEC Coastal Shipping Agreement must be finalised soon.
- BIMSTEC should **prioritize finishing up the India-Myanmar-Thailand Trilateral Highway** and the **Kaladan Multimodal Transit Transport Project**, which will allow for sea-access for India's landlocked northeastern states via the Kaladan river in Myanmar.

BIMSTEC v/s SAARC

- Strategic value of **BIMSTEC is driven not by the Pakistan factor alone**, rather the BIMSTEC as a neighbourhood forum presents its own strengths and weaknesses for India, independent of Pakistan and the SAARC.
- Framing the diplomatic move by **hyphenating SAARC and BIMSTEC** to mean one's gain is another's loss does more harm to both the groupings.
- The **single-factor view** fails to capture India's **multi-dimensional regional interests** and **limits the scope of analysis** in terms of assessing BIMSTEC on its own merit and how India sees the grouping in advancing its interests in the Bay of Bengal subregion.
- Both these policies aim for **connectivity and development in the frontier states** of India's northeast and **tackle the issue of cross-border insurgency** that has plagued this region for decades.
- The two organisations—SAARC and BIMSTEC—focus on geographically overlapping regions. **SAARC and BIMSTEC complement each other in terms of functions and goals.** BIMSTEC provides SAARC countries a unique opportunity to connect with ASEAN.
- Going forward, it may be useful to **assess each grouping on its own right.** SAARC provides a platform for India to engage with the subcontinental neighbours and the relevance of this grouping need not wane just because of India's engagement with other forums. There is no reason not to believe that India will not **leverage SAARC as and when opportunity arises.**
- India's strategic interests in the Bay of Bengal sub region presents its own specific opportunities and challenges for India to be leveraged to its advantage. This also applies to other India's neighbourhoods such as the Middle East, Central Asia or the Indian Ocean region.

Role of Technology in India's Foreign Relations

- Technological advancements in the 21st century have heightened the role of technology in the diplomacy arena.
- Technologically adept nation-states are using their own strategies to **integrate technology with their foreign policy** and diplomatic initiatives.
- In this context, technology should be used as a credible diplomatic plank by the Indian State to **further its national and geopolitical interests.**

Role of technology in diplomacy

- In international affairs diplomacy, technology and economics are the **most important tools** for any nation.
- It is emerging as an important instrument of techno-economic power that will **shape the changing dynamics** of international relations and global affairs.
- The **primary objective** of science diplomacy is to support foreign policy objectives with scientific information and advisory.

Importance of combining Science & Technology with diplomacy

- The role of Science & Technology (S&T) in the present 21st century is far more relevant and yet its interplay in international affairs is almost invisible in the globalised society.
- Globalisation and consequent inter-dependency among societies and nations is because of the integration brought about by advances in **Information-Communication-Technology (ICT)**.
- Technology has enabled modern civilisation to move towards a **knowledge-based society** where the information flow is instantaneous - far improved compared to a decade ago.
- The unique advantage of combining S&T and diplomacy in bilateral efforts is that it enables building enduring **techno-political bridges** for serving the cause of furthering mutual national objectives.

India's Position

- The **Science, Technology and Innovation Policy (STIP) 2013** was one of the examples of how technology and diplomacy are intertwined in government documents.
 - It enabled strategic partnerships and alliances with other nations through both bilateral and multilateral cooperation in science, technology and innovation.
- **International Solar Alliance (ISA) 2015** was launched by India and France to boost solar energy in developing countries.

- It is an alliance of 121 countries majorly the sunshine countries (countries lying between Tropic of Cancer and Tropic of Capricorn).
- **Draft Science, Technology and Innovation Policy, 2020** discusses the role of Science & Technology in re-organising India's foreign policy priorities and shaping the global technology ecosystem.
- In 2020, the **Ministry of External Affairs created technically specialised divisions**, such as the cyber diplomacy division, e-governance and information technology division, and the new emerging and strategic technologies division.

Challenges

- **Energy Consumption:** The techno-economic progress of large sections of the growing world population is increasing the global consumption of energy and other earth resources at an alarming rate.
- **Risk of Cyberwarfare:** Cyber warfare techniques use intangible software tools that can cripple military capabilities and international commercial trade.
- **Biotechnology:** Concerns about use of bioweapons and biological warfare are high.
- **Weaponization in Outer space:** Technology for anti-satellite weapons due the development of satellites that can be used for both military and civil reasons.

How techplomacy can be used by India

Identify areas of strength in technology ecosystem

- **Focusing on critical areas of strength** in its technology ecosystem can serve as potential tools of diplomatic leverage.
- **Employ technology as a soft power tool** to pinpoint certain tech-driven areas in which India has built expertise.
 - Investment by the State (both financial and human resources), in these critical areas can boost India's growth.
- To realise above objective, India should:

- **Analyse the export capabilities** and domestic intellectual property (IP) innovation levels in certain areas of technology.
 - Exporting specific technology products on a large scale can positively impact the diplomatic aspect of the country.
 - Example: Biotech space, including vaccines and drugs.
- **Focus on ability of domestic tech industry** to have a high level of innovation in a specific area of technology.
 - **Example:** Boosting already stronger fintech ecosystem of India
 - Acceptance UPI and RuPay in over five different countries.

Utilize different dimensions of techplomacy

- India can use **three different dimensions of techplomacy:**
 - **Science in Diplomacy**—using scientific advisory to achieve foreign policy objectives.
 - **Science for Diplomacy**—using S&T cooperation to improve relations between countries.
 - **Diplomacy for Science**—facilitating international scientific cooperation, and getting foreign S&T inputs for indigenous progress.

Self-sufficiency in emerging technologies

- There needs to be a reconsideration of the concept of self-sufficiency in emerging technologies in light of the Indian State's championing **efforts** in its tech diplomacy outreach.
- **Multilateralism in different critical and emerging technology fields** should be more of an entrepreneurial decision to improve access and combine scientific or technical knowledge.
 - **Example:** Promoting the growth of open-source technologies (built on open standards) with very little or no entry barriers in the form of licences and royalty fees must be prioritised.

Government push

- **Primary objective:** Appoint foreign service officer within the government who can serve as the state's official "**tech diplomat**".
- **Examples:**
 - Tech ambassador within Denmark's ministry of foreign affairs.
 - France has digital ambassador.
 - Australia appointed its first-ever ambassador for cyber affairs and critical technology in 2021.

India, in the long run, will benefit from being integrated into the global technology ecosystem and engaging with other like-minded nation-States through diplomacy. This will achieve its key objectives of economic integration and governance participation in the technology realm.

Swachh Bharat 2.0: Moving forward together

- The **concept of sanitation** in the Indian context has been around since the **Indus Valley civilisation**.
- However, till 2014, sanitation coverage in India was as low as **39 %**.
 - 55 crore people in rural areas were without a toilet facility before 2014.
- Swachh Bharat Mission, as one of the **biggest mass movements or Jan Andolan programmes of independent India** has completely changed the image of rural India through mass scale behaviour change.

Impact of poor sanitation practices

- **Health:** Exposure to contaminated drinking water and food with pathogen-laden human waste can cause diarrhoea, cholera, trachoma, intestinal worms, etc.
 - This can lead to the stunting of huge swathes of Indian children.

- **Environment:** Poor hygiene practices impact environment with untreated sewage flowing directly into water bodies and affecting coastal and marine ecosystems, contaminating soil and air, and exposing millions to disease.
- **Dignity:** It severely affected the dignity of people, especially women and children.
- **Economy:** A study by the World Bank states that the absence of toilets and conventional sanitation costs India **6.4 % of its GDP in 2006.**
 - The economic impact of poor sanitation for India is at least **\$38.5 billion every year** under health, education, access time and tourism.

Swachh Bharat Mission (SBM)/ Clean India Mission

- It was launched in 2014 (150th anniversary of the birth of Mahatma Gandhi).
- **Aim:** To eliminate open defecation and improve solid waste management.
- Under SBM, **construction of household-owned and community-owned toilets** was carried out.
- It is divided into two phases:
 - **Phase 1 (SBN 1.0):** 2014 - October 2019.
 - **Phase 2 (SBM 2.0):** 2020–21 till 2024-25.
- To achieve the objectives of SBM, the mission was split into two:
 - **SBM – Gramin:** financed and monitored through the Ministry of Drinking Water and Sanitation
 - **SBM – Urban:** monitored by the Ministry of Housing and Urban Affairs.

Key Features of Swachh Bharat Mission 2.0

- SBM-2.0 envisions to make **all cities 'Garbage Free' and ensure grey and black water management** in all cities other than those covered under AMRUT.
 - Atal Mission for Rejuvenation and Urban Transformation (AMRUT) is the first focused national water Mission.
 - It was first launched in June, 2015.
 - It aims to provide 100% coverage of water supply to all households.

- It will make all urban **local bodies as ODF+** and those with a population of less than 1 lakh as ODF++, thereby achieving the vision of safe sanitation in urban areas.
 - **Open Defecation Free (ODF) is the termination of faecal-oral transmission**, defined by:
 - **No visible faeces** found in the environment/village; and
 - Every household as **well as public/community institutions using safe technology** option for disposal of faeces.
- It focuses on **source segregation** of solid waste.
- It works for the utilizing the **principles of 3Rs (reduce, reuse, recycle)**, scientific processing of all types of municipal solid waste and remediation of legacy dumpsites.

Impacts of Swachh Bharat Mission 2.0

- By offering financial incentives for building household and community toilets, the government gave a **huge fillip to the toilet infrastructure**.
- **55 crore people** changed their behaviour and started using toilets.
- From 2014 to 2020, more than 10 crore toilets were constructed.
 - India declared itself ODF on October 2, 2019.
- There has been a significant reduction in **water and sanitation related diseases**.
 - It has resulted in an **annual profit of more than Rs. 50,000 per household** in rural India.
- After becoming Open Defecation Free (ODF), many villages have seen a **reduction in the number of deaths** due to diseases like diarrhoea, malaria etc.
- **Child health and nutrition** have also improved.
- By offering financial incentives for building household toilets, it gave a huge fillip to the toilet infrastructure.

The Lighthouse Initiative (LHI)

- It was commissioned by the Ministry of Drinking Water and Sanitation.
- **Aim:** To implement solid and liquid waste management structures by employing a **participatory approach** through mobilisation of the village

communities, corporates, district and block administration and gram panchayat officers.

- It will be implemented through **PPP (public-private partnership)**, across villages in 75-gram panchayats in 15 states in Phase 1.

Significance of LHI

- Managing household and wastewater at a village **level creates hygienic surroundings** for the communities.
- Implementing solutions to convert waste to achieve a remunerative return allows communities to become **economically self-sufficient**.
- **Recovery of precious grey water** through minimal treatment and treatment of sewage helps tackle **scarce water resources, encouraging reuse and conserving water bodies**.

The India Sanitation Coalition (ISC)

- It is a multi-stakeholder platform that **creates collaborations with** private sector, government, financial institutions, civil society groups, media, donors, etc.
- It is recognised as the **official intersection between the government and the private sector** for engagement in helping build **solid and liquid waste management infrastructure**.
- It has included activities such as the construction of soak pits, waste stabilisation ponds, drainage channels, compost pits, collection and segregations sheds and biogas plants etc.
- It creates programmes where government **funding is used for infrastructure building** and private sector comes in as a **strategic partner providing expertise in management and technology**.

Going forward, the ISC and Lighthouse Initiative should continue to focus on the government's position with regard to the thematic interlinkages between WASH and sectors such as health, education, gender, nutrition and livelihoods. This successful

collaboration can be replicated across the country, holding the promise of taking forward the remarkable success of the first phase of SBM.

WHO's alert against India-made cough syrups

- WHO on 29.09.2022 informed DCGI, the National Drug Regulator of India, that WHO is currently providing technical assistance and advice to Gambia, where children have died and where a contributing factor, is suspected to be the use of medicines which may have been contaminated with Diethylene glycol or Ethylene glycol (in some of the samples it was claimed to have been confirmed by further analysis conducted by WHO).
- CDSCO took up the matter immediately with Haryana State Regulatory Authority, under whose jurisdiction the drug manufacturing unit of M/s Maiden Pharmaceutical Limited, Sonapat is located. Further, a detailed investigation was launched to ascertain the facts/ details in the matter in collaboration with State Drugs Controller, Haryana.
- From the preliminary enquiry of CDSCO, it has been made out that M/s Maiden Pharmaceutical Limited, Sonapat, Haryana is a manufacturer licensed by the State Drug Controller for the products Promethazine Oral Solution BP, Kofexnaline Baby Cough Syrup, MaKoff Baby Cough Syrup and MaGrip n Cold Syrup under reference, and holds manufacturing permission for these products for export only. The company has manufactured and exported these products only to Gambia.
- WHO said that Diethylene Glycol (DEG) or ethylene glycol is toxic to humans when consumed and can prove fatal. It can cause kidney and neurological toxicity and has been associated with several cases of mass poisoning when consumed via drugs.
- According to a paper in the National Library of Medicine under the National Center for Biotechnology Information, the chemical is used in antifreeze, brake fluids, cosmetics, and lubricants and causes renal insufficiency and failure and could even lead to coma and death.
- The chemical tastes sweet and is water-insoluble. The toxic effects of the chemical include abdominal pain, vomiting, diarrhoea, inability to pass urine, headache, altered mental state, and acute kidney injury. The NIH paper pointed to at least 10 mass poisoning events that have taken place due to the toxic chemical in the past.
- Diethylene glycol and ethylene glycol are used in antifreeze and brake fluids and other industrial applications but also as a cheaper alternative in some pharmaceutical products to glycerine, a solvent or thickening agent in many cough syrups.
- Diethylene glycol is used as an illegal adulterant in medications and can result in renal and neurological toxicity. Because of its toxicity, it is not allowed in food or drugs. But because of its solubility, some drug makers have inappropriately substituted it for nontoxic ingredients such as glycerine in pharmaceuticals such as cough syrups and acetaminophen.
- It can cause abdominal pain, vomiting, diarrhoea, headache and severe renal injury.

- Toxic effects of Diethylene glycol/Ethylene glycol can include abdominal pain, vomiting, diarrhoea, bladder dysfunction, headache, altered mental state, and acute kidney injury, which may lead to death.
- Diethylene glycol/Ethylene glycol looks like Propylene glycol. Propylene glycol is generally considered safe and non-toxic.

Propylene glycol

- Propylene glycol is widely used as a solvent in drug manufacturing. This means it dissolves other substances (usually solid) without changing their fundamental structure or composition.
- The use of propylene glycol in foods is common and generally considered to be safe. When consumed, propylene glycol breaks down in the body quite quickly—within 48 hours—and is changed to an energy source.
- Unlike similar substances like ethylene glycol, propylene glycol does not form harmful crystals as it's being broken down in the body. Amounts not broken down and metabolized are passed out of the body in urine.

Some of the ways propylene glycol is used in food include:

1. As an anticaking agent, helping to prevent lumps from forming in food
 2. As a solvent in food flavorings, helping to dissolve and mix ingredients in them
 3. As a dough strengthener
 4. To improve flavors in food
 5. As a preservative, its antimicrobial properties help to kill or prevent the growth of microorganisms like bacteria and mold
 6. As a food thickener
 7. To help retain moisture in food
- Propylene glycol is safe for consumption, and the FDA approves its use in food at certain concentrations. It may form up to 97% of the contents of seasonings and flavorings, 24% of confections and frosting, and 5% of alcoholic beverages and nuts/nut products.
 - The maximum concentrations of propylene glycol are 2.5% for dairy products and 2% for all other food products.
 - Propylene glycol is widely used as a solvent in drug manufacturing. This means it dissolves other substances (usually solid) without changing their fundamental structure or composition.

Fish Samples Test Positive for Formalin

- Formalin is the one of the preservatives used to preserve biological specimens. Formalin is used for the preservation of biological specimen. Formalin is 30-40% of water in Formaldehyde or methanol.
- Formalin is a colourless strong-smelling chemical substance usually used in the industry of textiles, plastics, papers, paint, construction, and well known to preserve the human corpse. It is derived from formaldehyde gas dissolved in water.
- Formalin or formaldehyde is sprayed on the fish or injected into the fish or the fish is dipped into the solution. This helps keep the fish fresh for a longer time.
- Formalin causes irritation in the eyes, throat, skin, and stomach. In the long run, continued exposure causes harm to the kidneys, liver and can even cause cancers.

Asbestos in Johnson & Johnson that its Baby Powder (talcum powder)

- Talc or talcum is a naturally occurring clay mineral mined from the earth which is used in baby powder because of its ability to absorb moisture. Talc is the softest known mineral and is mined from underground deposits. Chemically, it is hydrous magnesium silicate.
- Mines that collect talc also contain asbestos that has been linked to health risks like mesothelioma and asbestosis.
- In 2013, the Maharashtra medicines regulator revoked the J&J company's license after discovering that the plant producing the powder used ethylene oxide, a carcinogen.

Central Drugs Standard Control Organization:

1. The Central Drugs Standard Control Organisation (CDSCO) under Directorate General of Health Services, Ministry of Health & Family Welfare, is the National Regulatory Authority (NRA) of India.
2. Under the Drugs and Cosmetics Act, CDSCO is responsible for approval of Drugs, Conduct of Clinical Trials, laying down the standards for Drugs, control over the quality of imported Drugs in the country.
3. It also does the coordination of the activities of State Drug Control Organizations by providing expert advice with a view of bring about the uniformity in the enforcement of the Drugs and Cosmetics Act.
4. Further CDSCO along with state regulators, is jointly responsible for grant of licenses of certain specialized categories of critical Drugs such as blood and blood products, I. V. Fluids, Vaccine and Sera.

5. Within the CDSCO, the Drug Controller General of India (DCGI) regulates pharmaceutical and medical devices, under Ministry of Health and Family Welfare.
6. The DCGI is advised by the Drug Technical Advisory Board (DTAB) and the Drug Consultative Committee (DCC).

The impact of agricultural chemical inputs

Agriculture remains the **principal source of livelihood** for the majority of the population in India and **agrochemicals** (Chemical fertilizers and pesticides) contribute significantly to its growth. However, use of **synthetic** fertilisers and pesticide has drastically increased several folds since the **Green Revolution**.

India is now one of the leading producers of agrochemicals in the world. But non-scientific and excessive application of synthetic fertilisers and pesticides damages not only the environment and **life of agricultural land** but also have entered into the food chain thereby affecting **plant, human, and animal health**.

In order to reduce the negative impact on the **ecological dynamics**, use of fertilisers and pesticides should be reduced and **sustainable alternatives should be explored**.

State of Synthetic Fertiliser and Pesticide Usage in India

- **Fertilisers:** During **FY20**, India consumed about **61 million tonnes of fertiliser**, of which **55% was urea**, in FY21, this figure is estimated to have risen to 65 million tonnes.
 - Currently, the fertiliser **production** of the country is **42-45 million tonnes, and imports are at around 18 million tonnes**.
 - A **subsidy is paid by the Centre for urea fertiliser**, based on the cost of production at each plant. Fertiliser manufacturers are required to sell the product at the government's **Maximum Retail Price (MRP)**.
- **Pesticides:** **Pesticides** are regulated in India through the **Insecticides Act, 1968** and **Insecticides Rules, 1971**.
 - **Insecticides, herbicides, rodenticides, and fungicides** are examples of well-known pesticides.
 - The Indian pesticides market reached a value of around **INR 212 billion in 2021** and is expected to reach **INR 320 Billion by 2027**.

Recent Government Initiatives for Sustainable Farming

- **Promotion of Alternate Nutrients for Agriculture Management Yojana (PRANAM)**
- **Rashtriya Krishi Vikas Yojana (RKVY)**
- **Liquid Nano-Urea Fertiliser**

Issues Associated with Chemical Fertilisers and Pesticides

- **Inappropriate Use of Fertilisers: 292 out of the 525 districts (56%)** in the country account for **85% of its fertiliser use**. In addition, the ratio of consumption of fertiliser has been **skewed towards urea**.
 - Since, there are no restrictions on who can buy subsidised fertiliser, or on how much they can buy, overuse of fertilisers in cultivation is increased, as well as the **urea is getting diverted to other industries (like dairy, textile, paint, fisheries, etc.)**
 - Overuse of urea has led to **falling crop response to fertilisers**, which, in turn, has **decreased farm productivity and farmers' profitability adversely**.
 - **Biomagnification:** The chemicals used in the synthetic fertilisers contain highly toxic substances resulting in **accumulation of toxic substances (biomagnification)** in the tissues of organisms at successively **higher levels in a food chain** deteriorating their health.
 - **Creating Dead Zones:** Chemical fertilisers contain **phosphates, nitrates**, when left unused in soil can **run off into coastal waters**, lakes and streams, resulting in **eutrophication** (addition of excessive amounts of nutrients).
 - It also catalyses the growth of algae. The algae deplete the water of oxygen before decomposing, **suffocating species that live in the area aids the creation of dead zones**.
 - **Deteriorating Soil Health:** Agrochemicals overuse can contribute to **soil acidification**, thereby reducing the content of organic matter (humus content) **stunting plant growth** and even leading to the release of **greenhouse gases** in the atmosphere.
 - **Disproportionate Usage of Pesticides:** Due to lack of scientific awareness regarding the proportionate use of pesticide, a large number of farmers in India end up using **excessive amounts of pesticides**.
 - Also, **pesticide licensing and marketing lacks proper regulation** in India including interdepartmental cooperation and

coordination. It is estimated that over **104 pesticides that are still produced/used in India**, have been banned in two or more countries in the world.

Looking Ahead

- **Inclusion of Bio-Fertilizers:** Use of **biofertilizers** (like **Rhizobium**) should be promoted as they are **cost effective, eco-friendly** and when they are required in bulk can be generated at the farm itself. They **increase crop yield up to 10-40% and fix nitrogen up to 40-50 Kg.**
- **Ensuring Year-Round Ground Cover:** In **erosion-prone regions**, farmers can plant **cover crops or perennial species to prevent periods of bare ground on farm fields** when the soil (and the soil and nutrients it contains) are most susceptible to erosion and **loss into waterways.**
 - Also, trees, shrubs and grasses can be planted along the edges of fields, especially important for a field that borders water bodies.
 - **Planted buffers** can help **prevent nutrient loss from fields** by absorbing or filtering out nutrients before they reach a water body.
 - **Rural Fertiliser Banks:** Fertilisers can be **regulated by setting up rural fertiliser banks. Aadhaar-linked accounts** should be required for fertiliser purchases, and digital records of sales can be kept that can be used at the time of **crop surveillance.**
 - In addition, **nano-urea** should be promoted as well.
 - **Crop Audit and Farmer Awareness:** Panchayat level **crop audit** can be conducted by experts from time to time to trace the content of fertilisers and pesticides. Also, **multiple awareness programmes** are needed to inform farmers about **proportionate use of fertiliser and pesticide.**
 - **Towards Organic Farming:** A **slow but significant shift** towards chemical-free agriculture is required, as well as **promoting natural and organic methods** like using manure, crop rotation, intercropping, biological pest control, which consumes less energy, **reduces nitrogen runoff induced pollution**, and is a **frontline fighter to tackle global warming.**

National Clean Air Programme

The Centre has revised the target to reduce air pollution (PM concentrations) in cities from 20-30% by 2024 to 40% by 2025–26, encouraged by the performance of 95 cities that demonstrated improvement in air quality in 2021–22 as compared to 2017 levels.

The updated goal might encourage the respective states to increase their ambition through city-based action plans for the National Clean Air Program (NCAP).

- Twenty cities under NCAP, including Chennai, Madurai, Nashik, and Chittur, have even met the National Ambient Air Quality Standards (NAAQS), which set an annual average limit of PM10 at 60 ug/m³. This information comes from a recent MoEFCC analysis of cities under NCAP.
- The more hazardous PM2.5, however, was not discussed in the analysis because not all NCAP cities monitor it. Under NAAQS, the annual average PM2.5 prescribed standard is 40 ug/m³.
- However, many cities are anticipated to achieve significantly greater reductions, with Varanasi recording the highest 53% reduction in PM10 levels in 2021–2022 (over 2017 levels).

NCAP



- The MoEFCC introduced it in January 2019. It will be a mid-term, five-year action plan.
- It is the first time a national framework for air quality management has been created in the nation with a deadline for reduction.
- **Goal:** The objective of NCAP is to achieve the required annual average ambient air quality standards across the nation within a predetermined time frame. The NCAP proposes a tentative national level target of a 20%–30% reduction in PM2.5 and PM10 concentration by 2024, using 2017 as the base year for concentration comparisons.
- **Objective:**
 - 131 cities are being targeted by NCAP for air quality improvement. Out of these 131 cities, 123 cities (NACs) are recognised by NCAP as not meeting national ambient air quality standards (NAAQS) five years in a row.
 - Additionally, the 15th Finance Commission's (XV-FC) list of million plus cities (MPCs) that are eligible to receive performance-based grants for the improvement of air quality also includes MPCs.

Initiatives under NCAP:

- **Indoor Air Pollution Monitoring & Management:** It describes the physical, chemical, and biological properties of indoor air in a house, building, institution, or commercial establishment. It would include setting up an Air Information Centre, Certification system for monitoring instruments, Air Quality Forecasting System, Extensive Plantation Drive, Intensive Awareness, Training and Capacity Building Drive etc. It will also have a three tier mechanism for review of monitoring, assessment and inspection for implementation
- **Air Quality Management Plan for 100 Non-Attainment Cities:** The city action plans need to be based on a thorough scientific approach that includes (i) identifying emission sources, (ii) determining the extent of these sources' contributions, (iii) prioritising the sources that need to be addressed, (iv) assessing the feasibility and economic viability of various options for controlling the sources, and (v) formulating action plans.
- **National Emission Inventory:** An accounting of the quantity of pollutants released into the atmosphere is called an emission inventory.
- **Network of Technical Institutions:** For the establishment and administration of Government of India policies and programmes on air pollution, a Knowledge Partners Network of highly skilled and experienced academicians, academic administrators, and technical institutions will be established.
- **Technology Assessment Cell:** Technology Evaluation Cell is intended to assess technologies important in relation to pollution prevention, control, and abatement. The cell is anticipated to concentrate on both domestic and foreign monitoring and mitigation technologies.

NGT on NCAP:

- The Ministry of Environment, Forests and Climate Change (MoEFCC) was previously ordered by the National Green Tribunal (NGT) to make changes to the National Clean Air Programme (NCAP). By 2024, NCAP suggests a 20–30% reduction in air pollution.

Source allocation is the process of determining which sources of pollution are responsible for a given amount of ambient air pollution.

The term "carrying capacity" refers to the maximum number of people that can enter a given space without endangering its environmental quality.

- NGT issued the following directives:
 - The 2024 deadline to reduce air pollution by 20–30% must be lowered.
 - Increase the reduction target.
 - Review the actions taken, such as the switch to CNG and electric vehicles, the expansion of public transportation, the mechanical sweeping of roads, the improvement of fuel quality, etc.
 - Within six months, make sure the necessary number of ambient air quality monitoring systems has been assessed and installed.
- Additionally, it instructed the Central Pollution Control Board's expert team to create within two months a model for **source allocation and carrying capacity assessment** that could be used for all non-attainment cities.

Understanding Potential GDP

Potential gross domestic product (GDP) is the amount of output that an economy can produce at a constant rate of inflation. Rising inflation, on the other hand, may cause an economy to produce more than its potential output for a short period of time. The capital stock, the potential labor force based on demographic factors and participation rates, the non-accelerating inflation rate of unemployment, and the level of labor efficiency are all factors to consider when calculating the output gap.

The global financial crisis, the decline in total factor productivity contribution, capital stock growth declaration, capital allocation distortions across various

economic sectors, financial sector mess and constraints, reduction in disposable income levels, depletion of consumption and fixed investment, and other factors are preventing India from realizing its potential GDP. India, on the other hand, could boost potential output by increasing capital formation and redistributing excess capital from over-capitalized to under-capitalized entities.

Determinants of potential GDP

1. Inflation

Inflation can be defined as an increase in either the money supply or the level of prices. When we hear the term “inflation,” we’re referring to a rise in prices relative to some benchmark. If the money supply is expanded, higher prices are almost always the result—just it’s a matter of time. For the purposes of this discussion, we’ll use the core Consumer Price Index (CPI), which is the standard measure of inflation used in the financial markets in the United States. The measurement of core inflation is more important.

According to studies, every percentage point of annual GDP growth above 2.5 percent has resulted in a 0.5 percent decrease in unemployment over the last 20 years. However, when employment is very low or near full employment, this positive relationship begins to break down. Extremely low unemployment rates have proven to be more costly than beneficial because a near-full employment economy will result in two important outcomes:

1. **Aggregate demand:**As aggregate demand for goods and services grows faster than supply, prices will rise.
2. **Labor market:**Due to the tight labor market, companies will have to raise wages. As a company seeks to maximize profits, this increase is usually passed on to consumers in the form of higher prices.
3. **Recession**

The GDP gap is positive when the economy is in a slump, indicating that it is not performing to its full potential (and less than full employment. When the economy is in an inflationary boom, the GDP gap is negative, indicating that the economy is performing better than it could be (and more than full employment).

3. Factory output

The contribution of finished goods from factories to GDP increases. For a high GDP, continuous growth will suffice. Meanwhile, raw material costs, energy prices, wages, taxes, and subsidies all have an impact on short-run aggregate supply (and real GDP). They all have an impact on the economy's production costs. **Household consumption, business investment, exports, and government spending are examples of aggregate demand factors.** In this case, monetary and fiscal policies are also important considerations.

Factor inhibiting potential GDP in India

1. Low productivity

Low productivity indicates that resources are not maximizing their skills and competencies, resulting in higher resourcing costs for the company. This could be due to two factors: first, managers may assign low-priority or mundane administrative tasks to highly-skilled employees. Furthermore, spending time and money on resources that aren't performing well reduces profit margins. This is due to the fact that the production costs are higher than or almost equal to the billing costs. As a result, productivity is a major determining factor in the organization's profit margins.

2. Currency depreciation

Currency depreciation is the loss of one currency's value in relation to another. It refers to currencies with a floating exchange rate, which is a system in which the value of a currency is determined by the forex market based on supply and demand. Currency pairs are always traded, with the value of one quoted against the value of the other. The value of the first listed currency, the base currency, is always one, while the value of the second listed currency, the quote currency, is given in relation to it. As currency values fluctuate, currency depreciation allows forex traders to profit or lose money.

Let's say a trader decides to short EUR/USD because he believes the euro will fall in value against the dollar. The position would be profitable if the euro fell in value. However, if the euro rose in value instead, they would lose money.

Instead, the trader would have taken a long position in the hope that the euro would appreciate against the dollar. They could close their positions for a profit if the euro

rose in value. If the euro falls in value against the dollar, the trader's long position will lose money because the trade will have to be closed at a lower exchange rate.

3. **Decrease of foreign capital**

Money entering the country in the form of concessional or non-concessional flows is referred to as foreign capital. **Foreign capital flows into India in a variety of ways, including banking and NRI deposits.** The various forms of foreign capital flowing into India have aided in the inflow of massive amounts of FDI into the country, which has boosted the Indian economy significantly. Foreign capital not only adds to domestic savings and resources but also to the country's productive assets. FDI provides the country with foreign currency. It aids in the growth of investment and, as a result, income and employment in the recipient country.

4. **Lack of infrastructure**

Infrastructure investment can be a powerful tool for achieving macroeconomic stability. Infrastructure investments have a significantly higher output "**multiplier**" than other financial interventions, according to most estimates. Each \$100 billion in infrastructure spending would increase job growth by about 1 million full-time equivalents if monetary policymakers adjusted the fiscal boost of the infrastructure investment (FTEs).

In recent years, productivity growth has slowed dramatically. Much of this slowdown is expected to be temporary, as tighter labor markets push productivity growth back to more historically normal levels. It takes effect right away.

Summing up

Comparing real potential GDP to real GDP-that is, potential output to actual output-can give insight into how the economy is performing in comparison to its potential. An economy that is underutilizing its resources is said to be operating below its potential: The output gap is negative, and the economy is sluggish. A positive output gap, on the other hand, indicates that the slack has vanished and resources are fully utilized, if not over-utilized. In fact, monetary policymakers rely on the output gap to guide their decisions. As a result, errors in estimating real potential GDP can reduce policy effectiveness.

The challenging task of recovery amid a slowing global economy

With the global economic environment taking a turn for the worse, the outlook for the Indian economy also appears to have dimmed. **The World Bank lowered its forecast for India's economic growth this year to 6.5 per cent, down from its earlier assessment of 7.5 per cent.** The downward revision is based on the Bank's assessment that monetary policy tightening across the world and the spillovers from the Russia-Ukraine war will "weigh on India's economic outlook". This revised assessment comes days after the RBI had lowered its own forecast for the country's growth to 7 per cent, down from its earlier projection of 7.2 per cent. Till now the ruling dispensation had been rather sanguine about the country's growth prospects — after all, even despite these downward revisions, India is still likely to be one of the fastest growing economies in the world. However, policymakers have now begun to voice concerns over the state of the economy.

On the domestic front, the concern is that even as the economy has recovered to its pre-Covid level, large parts continue to be mired in stress. For instance, micro, small and medium enterprises continue to struggle. An indication of this is that 16.4 per cent of those who availed credit under the Emergency Credit Line Guarantee Scheme of the government defaulted and have not been able to repay their obligations owing to financial difficulties. Considering that MSMEs employ a sizeable section of the labour force, their continuing struggles are bound to affect labour market prospects. In fact, as per the latest periodic labour force survey, the labour force participation rate in urban areas is lower than pre-Covid levels, while in rural areas, wage growth continues to be subdued indicating labour market slack.

And **there is still no firm evidence** of a broadbased revival in the private investment cycle even though the twin balance sheet problem — an over-leveraged corporate sector and banks saddled with bad loans — that was believed to be holding back investments no longer appears to be an obstacle. In such a scenario, tighter monetary policy is only going to complicate matters further. And with already stretched government finances, the possibility of worsening growth prospects, a higher subsidy outgo and uncertainty over revenues, the capacity of public spending to provide a fillip to growth is limited.

Recently the World Trade Organisation lowered its forecast for global trade volume growth to 1 per cent, down from 3.4 per cent earlier. The effects of a slowing global economy are already being felt. After growing at 22 per cent in April-June, growth has tapered off sharply in the months thereafter. In such an environment, with the drivers of growth exhibiting weakness, policy-makers will have to carefully weigh their options as they provide support to the economy while navigating this tumultuous period.

There is nothing called Ethical Surrogacy

Surrogacy (Regulation) Act, 2021

- **Provisions:**

- Under the Surrogacy (Regulation) Act, 2021, a woman who is a widow or a divorcee between the age of 35 to 45 years or a couple, **defined as a legally married woman and man, can avail of surrogacy** if they have a medical condition necessitating this option.
- It also **bans commercial surrogacy, which is punishable with a jail term of 10 years and a fine of up to Rs 10 lakhs.**
- The **law allows only altruistic surrogacy** where no money exchanges hands and where a surrogate mother is genetically related to those seeking a child.

- **Challenges:**

- **Exploitation of the Surrogate and the Child:**
 - One could argue that the state must stop the exploitation of poor women under surrogacy and protect the child's right to be born. However, the **current Act fails to balance these two interests.**
- **Reinforces Patriarchal Norms:**
 - The Act reinforces traditional patriarchal norms of our society that attributes **no economic value to women's work** and, directly affecting the fundamental rights of the women to reproduce under Article 21 of the constitution.
- **Denies Legitimate income to Surrogates:**
 - Banning commercial surrogacy also **denies a legitimate source of income of the surrogates**, further **limiting the number of women willingly to surrogate.**
 - Overall, this step indirectly **denies children to the couples choosing to embrace parenthood.**
- **Emotional Complications:**
 - In altruistic surrogacy, a friend or relative as a surrogate mother may lead to **emotional complications not only for the intending parents but also for the surrogate child as there is great deal of risking the relationship in the course of surrogacy period** and post birth.

- Altruistic surrogacy also **limits the option of the intending couple in choosing a surrogate mother** as very limited relatives will be ready to undergo the process.
- **No Third-Party Involvement:**
 - In an altruistic surrogacy, there is no third-party involvement.
 - A third-party involvement **ensures that the intended couple will bear and support the medical and other miscellaneous expenses** during the surrogacy process.
 - Overall, a third party **helps both the intended couple and the surrogate mother navigate through the complex process**, which may not be possible in the case of altruistic surrogacy.

Surrogacy

- Surrogacy is an arrangement in which a woman (the surrogate) agrees to carry and give birth to a child on behalf of another person or couple (the intended parent/s).
- A surrogate, sometimes also called a gestational carrier, is a woman who conceives, carries and gives birth to a child for another person or couple (intended parent/s).
- **Altruistic surrogacy:**
 - It involves no monetary compensation to the surrogate mother other than the medical expenses and insurance coverage during the pregnancy.
- **Commercial surrogacy:**
 - It includes surrogacy or its related procedures undertaken for a monetary benefit or reward (in cash or kind) exceeding the basic medical expenses and insurance coverage.

Assisted Reproductive Technology

- ART is used to treat infertility. It includes **fertility treatments that handle both a woman's egg and a man's sperm**. It works by removing eggs from a

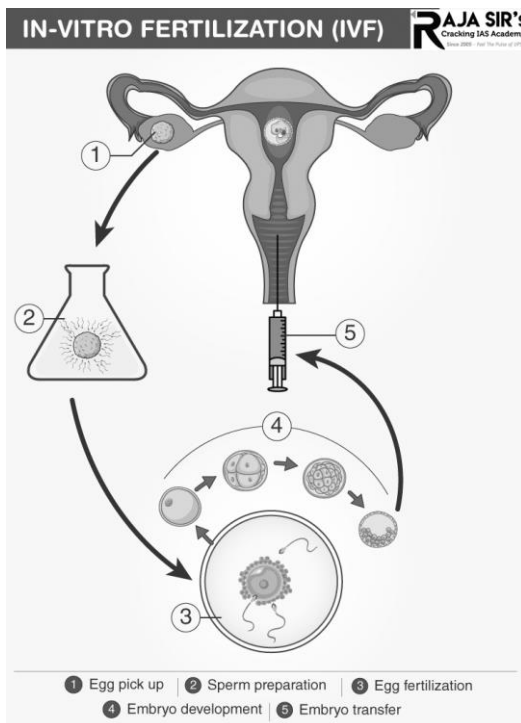
woman's body and mixing them with sperm to make embryos. The embryos are then put back in the woman's body.

- **In Vitro fertilization(IVF)** is the most common and effective type of ART.
- ART procedures **sometimes use donor eggs, donor sperm, or previously frozen embryos.** It may also involve a surrogate carrier.

In-Vitro Fertilisation

In-vitro fertilisation (IVF) is an assisted reproductive technology (ART) where an egg and a sperm are fertilised outside a woman's body in a laboratory. It is a process that is used to overcome infertility and support surrogacy.

It was first successfully performed in 1978, when IVF gave birth to Louis Brown. Lesley Brown, his mother, had been facing infertility issues since 9 years when she took help from Patrick Steptoe and Robert Edwards at Dr Kershaw's Cottage Hospital in Royton, Oldham, England.



In Human Being, normally in which one of the following parts, does the sperm fertilize the ovum?. (UPSC PRELIMS 2007 Question)

- (a) Cervix
- (b) Fallopian Tube

(c) Lower Part of uterus

(d) Upper Part of uterus

After the release of sperm into the female reproductive tract, these sperms being motile swim through the vagina to the cervix to the uterus and further up to the fallopian tube.

The fallopian tube is made of three regions:-

1. **Infundibulum:** It is the funnel-shaped part of the fallopian tube that possesses finger-like projections called fimbriae at its edges which help in the collection of the ovum after ovulation.
2. **Ampulla:** Ampulla is the wider part of the fallopian tube after the infundibulum.
3. **Isthmus:** The isthmus is a narrow region of the fallopian tube that joins the uterus. Sperm travels from isthmus to ampulla.

The egg is collected by the fimbriae of the infundibulum and pushed by ciliated columnar epithelial cells to the ampullary region where sperm fertilize the egg.

Procedure

The five steps of in-vitro fertilisation are as follows:

1. Stimulation / Superovulation

Normally, a woman produces one egg per month. But for IVF procedures, doctors give drugs to women to produce several eggs in a month. These eggs are examined from time to time to pick the healthiest one in the next step.

1. Retrieval of Egg and Sperm Preparation

The eggs are retrieved from the female by a procedure known as transvaginal oocyte retrieval. An oocyte selection is performed to select the egg that has the highest chance of fertilisation. The sperms are extracted from semen by removing inactive cells and seminal fluid in a process called sperm washing.

1. Egg Fertilisation

The female egg and male sperm are incubated together for fertilisation. The sperm generally enters the egg and insemination is carried out, but in cases where sperm motility is low, the sperm is directly injected into the egg.

1. Embryo Development

The fertilised egg divides to form an embryo. The embryo divides by cleavage to form a blastocyst (after 5-6 days of incubation).

1. **Embryo Transfer**

The embryo is transferred to the uterus after 5-6 days of active division. The number of embryos that are transferred depends on the age of women and any other health concerns if present. The embryos are transferred through a tube-like apparatus called a catheter which goes up through her cervix and vagina into the womb. The embryo then sticks to the uterine lining and results in pregnancy.

- **Legal Provisions:**
 - The ART (Assisted Reproductive Technology Act) Regulation 2021 provides a **system for the implementation of the law on surrogacy by setting up of the National Assisted Reproductive Technology and Surrogacy Board.**
 - The Act aims **at the regulation and supervision of ART clinics and assisted reproductive technology banks**, prevention of misuse, and safe and ethical practice of ART services.

Offences and Punishment

The following acts are recognized as offences under the law and attract the corresponding punishment:

- Undertaking or advertising commercial surrogacy Imprisonment extending to ten years and fine extending to Rupees ten lakhs
- Abandoning, disowning or exploiting the child born out of surrogacy - Imprisonment extending to ten years and fine extending to Rupees ten lakhs
- Exploiting the surrogate mother - Imprisonment extending to ten years and fine extending to Rupees ten lakhs
- Selling, importing or trading in human embryos or gametes for the purpose of surrogacy - Imprisonment extending to ten years and fine extending to Rupees ten lakhs
- Conducting sex selection - Imprisonment extending to ten years and fine extending to Rupees ten lakhs

Any medical practitioner who commits any offence under the Act shall be punished with imprisonment extending upto five years and fine extending upto Rupees ten lakhs. If a subsequent offence is reported by the same person, he shall be reported to the appropriate authority and the State Medical Council for the suspension of his registration for five years.

- **Shortcomings:**

- **Exclusion of Unmarried and Hetrosexual Couples:**
 - The Act excludes unmarried men, divorced men, widowed men, unmarried yet cohabiting heterosexual couples, trans persons and homosexual couples (whether married or cohabiting) from availing ART services.
 - This exclusion is relevant as the Surrogacy Act also excludes above said persons from taking recourse to surrogacy as a method of reproduction.
- **Reduces the Reproductive Choices:**
 - The Act is also limited to those commissioning couples who are infertile - those who have been unable to conceive after one year of unprotected coitus. Thus, it is limited in its application and significantly reduces the reproductive choices of those excluded.
- **Unregulated Prices:**
 - The prices of the services are not regulated; this can certainly be remedied with simple directives.

Looking Ahead

As India is one of the major hubs of these practices, the Act is certainly a step in the right direction. There, however, needs to be a dynamic oversight to ensure that the law keeps up with rapidly evolving technology, demands of morality and societal changes.

Dalit Muslims, Dalit Christians Must Get SC Status?.

The Centre is likely to soon decide on **setting up a national commission** to study the **social, economic and educational status of Dalits** who converted to religions other than Hinduism, Buddhism and Sikhism. Several petitions are pending before the Supreme Court seeking **Scheduled Caste (SC) reservation benefits for Dalits** who **converted to Christianity or Islam**.

Why don't Dalits who convert to Christianity and Islam get quota benefits?

The **original rationale** behind giving reservation to Scheduled Castes was that these sections had suffered from the **social evil of untouchability**, which was practised among Hindus. Under **Article 341 of the Constitution**, the President may “specify the castes, races or tribes or parts of or groups within castes, races or tribes which shall...be deemed to be **Scheduled Castes**”.

The first order under this provision was **issued in 1950**, and **covered only Hindus**. Following demands from the **Sikh community**, an order was **issued in 1956**, including **Sikhs of Dalit origin** among the beneficiaries of the SC quota. In 1990, the government acceded to a similar demand from **Buddhists of Dalit origin**, and the order was revised to state: “No person who professes a religion different from the Hindu, the Sikh or the Buddhist religion shall be deemed to be a member of Scheduled Caste.”

Does this religion-based bar apply to converted STs and OBCs as well?

It does not. The **Department of Personnel and Training (DoPT)** website states, “The rights of a person belonging to a **Scheduled Tribe** are independent of his/her religious faith.” Following the implementation of the **Mandal Commission report**, several **Christian and Muslim** communities have found place in the Central and state lists of OBCs.

What efforts have been made to include Muslims and Christians of Dalit origin among SCs?

After 1990, a number of **Private Member's Bills** were brought in Parliament for this purpose. In 1996, a government Bill called **The Constitution (Scheduled Castes) Orders (Amendment) Bill** was drafted, but in view of a divergence of opinions, the Bill was not introduced in Parliament.

The UPA government headed by Prime Minister Manmohan Singh set up two important panels: **the National Commission for Religious and Linguistic Minorities**, popularly known as the **Ranganath Misra Commission**, in October 2004; and a seven-member high-level committee headed by former Chief Justice of Delhi High Court **Rajinder Sachar** to study the social, economic, and educational condition of Muslims in March 2005.

The **Sachar Committee Report** observed that the **social and economic situation of Dalit Muslims and Dalit Christians did not improve after conversion**. The Ranganath Misra Commission, which submitted its report in May 2007, recommended that SC status should be “**completely de-linked**...from religion and...Scheduled Castes [should be made] fully religion-neutral like...Scheduled Tribes”.

The report was tabled in both Houses of Parliament on 18 December 2009, but its recommendation was not accepted in view of **inadequate field data** and **corroboration with the actual situation** on the ground.

A report by a team of sociologists led by **Satish Deshpande**, titled **Dalits in the Muslim and Christian Communities** — A Status Report on **Current Social Scientific Knowledge**, said in January 2008 that there was a strong case for extending **SC status to Dalit Christians and Dalit Muslims**. However, the study, which was commissioned by the National Commission for Minorities, was also not considered reliable due to insufficient data.

What view did the BJP take before it came to power?

In February 2010, the BJP national executive passed a resolution **criticising the Misra Commission**. It said that the “Commission cannot dictate or thrust its opinion on the Christian Pope or Muslim maulvis... **Reservation would amount to a formal introduction of a caste system in Islam and Christianity**, thus changing the basic tenets of these religions, which is outside the jurisdiction of both Parliament and the judiciary and also contrary to the provisions of the Koran and the Bible.”

Back in 1961, the **Akhil Bharatiya Pratinidhi Sabha (ABPS)**, the highest decision making body of the RSS, had said: “If any scheme of separate reservation...of different sects is sought to be envisaged for political purposes, it will prove highly detrimental to national unity...” In 1990, in response to **Christian demands for reservation** on the lines of **neo-Buddhists**, the ABPS said “the Constitution makers envisaged these concessions only to remove **caste-based discrimination and inequality** prevalent in Hindu society”.

What happens here onward?

Based on the recommendations of the **Ranganath Misra Commission**, there are some petitions pending before the Supreme Court, seeking reservation benefits for **Christians and Muslims of Dalit origin**. In the last hearing on 30 August, a three-judge Bench headed by **Justice Sanjay Kishan Kaul** gave Solicitor General of India Tushar Mehta three weeks’ time to present the stand of the Union government on the issue. The next hearing is scheduled for 11 October 2022.

Deciphering India's new draft telecom bill.

- In a bid to do away with **British-era laws** governing the telecom sector, **the Department of Telecommunications (DoT)** issued the **draft Indian Telecommunication Bill, 2022**. The proposed Bill aims to bring in

sweeping changes to **how the telecom sector is governed**, primarily by giving the Centre more powers in several areas to do so.

Why has the government issued a draft Telecommunication Bill?

- Through the **Indian Telecommunication Bill, 2022**, the Centre aims to consolidate and **amend the existing laws** governing the provision, development, expansion and operation of telecommunication services, **telecom networks and infrastructure**, in addition to assignment of spectrum. The draft Bill, which was published by the DoT late on 21 September 2022 night, consolidates **three separate acts** that govern the telecommunications sector — **Indian Telegraph Act 1885, Indian Wireless Telegraphy Act 1933**, and **The Telegraph Wires, (Unlawful Protection) Act 1950**.

What are some of the key amendments to existing telecom laws?

New Age Rulebook

Telecom dept envisages Act for internet-driven telecommunications

Wants clear guidelines around spectrum assignment, specifically administrative allocation

Mechanism to regulate OTT to be decided after Trai recommendations

DoT seeking selective blocking of apps in case of unlawful activities

Telcos want a convergence law for various technologies and platforms

Draft bill to be put up for public consultation before finalisation

- One of the key changes is inclusion of **new-age over-the-top communication services** like **WhatsApp, Signal and Telegram** in the definition of telecommunication services.
- As per the draft law, providers of telecommunication services will be covered under the **licensing regime**, and will be subjected to similar rules as other telecom operators. This issue has been under contention for several years

now with telecom service providers seeking a **level-playing field with OTT apps** over communication services such as **voice calls, messages**, etc. where operators had to incur high costs of licences and spectrum, while OTT players rode on their infrastructure to offer free services.

Are there other areas where the government has proposed to increase its powers?

- The Centre is also looking to amend the **Telecom Regulatory Authority of India Act (TRAI Act)** to dilute the sectoral watchdog's function of being a recommendatory body. The **current TRAI Act** mandates the **telecom department** to seek the regulator's views before issuing a new licence to a service provider. The proposed Bill does away with this provision. It has also removed the provision that empowered TRAI to request the government to furnish information or documents necessary to make this recommendation. Additionally, the new Bill also proposes **to remove the provision** where if the **DoT cannot accept TRAI's recommendations or needs modification**, it had to refer back the recommendation for reconsideration by TRAI.

Does the proposed Telecom Bill also look to address issues being faced by the telecom industry?

- The DoT has also proposed that if a **telecom entity** in possession of spectrum goes through **bankruptcy or insolvency**, the assigned spectrum will revert to the control of the Centre. So far, in insolvency proceedings, there has been a **lack of clarity** on whether the spectrum owned by a defaulting operator belongs to the Centre, or whether banks can take control of it.
- The draft Bill also accords the Centre powers to defer, **convert into equity**, write off or grant relief to any licensee under extraordinary circumstances, including **financial stress, consumer interest, and maintaining competition**, among other things. It also proposes to replace the **Universal Service Obligation Fund (USOF)** with the **Telecommunication Development Fund (TDF)**. USOF is the pool of funds generated by the **5 per cent Universal Service Levy** that is charged upon all telecom fund operators on their Adjusted Gross Revenue. The USOF has largely been

used to aid rural connectivity. However, with the TDF, the objective is also to boost connectivity in underserved urban areas, R&D, skill development, etc.

An anti-superstition law is urgent

- In the aftermath of the twin murder in Kerala in a suspected case of 'human sacrifice' has stunned the entire country. Bhagaval Singh, an 'ayurvedic healer', and his wife Laila allegedly murdered two women in a village in the Pathanamthitta district of Kerala for 'financial prosperity'.
- The major Indian society is driven by religion and beliefs related to it. Religion is believed to be shaping the lives and behavioural conduct of all Indians. This immense importance and a wider scope of meaning hasn't allowed anyone to lay a specific definition of religion. But the concept of religion is connected to the idea of a superior order of existence or life and the assumption of the existence of a superior being. Even though the Preamble to the Indian Constitution does not highlight the proper and specific meaning of 'religion', the Preamble, Article 25 and Article 26 introduces the right to freedom of professing, practising and propagating any religion without any discrimination. Every religious section has the rights to manage their religious institutions, affairs related to religion and administer property according to law. But the exercise of the freedom of religion is also bound by limitations. It cannot contravene fundamental rights or go against public order, health and morality and such other limitations.
- Judicial precedents and interpretations highlight that rituals, ceremonies, and modes of worship constitute an important part of religion. Often on this basis, superstitious practices and traditions take over and there are no bounds to stop it. Although the concept of essentiality is not considered to be the basis on which anti-superstition or superstition is decided upon, it is indeed an important mode for adjudging which practices, traditions and beliefs are an important part of the religion. But the Constitution does not consider the concept of essentiality and talk about it clearly. It is very difficult to chalk out practices that are essential for a religion. Practices disapproving human rights and against humanity cannot be approved as an essential part of a religion. But often the conflict and disputes start on this point where the trial to forbid inhumanity in the name of religion is opposed by the fundamental right to freedom of religion. Offenders and criminals frequently take the defence of freedom of religion for the crimes they commit.
- Human sacrifices, cheating, exploitation, fraud and abuses are still glorified in several parts of India in the name of religion, culture and tradition till today. Time and again

India has felt the requirement for anti-superstitious laws. The pre-existing laws, for instance, the Indian Penal Code is not well equipped to take account of all crimes committed as a matter of superstitious practices. Even though the constitution gives us the right to believe in things and practices which do not have any scientific backing, it is high time that new legislations are required to oppose inhumanity, brutality, fraud and human sacrifices made in the name of religion.

- Superstitious acts and black magic practices violate the fundamental rights guaranteed by Articles 14, 15, and 21 of the Indian Constitution. Moreover, they also violate several provisions of international treaties to which India is a signatory, such as the 'Universal Declaration of Human Rights, 1948', 'International Covenant on Civil and Political Rights, 1966', and 'Convention on the Elimination of All Forms of Discrimination against Women, 1979'.
- However, India still does not have central legislation to tackle the menace of black magic. India needs legislation on superstition, though what should go into it requires debate. Every superstition cannot be removed by the force of law. For that, a mental change is necessary. However, superstitious practices that are utterly dehumanising, brutal and exploitative need to be dealt with by a law that specifically addresses them.
- While presently there exists no nationwide legislation to deal with superstitious practices, black magic, or human sacrifice in particular, certain sections of the Indian Penal Code enlist penalties applicable for such incidents.
- Section 302 (punishment for murder) takes cognisance of human sacrifice, but only after the murder is committed. Likewise, Section 295A (Deliberate and malicious acts, intended to outrage religious feelings of any class by insulting its religion or religious beliefs) works to discourage such practices.
- Furthermore, Article 51A (h) of the Indian Constitution makes it a fundamental duty for Indian citizens to develop the scientific temper, humanism and the spirit of inquiry and reform.
- Other provisions under the Drugs and Magic Remedies Act of 1954 also aim to tackle the debilitating impact of various superstitious activities prevalent in India.

State-specific laws

- The state of Bihar emerged the pioneer in enacting a law to deal with superstitious practices in 1999. The Prevention of Witch Practices Act was amongst the first in India to address witchcraft and inhumane rituals.
- The state of Maharashtra followed in 2013 to enact the Maharashtra Prevention and Eradication of Human Sacrifice and Other Inhuman, Evil and Aghori Practices and Black Magic Act, which banned the practice of human sacrifice in the state. A section in the legislation specifically deals with claims made by 'godmen' who say they have supernatural powers. Additionally, the law also makes it possible to curtail activities of so-called godmen before they become too powerful to effectively address the menace of exploitation in the name of religion.

- Likewise, the state of Karnataka too effected a controversial anti-superstition law in 2017 known as the Karnataka Prevention and Eradication of Inhuman Evil Practices and Black Magic Act, which comprehensively counters “inhumane” practices linked to religious rituals including performing any inhumane act, evil practices and black magic in search of treasure, bounty, tantric acts including physical and sexual assault, creating impression of ‘possession’ and exorcism or assaulting people under the garb of exorcism, making claims of healing power, coercing people to perform fire-walking, and so on. The Karnataka law also particularly lists out penalties for spreading misinformation and creating panic in the garb of ghosts or black magic.
- In 2014, a working draft of such a bill titled ‘The Kerala Exploitation by Superstition (Prevention) Act’ was prepared by the then Additional Director General of Police (Intelligence) A Hemachandran. However, the draft remained in cold storage and Kerala failed to enact a comprehensive law against black magic. The Kerala Law Reforms Commission formed another draft bill titled ‘Kerala Prevention of Eradication of Inhuman Evil Practices, Sorcery and Black Magic Bill’ in 2019, which called for imprisonment of up to seven years for convicts and up to Rs 50,000 fine along with the punishments for offenses under the Indian Penal Code (IPC). However, both these bills failed to see the light of the day and were not introduced, discussed, or passed in the state legislative assembly.

Legal precedents

- In 2019, a district court in Chandigarh sentenced a man to life imprisonment till his natural death for brutally slitting the throat of a four-year-old girl in the name of human sacrifice. The court also imposed a fine of Rs 25,000 on the accused and punished him under Section 302 of the IPC. The judgment reads: “The ghastly crime... does not in any manner make the accused (Kamlesh) entitled to any sort of leniency. He can be punished with death, or imprisonment for all of his life, which is the rule, while capital sentence is an exception to be resorted to for special reasons.”
- The present IPC is not equipped to take care of crimes committed on account of black magic and other superstitious practices. A separate law is necessary because the relationship between a devotee and so-called godman is of a peculiar nature, often marked by violence. Consider the Prevention of Domestic Violence Act, 2005. There are provisions in the IPC to punish violence, but the peculiar nature of the violence faced by women within the family needed a separate law.
- Furthermore, such practices tend to notoriously target the vulnerable sections of society in a lopsided manner, including women, children, and the poor.
- In fact, the state’s role in curtailing such barbaric practices has historically seen resistance from certain elements in the communities practicing such rituals. For instance, between 1837 and 1856, the Kandh tribes retaliated against the British efforts to put an end to the Kandh’s practice of human sacrifice, known as mariah. Members of the tribe in areas of Ghumsar, Kalahandi, and Patna fought a bloody battle against the

colonial masters using tangis (a sort of battle axe-bows and arrows) and staged a strong resistance to any such intervention.

- Allowing the unhindered continuance of such practices violates an individual's fundamental right to equality and right to life under Articles 14 and 21 of the Indian Constitution respectively. In the absence of measures to tackle superstitions, unscientific and irrational practices such as faith healing, quackery, and misinformation regarding medical procedures can also balloon up, which can have severe detrimental effects on public order and health of citizens.

Summing up

- Burning people for curing diseases, hiring babas to conduct an exorcism, raping and killing women in the name of witch-hunting and such brutalities cannot be ignored by the authorities and the legal system. Yes, the Constitution allows freedom of religion but that cannot be against the State. Laws made for the interest of the public can restrict religious practice against the state, public order, morality, health, fundamental rights and, so on. Inhumanity cannot be caused in the name of religion, it was even the practice of Sati which was believed to be conducted in the name of religion but it was for removing the woman from the path of the family and relatives so that the man's property could be inherited by them without any divisions or obstructions. One should enjoy his or her rights but that should not be inconsistent with the enjoyment of rights by others. India needs more legislations to do away with the evils of superstition and superstitious beliefs. Even the existing legislations have enough developments to be made and enough loopholes for one to go against it. But in the light of needing more laws and legislations, one cannot ignore the requirement for education and a developed mental status for people to understand the difference between crime, humanity and superstitions.
- However, it is pertinent to remember that bringing a legislation to deal with this social issue shall only mean half the battle won, wherein meaningful reform will need to increase awareness among the masses through information campaigns, and by roping in community/religious leaders to debunk the myths surrounding such practices.

The Telecom Bill's scope needs to be widened

- The Indian **Telecommunications Bill 2022**, which will replace the antiquated Indian Telegraph Act of 1885, was recently issued by the Department of Telecommunications (DoT).
- Yet, despite the fact that technology has advanced rapidly over the past ten years, the Bill unfortunately **lacks a vision for the future**.

Need for the Indian Telecommunications Bill 2022

- It is an attempt by the **government to update the extant regulatory framework** in keeping with the advancements and challenges in the sector.
- This was much needed given that the three main legislations that occupy this domain are **considerably outdated**.
 - These legislations are **the Indian Telegraph Act enacted in 1885**, the Indian Wireless **Telegraphy Act enacted in 1933** and the **Telegraph Wires (Unlawful) Possession Act in 1950**.
- Current bill looks to **repeal these legislations and “restructure the legal and regulatory framework”** for the telecommunications sector.

The bill proposes

- In terms of users' **safety and security**, it aims to **enable a legal framework** to prevent the harassment of users from unauthenticated sources.
- It establishes that the **prior consent of the user is necessary** before offering any promotional services or advertisement.
 - This would allow many customers to stop receiving spam calls and **texts**, as India is already one of the worst affected countries by these types of communications.
- The bill provides for the **right of appeal** before the appellate authority.
 - Besides, the central government is also **enabled to set up an alternate dispute resolution mechanism** which can range from mediation, arbitration, etc.
- It assigns **unwavering power to the central government**.
- It proposes to replace the **Universal Service Obligation Fund (USOF)** with the **Telecommunication Development Fund (TDF)**.
 - While the USOF Fund has been primarily **used to aid rural connectivity**.

- The TDF aims to **boost connectivity in underserved urban regions**, skill development, etc.

Positive Side of the bill

- As per the bill, any changes to the telecom policies, including the terms for licence and payment, will **not apply retroactively**. This gives the **businesses certainty**.
- To reduce the omnipresent unwanted commercial calls, the bill allows **calling party's verifiable identification** to be displayed to the recipient.
- The Bill identifies the best **use of radio spectrum for commercial mobile services** and lays out the future for **technology-neutral spectrum** trading, sharing, leasing, and repurposing.
- It is the opening up of an **alternative method for allocating radio spectrum** to auctions.
 - This gives the government the chance to distribute spectrum using several approaches such as administrative or beauty parade allocation when appropriate for particular use cases.
 - A beauty parade is a synonym for a formal presentation given to a panel in response to a request for tender.
 - The name is an ironic reference to the beauty pageant, suggesting that the tenderer may choose a company for reasons other than important facts.
- It gives the recognition of **telecommunication facility providers and the associated Right of Way (RoW)** enablement for the laying down of the passive infrastructure.

Negative Side of the bill

No clarity on OTT communication and broadcasting services

- The Bill fails to **provide clarity** on whether **Over The Top (OTT)** services should be regulated on par with **mobile network operators (MNOs)**.
- There is still a debate on whether the OTT services **complement or substitute the services such as voice telephony and Short Message Service offered by the MNOs**.

- MNOs are licensed and are often under **stringent regulation** due to their exclusive access to radio spectrum and Right of Way for
 - Laying down their infrastructure such as **optic fibre and towers**.
 - Access to **Universal Service Fund for providing connectivity** to the non-profitable rural areas of the country.
- OTTs do not have the same type of **exclusive privileges and access** and hence they have not been regulated until now.
- By regulating OTTs on par with MNOs with similar **terms and conditions including heavy** licensing is a serious problem. The **Bill fails to address these differences**.

Absence of any modification to the role of TRAI

- The total **absence of any modification to the role of the Telecommunications Regulatory of Authority of India (TRAI)**, except for cosmetic changes to the TRAI Act 1997.

Centre's overarching power

- The bill provides overarching power to the centre to **regulate all aspects of telecommunications** in the interest of national security.
- This comes without appropriate **safeguards including the designation of authorities** who can issue such orders.

Suggestions

- The government must **provide the much-needed autonomy** both financially as well as administrative to TRAI.
- There is need to **bring OTTs under mild control** due to their power in capturing and using Personal Information of the consumers, and exhibiting near monopoly in several markets.
 - OTTs should be different from that of the MNOs which span across areas such as data and **privacy protection**, consumer protection, content moderation etc.

- There is a need to **clearly indicate the precautionary measures and processes** to reduce possible misuse of centre's overreaching powers.
- **Granular level of details regarding sanctions and penalties** in the Bill for deviating conduct of the service providers should be prescribed in the subsequent regulations and rules.

The purview of the Bill should be widened to include the recently emerging digital communications industry, and TRAI's role should be strengthened to allow for effective coordination with other relevant regulators, such as the soon-to-be-established Data Protection Authority and Consumer Protection Authority.

'Repo Rate' - Scanned in Detail

Repo stands for 'repurchase option' or 'repurchase agreement'. It is a form of short term borrowing that allows banks or financial institutions to borrow money from other banks or financial institutions against government securities with an agreement to buy those securities back after a specified time period and at a predetermined price (which is higher than the initial sell price). A repurchase agreement is a secured way of raising short-term capital for banks. The duration of these loans generally varies between one day to a fortnight. In this system, the borrower enters into a repo or repurchase agreement, whereas, for the lender, it's a reverse repurchase agreement or reverse repo. In India, the Reserve Bank of India or RBI (which is the central bank in the country) lends money to commercial banks with an interest rate which is called repo rate. These loans are sanctioned in exchange for securities to help the banks achieve their financial goals. On the other hand, RBI also has provisions for banks to park their excessive funds for which RBI pays interest, which is determined by reverse repo rate. This interest rate is also applicable when RBI borrows money from commercial banks. RBI uses repo and reverse repo to maintain economic stability in the country. When there is a need for an economic boost, RBI pumps funds into the system by helping commercial banks borrow money from the bank. Using repo, banks raise the necessary capital to increase their lending capacity. This ensures liquidity for the bank and proper cash flow into the market. But, in the case of inflation, RBI uses reverse repo to absorb funds from the market to regulate the lending capabilities of commercial banks.

Monetary Policy Committee - It is a statutory and institutionalized framework under the Reserve Bank of India Act, 1934, for maintaining price stability, while keeping in mind the objective of growth. The Governor of RBI is ex-officio Chairman of the committee. The MPC determines the policy interest rate (repo rate) required to achieve the inflation target (4%). An RBI-appointed

committee led by the then deputy governor Urjit Patel in 2014 recommended the establishment of the Monetary Policy Committee.

Repo Rate: It is the interest rate at which the central bank of a country lends money to commercial banks. The central bank in India i.e. the Reserve Bank of India (RBI) uses repo rate to regulate liquidity in the economy. In banking, repo rate is related to 'repurchase option' or 'repurchase agreement'. When there is a shortage of funds, commercial banks borrow money from the central bank which is repaid according to the repo rate applicable. The central bank provides these short terms loans against securities such as treasury bills or government bonds. This monetary policy is used by the central bank to control inflation or increase the liquidity of banks. The government increases the repo rate when they need to control prices and restrict borrowings. On the other hand, the repo rate is decreased when there is a need to infuse more money into the market and support economic growth. An increase in repo rate means commercial banks have to pay more interest for the money lent to them and therefore, a change in repo rate eventually affects public borrowings such as home loan, EMIs, etc. From interest charged by commercial banks on loans to the returns from deposits, various financial and investment instruments are indirectly dependent on the repo rate.

Impact of Repo Rate in Economy

- Repo rate is an important component of the monetary policy of the nation, and it is used to regulate the liquidity, inflation, and money supply of the nation. Additionally, repo rate levels create a direct impact on the pattern of borrowing by the banks. In other words, in situations of increased repo rate, the banks need to pay higher interest to RBI in order to avail funds, while in terms of lower repo rate, the cost of borrowing funds is less.

The following scenarios discuss the impact of the repo rate on the economy.

1. When the inflation rate is high: At times of high inflation in the economy, the central bank (RBI) regulates the flow of money in the economy by increasing the repo rate, which results in fewer borrowings by the businesses and the industries. The result of this increase is slowing down the money supply and investment activities in the economy, which is instrumental in controlling the inflation rate.
2. To increase liquidity in the economy: When there is a requirement of increasing liquidity in the market, RBI eases the repo rate so that businesses can borrow money for investment purposes, which results in an increased money supply in the economy. The effect of such a step is that it becomes instrumental in the growth of the economy.

Scenarios that lead to an increase or decrease in the repo rate are as follows:

Increase in Repo Rate

1. When there is a high inflation rate in the economy, and as per RBI, the condition may further surge.
2. When there is a risk of depreciation of the currency
3. When it wants to reduce any speculations that arise in areas of foreign exchange
4. The possibility of the formation of asset bubbles as a result of an excessive amount of capital formation

Imported inflation: When the general price level rises in a country because of the rise in prices of imported commodities, inflation is termed as imported. However, inflation may also rise due to the depreciation of the domestic currency, which pushes up the rupee cost of imported items. For example, if the rupee depreciates by 10% against the US dollar in a particular period, the landed rupee cost of an imported product will also go up by the same proportion and will affect the price levels and inflation readings.

Decrease in Repo Rate

1. That situation in which RBI assumes that both inflation and the fiscal deficit are well controlled and there is no unlikely possibility that a demand-led price surge will be observed.
2. When the economy is showing signs of slow down and RBI looks to accelerate the economy by facilitating a more friendly monetary policy.
3. If the balance of payments situation is deemed to be normal by the RBI.

Reverse Repo Rate: This is the rate the central bank of a country pays its commercial banks to park their excess funds in the central bank. Reverse repo rate is also a monetary policy used by the central bank (which is RBI in India) to regulate the flow of money in the market. When in need, the central bank of a country borrows money from commercial banks and pays them interest as per the reverse repo rate applicable. At a given point in time, the reverse repo rate provided by RBI is generally lower than the repo rate. While repo rate is used to regulate liquidity in the economy, reverse repo rate is used to control cash flow in the market. When there is inflation in the economy, RBI increases the reverse repo rate to encourage commercial banks to make deposits in the central bank and earn returns. This in turn absorbs excessive funds from the market and reduces the money available for the public to borrow.

Impact of Reverse Repo Rate on Economy

- The reverse repo rate has an impact on the economy as when the reverse repo rate is increased banks deposit their surplus funds with RBI in order to gain interest.

- The result is that the economy experiences reduced money flow, the banks find it more feasible to deposit the money in the central bank rather than providing it to individuals or businesses which results in boosting the value of the rupee.
- Similarly, inflation is controlled by RBI by increasing the reverse repo rate, and when the situations are perfect for increasing the inflation, RBI then cuts the reverse repo rate and repo rate so as to inject liquidity into the economy.
- The impact of change in reverse repo rate can be seen in home loans, as an increased reverse repo rate will encourage banks to invest their surplus funds in low-risk government securities instead of providing credit to individuals.
- It causes home loans to become dearer, while the opposite effect is seen when the reverse repo rate is decreased.

SLR: Statutory liquidity ratio or SLR refers to the minimum percentage of deposits that needs to be maintained by commercial banks in the form of liquid assets, cash, gold, government securities, etc. SLR is essentially a portion of the bank's Net Demand and Time Liabilities (NDTL) or total demand deposits and time-based deposits. The limit of SLR for commercial banks is decided by the central bank of the country (Reserve Bank of India or RBI in India) but the deposits are maintained by the respective banks themselves. However, the SLR cannot be used by the bank for lending. The deposits designated towards SLR are eligible for earning interests. This monetary policy of the RBI is aimed at ensuring the solvency of the banks or ensuring that the banks, at any point in time, are capable of paying back their liabilities. This in turn ascertains that the depositor's money is safe and helps in increasing their confidence in the bank. SLR is used to regulate inflation and maintain cash flow in the economy. When there is inflation, RBI increases the SLR to restrict the lending capacity of the bank. And when there is a need to infuse cash into the system, RBI reduces the SLR to help banks offer loans at better rates and improve borrowings.

CRR: Cash reserve ratio or CRR is a portion of a commercial bank's total deposits that needs to be maintained at the central bank of the country (which is RBI in India). Just like SLR, the limit of CRR to be maintained is also determined by RBI. However, here the deposit is in the form of liquid cash and has to be kept in an account with the RBI. Banks are not allowed to utilise the CRR deposited for giving out loans or for other lending purposes. Apart from that, CRR deposits are also not eligible for earning interests. CRR helps in ensuring that the bank always has enough cash to disburse when depositors need it. The purpose of this monetary policy is to check inflation in the economy. When CRR is increased, the cash reserves of commercial banks are depleted which limits their lending capacity. This reduces borrowings and helps in controlling inflation.

MSF or marginal standing facility is a system of the Reserve Bank of India that allows scheduled commercial banks to avail funds overnight. The interest rate charged by RBI on such borrowings is called the MSF rate or marginal standing facility rate. RBI has introduced this provision to help scheduled banks when inter-bank liquidity completely dries up and they are in urgent need of money. MSF is sanctioned against government securities and the MSF rate is around 100 basis points or one percent higher than the repo rate. These loans fall under RBI's

liquidity adjustment facility or LAF. The maximum amount that can be availed under MSF is a percentage of the bank's NDTL or net demand and time liabilities. Banks can use their SLR or statutory liquidity ratio to take loans under MSF. This is a short-term loan used to maintain the liquidity of banks. MSF helps in reducing the volatility of overnight lending rates and helps banks manage situations where there is a short-term asset liability mismatch. RBI uses this monetary policy to regulate the supply of funds into scheduled banks and also ensures safety for the depositors. Though limited, but the MSF rate at which banks borrow money from RBI can also affect retail loans. Generally, loans rates available for the public tend to get cheaper when MSF rate decreases and vice versa. Moreover, RBI also revises the MSF rate to strengthen the value of rupee, when required. Monetary standing facility was introduced by the RBI as a provision for banks to avail overnight funds during a revision of the country's monetary policy in 2011-12.

Election Commission freeze Shiv Sena Symbol

- In an **interim order** passed late on 8 October 2022 evening, the **Election Commission of India (ECI) froze** the well known '**bow and arrow**' **election symbol of the Shiv Sena** until the competing claims for recognition by the two rival factions is decided.

How does the ECI decide who gets the symbol?

- **Para 15 of the Symbols Order, 1968** — which has been cited by the ECI in the case of the Shiv Sena — states: "When the Commission is satisfied... that there are rival sections or groups of a recognised political party each of whom claims to be that party the Commission may, after taking into account all the available facts and circumstances of the case and hearing (their) representatives... and other persons as desire to be heard decide that one such rival section or group or none of such rival sections or groups is that **recognised political party** and the decision of the Commission shall be binding on all such rival sections or groups."
- This applies to disputes in **recognised national and state parties** (like the Shiv Sena or LJP). For splits in registered but unrecognised parties, the ECI usually advises the warring factions to resolve their differences internally or to approach the court.

But what happened in such cases before 1968?

- **Before 1968**, the EC issued notifications and executive orders under the **Conduct of Election Rules, 1961**.
- The most high-profile split of a party before 1968 was that of the CPI in 1964. A breakaway group approached the ECI in December 1964 urging it to recognise them as CPI (Marxist). They provided a list of MPs and MLAs of Andhra Pradesh, Kerala and West Bengal who supported them.
- The **ECI recognised the faction as CPI (M)** after it found that the votes secured by the MPs and MLAs supporting the breakaway group added up to more than 4% in the 3 states.

And what was the first case decided under the 1968 Order?

- It was the **first split in the Indian National Congress in 1969**.
- **Indira Gandhi's tensions with a rival group within the party** came to a head with the death of President Dr Zakir Hussain on 3 May 1969. The Congress old guard, led by K Kamaraj, Neelam Sanjiva Reddy, S Nijalingappa and Atulya Ghosh, known as the Syndicate, nominated Reddy for the post. Indira, who was the Prime Minister, encouraged Vice-President VV Giri to contest as an Independent, and called for a "conscience vote" in defiance of the whip issued by party president Nijalingappa.
- After Giri won, Indira was expelled from the Congress, and the party split into the "old" Congress (O) led by Nijalingappa and the "new" Congress (J) led by Indira.
- The "old" Congress retained the party symbol of a pair of bullocks carrying a yoke; the breakaway faction was given the symbol of a cow with its calf.

Is there a way other than the test of majority to resolve a symbol dispute?

- In **almost all disputes decided by the EC so far**, a clear majority of party delegates/office bearers, MPs and MLAs have supported one of the factions. In the case of the Shiv Sena, the majority of the party's elected representatives have switched over to Shinde's side.
- Whenever the **EC could not test the strength of rival groups** based on support within the party organisation (because of disputes regarding the list

of office bearers), it fell back on testing the majority only among elected MPs and MLAs.

- Only in the case of the **split in the AIADMK in 1987**, which happened after the death of **M G Ramachandran**, the EC was faced with a peculiar situation. The group led by MGR's wife Janaki had the support of the majority of MPs and MLAs, while **J Jayalithaa was supported by a substantial majority in the party organisation**. But before the EC was forced to make a decision on which group should retain the party symbol, a rapprochement was reached.

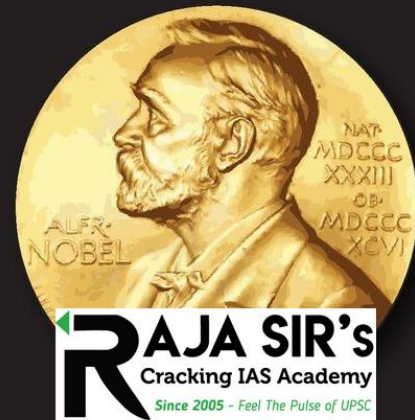
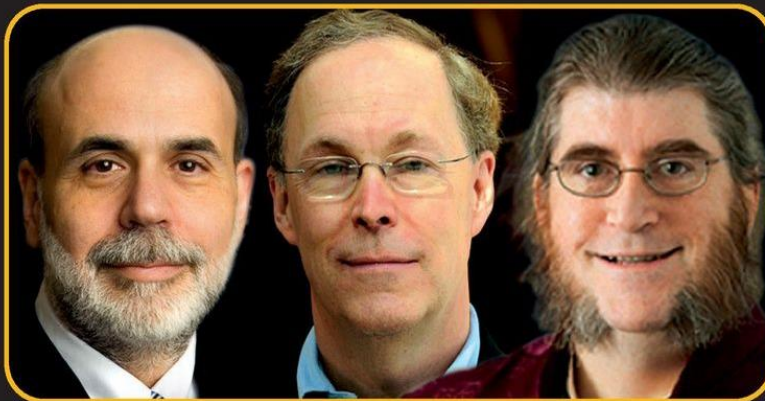
And what happens to the group that doesn't get the parent party's symbol?

- In the case of the **first Congress split**, the EC recognised both the Congress (O) as well as the breakaway faction whose president was Jagjivan Ram. The Congress (O) had a substantial presence in some states and satisfied the criteria fixed for recognition of parties under **Paras 6 and 7 of the Symbols Order**.
- **This principle was followed up to 1997**. However, things changed when the Commission dealt with the cases of splits in the Congress, Janata Dal, etc. — disputes which led to the creation of Sukh Ram and Anil Sharma's Himachal Vikas Congress, Nipamacha Singh's Manipur State Congress, Mamata Banerjee's West Bengal Trinamool Congress, Lalu Prasad's RJD, Naveen Patnaik's Biju Janata Dal, etc.
- The EC in 1997 did not recognise the new parties as either state or national parties. It felt that merely having MPs and MLAs is not enough, as the elected representatives had fought and won polls on tickets of their parent (undivided) parties.
- The EC introduced a **new rule under which the splinter group of the party** — other than the group that got the party symbol — had to register itself as a separate party, and could lay claim to national or state party status only on the basis of its performance in state or central elections after registration.

Why banks fail - causal inferences by Nobel laureates 2022?

- For significantly improving “*our understanding of the role of banks in the economy*,” particularly during financial crises,” the **Sveriges Riksbank Prize in Economic Sciences for 2022** was awarded on 10 October 2022 to three American economists: **Ben S Bernanke**, **Douglas W Diamond** and **Philip H Dybvi**.
- The last of the Nobel Prize announcements for this year, the **Economics Prize** has gone to the **three individuals for their role** in research related to **how banks function**. “Modern banking research clarifies why we have banks, how to make them less vulnerable in crises and **how bank collapses exacerbate financial crises**. The foundations of this research were laid by Ben Bernanke, Douglas Diamond and Philip Dybvig in the early 1980s. Their analyses have been of great practical importance in regulating financial markets and dealing with financial crises,” said the Royal Swedish Academy of Sciences in its press release.
- It also noted, “Later, **when the pandemic hit in 2020**, significant measures were taken to avoid a global financial crisis. The laureates’ insights have played an important role in ensuring these latter crises did not develop into new depressions with devastating consequences for society.”

Nobel Prize in Economics



Ben Bernanke, Douglas Diamond and Philip Dybvig (USA)
share the Nobel Prize in Economics “for research
on banks and financial crises”

● **2021: Guido Imbens (NED/USA), Joshua Angrist (USA), David Card (CAN)**
“for contributions to labour economics and analysis of causal relationships”

● **2020: Paul Milgrom (USA), Robert Wilson (USA)**
“for improvements to auction theory and inventions of new auction formats”

● **2019: Abhijit Banerjee (IND), Esther Duflo (FRA/USA), Michael Kremer (USA)**
“for their experimental approach to alleviating global poverty”

● **2018: William Nordhaus (USA) Paul Romer (USA)**
“for including climate change and technological innovation in longterm economic theory”

Here is the role each of them played in the development of this research.

Ben S Bernanke

- According to the press release, the research laid the foundation of some crucial questions on banks: “**If banking collapses can cause so much damage**, could we manage without banks? Must banks be **so unstable** and, if so, why? How can society improve the stability of the banking system? **Why do the consequences of a banking crisis last so long?** And, if banks fail, why can’t new ones immediately be established so the economy quickly gets back on its feet?”
- It added: “However, there is a conflict here: **savers want instant access to their money** in case of unexpected outlays, while businesses and homeowners need to know they will not be forced to repay their loans prematurely.”

- This lays out a **fundamental problem** that makes banks and money volatile and vulnerable to shocks sometimes. For example, when people were **unable to withdraw their money** from a few rural banks in China earlier this year, they witnessed bank runs. A bank run may happen where many savers try to withdraw their money at once, which can lead to a bank's collapse.
- “Through **statistical analysis and historical source research**, Bernanke demonstrated how failing banks played a decisive role in the global depression of the 1930s, the worst economic crisis in modern history. The collapse of the banking system explains why the downturn was not only deep, but also long-lasting,” said the release. It added the importance of well-functioning bank regulation is also understood thanks to this research.
- Interestingly, Bernanke was the head of the US central bank, the Federal Reserve, when the **2008 crisis hit**, and was able to “**put knowledge from research into policy**,” the Academy said.

Douglas W Diamond and Philip H Dybvig

- Both **Diamond and Dybvig** worked together to develop **theoretical models** explaining why banks exist, how their role in society makes them vulnerable to rumours about their impending collapse, and **how society can lessen this vulnerability**. These insights “form the foundation of modern bank regulation,” said the Academy.
- The model captures the central mechanisms of banking, as well as **its weaknesses**. It is based upon households saving some of their income, as well as needing to be able to withdraw their money when they wish. That this does not happen at the same time for every household allows for money to be invested into projects that need financing. They argue, therefore, that **banks emerge as natural intermediaries** that help ease liquidity.
- But **with massive financial crises** that have been witnessed in history, particularly in the US, it is often discussed **how banks need to be more careful about assessing the loans they give out**, or how bailing out banks in crisis might turn out to be.
- “**How the financial markets should be regulated to fulfil their function** – channelling savings to productive investments without **causing recurring crises** – is a question that researchers and politicians continue to wrestle with. The research being rewarded this year, and the work that builds upon it, makes society much better equipped to take on this challenge,” the Academy noted, and added, “This reduces the risk of financial crises

developing into long-term depressions with severe consequences for society, which is of the greatest benefit to us all.”

India receives 4th set of Swiss bank account details

India has received the **fourth set of Swiss bank account details** of its nationals and organisations as part of an **annual information exchange**, under which Switzerland has shared particulars of nearly **34 lakh financial accounts** with 101 countries.

Significance of India receiving information from Switzerland

- This is the **fourth tranche of information** that India has received from Switzerland since the two countries entered into an **Automatic Exchange Of Information (AEOI)** agreement in January 2018. The first such exchange with India took place in 2019.
- In an effort to bring in transparency and **restrict money laundering**, the Swiss Federal Office has given a detailed account of the massive **AEOI 2022 exchange exercise**: the country has just concluded its exchange of information with 101 countries; with details of around 3.4 million financial accounts.
- Some countries which have been added to the **Swiss AEOI list for the first time** are **Turkey, Peru and Nigeria**. The Swiss Federal Tax Administration office has also informed that with **74 of these 101 countries**, the information exchange was reciprocal.

Volume, nature of data

- **In 2019**, prior to India receiving its **first batch of banking information** via the AEOI, officials had told that **India would be among 73 countries** that would be receiving the data and in their (India's) case **“several dispatches”** would be required, giving an indication of the large volume of account holders.

- This time, the **Federal Tax Administration** has informed that the nature of the financial information includes the name, address, country of residence, tax identification number, information concerning the reporting financial institution, and account balance and capital information, giving an insight into the exact nature of the transmitted data.

Guidelines for exchange of such sensitive banking information

- The **guidelines and parameters for the AEOI** are set by the Paris-based international body, the **Organisation for Economic Co-operation and Development (OECD)**. The annual exercise of AEOI exchange, such as the current Swiss bonanza of banking details, is strictly meant for “**tax only**” **purposes** and in India, kept in the custody of and for action by the **Central Board of Direct Taxes (CBDT)**.
- Under the OECD’s guidelines, no details of the quantum of funds or the names of account holders are to be publicised. In 2014, the OECD developed the **Common Reporting Standard (CRS)** which allows every country to obtain data from **Financial Institutions (FIs)** and “automatically” exchange it with countries with which AEOI agreements are in order every year.

Scope of India’s AEOI network

- **Under the OECD umbrella of AEOI**, India presently shares bulk financial and banking information with **78 countries** and receives the same from **107 countries**, with Switzerland known to be sharing some of the most voluminous data.
- Due primarily to the large volume of FI data coming in from now a 100 countries, the CBDT last year set up a **network of Foreign Asset Investigation Units (FAIUs)** in 14 of its investigation wings, to which the information of that region which has reached India via the AEOI route is transmitted in a secure manner.
- It is the FAIUs that do the follow-up probe of the FI data, and to begin with, investigate whether the taxpayer has declared the **foreign bank account/s in tax returns or not**.

What is GRAP

- The **Commission for Air Quality Management (CAQM)** said on 5 October 2022 that measures under '**Stage-1**' of the **Graded Response Action Plan (GRAP)** will be **enforced in the NCR with immediate effect**. The order came after **Delhi's AQI deteriorated to be in the 'poor' category** on 5 October 2022. Other parts of the NCR, including Gurgaon, Noida and Greater Noida, also recorded 'poor' air quality on 5 October 2022.

What is the Graded Response Action Plan?

- **GRAP is a set of emergency measures** that kick in to prevent further deterioration of air quality once it reaches a certain threshold. **Stage 1 of GRAP** is activated when the **AQI is in the 'poor' category (201 to 300)**, and On 5 October 2022, for instance, the AQI in Delhi was 211.
- The **second, third and fourth stages** will be activated three days ahead of the **AQI reaching the 'very poor' category (301 to 400), 'severe' category (401 to 450) and 'severe +' category (above 450)** respectively. For this, the CAQM is relying on air quality and meteorological forecasts by the Indian Institute of Tropical Meteorology (IITM) and the India Meteorological Department (IMD).
- Measures being imposed under the previous categories will continue even when the subsequent category is activated, that is, **if measures under Stage-2 are activated, measures under Stage-1 will continue** to remain in place.

How is the GRAP different this year?

- The **CAQM revised the Graded Response Action Plan earlier this year**. The GRAP was **first notified in January 2017** by the Ministry of Environment, Forest and Climate Change. This was based on a plan that was submitted by the **Central Pollution Control Board (CPCB)** in November 2016. According to the notification, the task of implementing the

GRAP fell on the now dissolved **Environment Pollution (Prevention and Control) Authority for the NCR**. From 2021 onwards, the GRAP is being implemented by the CAQM.

- In the version of the GRAP that was notified in 2017, measures kicked in after pollution concentrations reached a certain level. This year, measures are **pre-emptive** and will kick in based on forecasts in an attempt to prevent the AQI from deteriorating further. The **older version of the GRAP was enforced based only on the concentration of PM2.5 and PM10**. This year, GRAP is being enforced based on the **AQI**, which takes other pollutants also into account, such as **ozone, sulphur dioxide and oxides of nitrogen**.

What are the measures that will be enforced this year?

- Some of the measures in the **revised GRAP are also different this year**. For the first time, it specifies that State governments in the NCR may impose restrictions on **BS-III petrol and BS-IV diesel four wheelers under Stage-3**, or when the AQI is likely to reach the 'severe' category.
- In the **'severe +' category**, GRAP imposes a **ban on plying of four-wheelers in Delhi** and NCR districts bordering Delhi, except for BS-VI vehicles and those plying for emergency or essential services. Under this category, there will also be a ban on the movement of Delhi registered, diesel-operated medium and heavy goods vehicles in Delhi, with exceptions for those carrying essential commodities or providing essential services.
- **Restrictions on some construction activities** will also set in earlier in the revised GRAP. A ban on construction activities (except for those involving railways, projects of national security, hospitals, metro services, and linear public projects like highways, roads) will be imposed under the 'severe' category. **In the previous plan, the construction ban was implemented only in the 'severe +' category**.
- **Construction activities on linear public projects** like highways, roads, flyovers, pipelines and power transmission, will be banned under the 'severe +' category this year.

What are some other measures being considered?

- Under the **'severe +' category**, State governments may consider **additional emergency measures** like the closure of schools, plying of vehicles on an odd-even basis, and decide on allowing public, municipal and private offices to work on 50% strength and the rest to **work from home**.

What are citizens required to do?

- The **revised GRAP** also has a set of measures for the public to follow – **under the 'poor' category**, this includes keeping vehicle engines tuned, and ensuring PUC certificates are updated and switching off vehicle engines at red lights. Under the **'very poor' category**, it is suggested that citizens use public transport and replace air filters in their automobiles.
- Under the **'severe' category**, a recommendation is made to **work from home if possible**, and not use coal and wood for heating. **Under the 'severe +' category**, GRAP advises people with chronic diseases and children and the elderly **to avoid outdoor activities**.

Who will implement and enforce the GRAP?

- The **CAQM has constituted a sub-committee for the operationalization of the GRAP**. This body includes officials from the CAQM, member secretaries of pollution control boards of Uttar Pradesh, Delhi, Haryana, Rajasthan, the Central Pollution Control Board, a scientist from the IMD and one from the IITM, and Dr T K Joshi, Health Advisor, Centre for Occupational and Environmental Health, Maulana Azad Medical College. The sub-committee is required to meet frequently to issue orders to invoke the GRAP.
- The **orders and directions of the CAQM** will prevail in case of any conflict between directions issued by the State governments and the CAQM.
- **Measures under the different categories of the plan** are to be enforced by the **pollution control boards of the NCR states** and the concerned departments and agencies, including the traffic police, the Transport Department and road owning and construction agencies. Actions under **Stages II, III and IV** will be invoked three days in advance of the AQI reaching the projected level.

Stage 1 (AQI 'Poor' – 201 to 300)

- (1) **Stopping all construction and demolition activities** with plot size of 500 square metres or more which have not been registered on dust mitigation monitoring portals
- (2) mechanised sweeping, water sprinkling on roads
- (3) enforcing guidelines on use of anti-smog guns at construction sites
- (4) enforcing ban on open burning of waste and PUC (pollution under control norms) for vehicles
- (5) DISCOMs to minimise power supply interruptions in NCR
- (6) Encourage offices to start unified commute for employees to reduce traffic

Stage 2 (AQI 'Very poor' – 301 to 400)

- (1) Not allowing coal/firewood in tandoors at hotels
- (2) **Stopping use of diesel generator sets** except for essential and emergency services (hospitals, railways, metro services, airports, water pumping stations, “projects of national importance”)
- (3) **Enhance parking fees to discourage private transport**
- (4) Augment CNG/ electric bus and metro services by procuring additional fleet and increasing the frequency of service

Stage 3 (AQI 'Severe' – 401 to 450)

- (1) **Ban on construction and demolition activities** except railway, metro, hospitals, sanitation projects etc, linear public projects like highways, roads, and flyovers
- (2) Closure of industries that have PNG supply and are not running on approved fuels. In industrial areas that don't have PNG supply, industries not running on approved fuels will operate only for five days a week
- (3) State governments in NCR may impose restrictions on BS III petrol and BS IV diesel four wheelers

Stage 4 (AQI 'Severe +' – more than 450)

- (1) Stop entry of truck traffic into Delhi (except for essentials, CNG and electric trucks)
- (2) Ban on plying of Delhi registered diesel medium and heavy goods vehicles in Delhi, except for essentials
- (3) Ban on plying of 4-wheeler diesel vehicles in Delhi and districts of NCR bordering Delhi, except BS-VI vehicles and vehicles used for essential or emergency services
- (4) State Governments may consider additional emergency measures like closure of schools, plying of vehicles on odd-even basis
- (5) NCR State governments to decide on allowing public, municipal and private offices to work on 50% strength and the rest to work from home
- (6) Ban C&D activities in linear public projects such as highways, roads, flyovers.

A forest-led COP27

- Over the past few years, there have been increasing **calls for the development and transfer of technologies** to promote combating climate change.
- Technology has evolved into a means **of ensuring our species' survival**.
- However, the level of the **techno-determinism present in the plan to stop climate change** is worrisome.

Technology and Climate Change

- Technology **cannot solve the problem** on its own. A **change in society and a zero-emission plan** are needed.
- **Technology innovation** has the benefit of history on its side.
 - For instance, **Norman Borlaug launched the Green Revolution**, which improved yields and fed billions of people.
 - However, to address the issues in front of us, much more efforts to address the effects of climate change.

COP26 and Technological Optimism

- Technology optimism was **also fuelled by COP-26 (Conference of the parties-26) in Glasgow.**
 - A COP is the supreme governing body of an international convention.
 - It is composed of representatives of the member states of the convention and accredited observers.
- Every technological option **considered at COP-26 is said to be dependent** on just three resources:
 - **Nelectricity (non-emitting electricity)** produced by hydropower renewable or nuclear fission.
 - **Carbon capture Storage (CCS)**
 - **Bio Mass**

Concerns of targets proposed in COP-26

Excessive focus on tech-centric climate interventions

- Most of the climate conservation efforts that focuses on technological interventions **ignores forest economies and subjects such as conservation and forests**, which are the best carbon removal instruments.
- The same amount of money must be **invested in conservation as in the transfer of cutting-edge technology** in order to combat climate change.

Unrealistic targets

- The proposals outlined at **COP-26 will not be able to meet all of the demand** for those resources by 2050.

Reason behind potential non-attainment of COP-26 targets

- Currently, each person has **access to 4 kWh of electricity** each day. However, the **COP-26 proposals provide for 32** (range 16-48).
- Present CCS per person annual consumption is 6kg, but the **COP-26 plans call for 3,600kg (range 1,400-5,700).**

- We consume **100 kg of plant-based food annually per person**, but **200 kg of additional** harvest is needed in order to **produce enough bio-kerosene** to fly at the current rate.
 - It is unlikely that we will have these in **sufficient quantities to meet the demands of the plans presented at COP-26**
- From 2000 and 2050, the world will require enough renewable energy capacity to **power one nuclear plant every day** to avert catastrophic climate change as per Carnegie Institution report.
- According to MIT Technology Review, if things continue as they are, it will **take the world close to 400 years to overhaul its energy system.**

Vague nature of the deforestation commitment

- At **COP-26**, there was a **pledge to stop deforestation by 2030**, but the details of the pledge were hazy.
- **Monoculture farming** is a simple way for nations to try to meet their "**net zero deforestation targets.**"
 - However, this won't be much use because researchers found that woods that have been conserved **naturally are 40% more effective** than those that have been planted.

Importance of Forest

- A net **7.6 billion metric tonnes of CO2** are removed annually by forests.
- According to a recent study, their biophysical characteristics tend to cause an **additional 0.5% cooling of the earth.**
- **Up to 37% of the emissions reductions** required to combat climate change can be met by forest protection and other natural alternatives.
- **Mangroves and salt marshes are green infrastructure** that is 2–5 times more affordable than grey infrastructure.
- According to a study, **between 2015 and 2017, the loss of tropical forest cover resulted in 4.8 billion tonnes** of annual gross carbon emissions.
 - This produces more emissions annually than are produced throughout the course of **85 million autos.**
- In 2019, the **energy supply sector contributed around 34%** of all net anthropogenic greenhouse gas emissions.

- It consists **industry (24%), agriculture, forestry, and other land use (22%), transportation (15%), and buildings (6%)**.

Suggestions

- To remove CO₂ from atmosphere, the need of the hour is conservation of natural **CO₂ sinks**, along with improving biodiversity protection, and restoring ecosystems.
 - According to the **IPCC Land Report, land is a significant CO₂ sink**.
- The best and most equitable method to address **the climate catastrophe** is to maintain the **earth's cyclical processes**.
 - This method will work by **safeguarding terrestrial ecosystems, natural sinks, and transformative agriculture techniques**, led by indigenous people and local communities.

We must understand that the current climate catastrophe is merely a symptom of the larger issue that human activity and consumption have outpaced the planet's potential for regeneration. At most, technology can help us, not lead us, along the path to a world that is sustainable, regenerative, and egalitarian.

OPEC+ cut oil production

Recently, The **Organisation of the Petroleum Exporting Countries and its allies (OPEC+)** has decided to **cut oil production by 2 million barrels** per day (bpd).

- This is the **largest cut since the beginning of the Covid-19 pandemic**.
- US legislation in May 2022 passed the **No Oil Producing and Exporting Cartels (NOPEC) bill**, which is intended to protect **US consumers and businesses from engineered oil spikes**.

Reasons for Slashing Production

- Oil prices skyrocketed after Russia's invasion of Ukraine and have since begun to **soften over the past few months**, before dropping sharply to under USD 90 in September, 2022 due to **fears of a recession in Europe** and reduced demands from China because of **its lockdown measures**.
- The reductions **would boost prices and be extremely beneficial for the Middle Eastern member states**, to whom **Europe has turned for oil** after levelling sanctions against Russia since it invaded Ukraine.
- OPEC+ members are concerned that **a faltering global economy would reduce the demand for oil**, and the cuts are seen **as a way to protect profits**.
- Increased oil prices, which first occurred during the invasion of Ukraine, have helped Saudi Arabia, one of the founding members of OPEC, **become one of the world's fastest-growing economies**.
- It is possible that Russia might be influencing OPEC, to make **it more expensive for the West to extend energy sanctions** on Russia.

Impact

- **Impact on European Countries:**
 - Recently, the European Union had announced its plan to implement a price cap on oil exports from Russia.
 - Under the plan, countries will only be permitted to purchase Russian oil and petroleum products transported via sea that are sold at or below the price cap.
 - However, the recent decision to reduce the supply is likely to keep the global oil prices high, **allowing Russia to continue aiming for significant revenue from its crude export**.
- **Impact on the U.S:**
 - The move is likely to be highly detrimental to the US, which **has repeatedly asked the organisation to increase oil production**.
 - Slashes in reduction and subsequently increased oil prices can be **particularly dangerous to the US**, who is trying to **reduce inflation rates before the midterm elections** in November 2022.
- **Impact on India:**
 - India imports nearly **85% of its crude requirement**, the oil import bill will rise on account of the rise in prices. The rise in import bills will

not only lead to **inflation** and a **rise in the Current Account Deficit (CAD) and fiscal deficit** but also weaken the rupee against the dollar and hurt stock market sentiment

- As per **Investment Information and Credit Rating Agency (ICRA)**, for every \$10 per barrel increase in the price of the Indian crude oil basket, the CAD could widen by \$14-\$15 billion, or 0.4% of GDP.

OPEC AND OPEC+

The non-OPEC countries that export crude oil along with the **13 OPEC countries are termed OPEC+**

OPEC MEMBER & NON-MEMBER COUNTRIES

OPEC: Iran, Iraq, Kuwait, Saudi Arabia, Venezuela, Qatar, Libya, UAE, Algeria, Nigeria, Angola, Equatorial Guinea, Congo

OPEC+: Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, South Sudan and Sudan

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- Established in 1960 by founding members **Iran, Iraq, Kuwait, Saudi Arabia and Venezuela**, OPEC has since expanded and now has **13 member states**.

- **Member countries are:**Algeria, Angola, Congo, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, United Arab Emirates, Venezuela.
- **Qatar terminated**its membership on 1st January 2019.
- With the addition of **another 10 allied major oil-producing countries**,the OPEC is known as **OPEC+**.
 - **OPEC+ countries include**13 OPEC member countries, Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, South Sudan and Sudan.
- The objective of the organization is to **“coordinate and unify the petroleum policies of its Member Countries**and ensure the **stabilisation of oil markets** in order to secure an efficient, economic and regular supply of petroleum to consumers, a steady income to producers and **a fair return on capital for those investing in the petroleum industry.**
- Previously controlled by western-dominated multinational oil companies known as the “Seven Sisters,” OPEC sought to give the oil-producing nations greater influence over the global petroleum market.
- They account for roughly **40 % of the world’s crude oil**and 80 % of the globe’s oil reserves, according to estimates from 2018.
- They usually **meet every month to determine how much oil the member states will produce.**
- However, many allege that **OPEC behaves like a cartel**,determining the supply of oil and influencing its price in the world market.

Food growers can be processors too

- The food industry is unable to **increase in farmers’ wages and reducing food waste.**
- Instead of farmers, the industry is primarily benefiting from the value-added of agricultural products.

Current Status of India's food processing sector

- India is among **the world's top producers** of many key farm commodities.
- India ranks **first in the production of milk; second** in that of **fruit, vegetables and fisheries; and third in eggs.**
- It also produces **a variety of health foods and therapeutically** important herbs.
 - They can be processed **into nutritious snacks and other kinds of high-value products** for domestic and export markets.
- The **gross value added (GVA)** of the food-processing sector has surged from **1.34 trillion in 2014-15 to 2.37 trillion in 2020-21.**
- The report by the Federation of Indian Chambers of Commerce and Industry indicates that this sector may grow at an even faster pace of around **15 per cent a year from now on.**
- Almost **\$11 billion** in foreign capital entered the Indian food processing industry between **April 2000 and March 2022.**
 - Foreign capital entered **either directly or through mergers** and acquisitions.

Small and micro food-processing units are economically more viable than the larger ones

- Many characteristics of the Indian farm sector that make **small and micro food-processing** units economically more viable than the larger ones. The notable ones among them are:
 - The **perishable and seasonal nature** of farm produce
 - Its **scattered availability** in small lots
 - **Paucity of commodity-specific** warehousing
 - **Transportation facilities**
 - The issues related to **product quality, especially in terms of its suitability** for processing.

Challenges of India's food sector Industry

Post-harvest losses

- In India, the **post-harvest losses of farm output** continue to be rather high up to 40 % in some perishable items.
 - In monetary terms, these losses are **assessed at 60,000-80,000 crores annually**.
- There are various reasons for low growth of farm sector. They are:
 - **Inept post-harvest handling**
 - **Transportation, storage, and marketing** the produce;
 - A **low level of on farm processing** to enhance the value and extend the shelf-life of the harvested stuff
 - **Lack of direct linkage** between growers and processors.
- **Hardly 10 %** of the farm harvest is subjected to some kind of value-enhancing treatment or processing.
 - This **level needs to be stepped up** at least to 25 % to **reduce spoilage, facilitate the year-round availability** of seasonal agricultural products, and soften volatility in their prices.

Lacunae in implementation of laws by states

- The obligation of processing units that they get raw materials from markets run by **agricultural produce marketing committees** acts as a formidable constraint.
 - Only some states have done away with this provision by **amending their marketing laws** to allow direct purchases from farmers.

Logistical infra

- The needed **logistics infrastructure** is also found wanting in most places.

Government efforts

- The government allowed **100 % foreign direct investment** under the automatic route for manufacturing and retail trading, including e-commerce, of food products made in India.

- It has **extended the Production-Linked Incentive Scheme** to this industry to impart further impetus to its growth.

The two **notable government initiatives** targeted specifically at promoting small-scale or cottage-level food processing are:

Pradhan Mantri Kisan SAMPADA Yojana

- It aims primarily at **creating modern post-harvest infrastructure** for value-addition in farm products and their down the-line value-chain.

PM-Formalisation of Micro Food Processing Enterprises Scheme

- It is meant to **provide financial, technical, and business** support.
- It is for **setting up small-scale ventures and the upgrade of the existing micro food-processing units** on the basis of the one-district-one-product approach.

Suggestions

- A higher level of processing would also generate **additional income for farmers** and off-farm employment and entrepreneurship opportunities for rural people.
- The best course would be to **promote small-scale and village-level agro-processing units** even while continuing to support the organised sector food-processing industry.
- In fact, the **small- and medium-scale sectors** should get preferential treatment because they directly impact farm incomes.
- Farmers also **need to be encouraged** to set up mini or micro agro-processing centres, individually or collectively, through **cooperatives or farmers' producer organisations**.
- Such centres can have small machines like **mini rice mills, atta chakkies, masala grinders**, mini feed mills, small dal mills and similar others.
- Such ventures **do not require much land or large investment** but can yield good income for the ruralites.

As per the ground reality, government needs to put more efforts for the growth of Indian Farm sector. By promoting small-scale Agro and proper logistics infrastructure the problem of farm sector can be improved. The major aim of growth shall be food growers can be processors too.

Women's Role in livestock sector cannot be ignored

- In India's rural economy, the livestock industry is one of the **fastest-growing segments**.
- It contributed **28% of India's agricultural GDP and 5% of national income** in 2018–19.
- Research demonstrates that women are almost always involved in **animal care in rural homes that keep cattle**.
- **International Day of Rural Women (October 15)** aims to acknowledge the contribution that women make to the growth of livestock development.

Women and livestock sector

- Majority **of women employed in rural areas (72% of them)** work in agriculture.
- Dairy cooperatives had **five million female members in 2015–16**, and by 2020–21, that number would rise to 5.4 million.
- In 2020–21, **women made up 31% of all dairy producer** cooperative members.
- Women's dairy cooperative societies increased in number in India from **18,954 in 2012 to 32,092 in 2015–16**.
- However, their contribution to the livestock economy **is not as well recognised** with the exception of their involvement in dairy cooperatives, particularly in milk marketing.

Challenges of women livestock farmers

Issue with data collection

- Traditional **labour force surveys consistently fail to report** women's involvement in livestock-raising.
- Some of the problem in data collection are i) **intermittent nature of work** done for brief periods of time during the day, frequently done inside the farm, and ii) women's own responses.
- Additionally, tasks associated with cattle that women performed were combined with domestic chores and took **about 3.5 hours**.
- Thus, the woman herself might not **list "livestock raising" as a source of income**.

Solution for data collection issue

- **Calculating an augmented work participation** rate can be used to correct this mistake.
 - This estimate includes women who reported themselves as "**engaged in domestic duty**" or care work for the majority of the year but spent time on specific activities.
 - This estimate is also included women who reported themselves as **engaged in economic activity**.

Underestimation of women in livestock sector

- According to the Employment and Unemployment Survey of 2011–12, 12 million rural women were employed in the livestock-raising industry.
 - But roughly 49 million rural women were involved in keeping cattle.
 - In other words, four times as many **women as the official estimate worked** in the cattle sector, making up a sizable portion of the rural population.
- This conclusion is supported by data from India's first **national Time Use Survey from 2019**.
 - **11% of rural women, or 48 million women**, were involved in animal rearing when all activities performed in the previous 24 hours were taken into account, like cooking etc.

- As per data by the **Foundation for Agrarian Studies in Karnataka**, a woman spent at least two hours a day caring for animals in every family that possessed a milch cow.
- Additionally, **older, less educated women** in the village worked raising animals.

Issues in National Livestock Policy (NLP) of 2013

- The National Livestock Mission (NLM) of 2014–15 was established to **advance the livestock** industry.
- Its goal was to **increasing livestock production and productivity** in a sustainable manner.
 - The empowerment of women was one of the objectives of this policy.
- It shows that over **70% of the labour for the livestock sector** is performed by **women** and that.
- It emphasises on **feed and fodder accessibility, offering extension services**, and enhancing financing availability to livestock farmers.
- However, NLM does not, suggest any plans or initiatives tailored especially for **female livestock farmers**.
- It suggests that the **State government set aside 30% of the money** from federally **funded programmes for women**. The 30% quota is **not justified**.

Other Issues

- Recent employment surveys, including the Periodic Labour Force Survey, **fail to capture information** on the precise activities of people who work mostly at home.
 - Consequently, the **underrepresentation of women** in the livestock industry persists.
- Extension programmes for **female livestock farmers are still mostly inaccessible**.
 - **80,000 livestock farmers** were trained nationwide in 2021. But **it's unclear** how many of them were women.
 - Only a few women in each village **reported receiving any information from extension** workers.

- It was difficult for **women in low-income households to obtain loans** for the purchase of livestock since they had no collateral to give the banks.
- Under the **Kisan Credit Cards (KCC)** scheme, **around 15 lakh new KCC** were given to livestock producers during 2020–2022.
 - However, there were no information on how many of them were female farmers.
- Women who raised cattle **lacked technical expertise** in animal breeding and veterinary treatment.
- **Men were almost often the ones to take care** of these particular chores and artificially inseminate the animals.
 - Women were **ignorant about the composition and functions of dairy boards**
- Additionally, women from **Scheduled Caste homes who were landless** or from low-income peasant families were rarely heard.

The livestock industry relies heavily on women labour. However, women who work with cattle are still uncounted in official statistics, which makes them invisible today. Therefore, women ought to be involved in all decision-making processes and the growth of the livestock industry.

What India's new FTP should include ?

- The Ministry of Commerce has again deferred the launch of its new foreign trade policy (FTP) as it felt the need to have **wider consultation with industry**.
 - Current FTP is in force since 2015-20 but extended thereafter till March 2023.
- The new foreign trade policy must **clear the clutter in laws and regulation** for the export community's benefit.

Foreign Trade Policy (FTP)

- It is a policy document that spells out **the objectives and strategies to boost exports**.
- It is also an important document that **interprets rules, regulations, and procedures** in international trade transactions.
 - These transactions are critical in facilitating in **export-import operations** and making the export sector **more competitive**.

Operational Challenges of FTP

Operational issues are recurring in nature and can be handled throughout the year. There are **four major operational challenges** that deserve utmost attention:

Issues related to Remission of Duties and Taxes on Export Products (RoDTEP)

- RoDTEP scheme is aimed at **neutralising the taxes** at the State and local levels not otherwise refunded under any other mechanism.
 - RoDTEP is a **refund of duties and taxes** (electricity duties, petroleum taxes, stamp duty etc.). It is embedded in **manufactured products** for exports.
 - It **does not include “cess and levies,”** which has emerged as a potent instrument in recent years, to collect funds for designated purposes.
- It benefits **are confined to limited sectors** and a number of important sectors such as pharmaceuticals, chemicals and steel are out of its purview.
- Under the current policy, RoDTEP benefits are **not available to advance authorisation** holders and EOU's.
- Exemption granted under the advance authorization/EPCG (Export Promotion Capital Goods) scheme/EOU (Export Oriented Units) is primarily from customs duties and IGST and **not from embedded taxes like electricity duty, diesel/petrol taxes** etc.

Long List of Pending Cases

- There is **long list of pending cases of redemption** with respect to Advance Authorization scheme due to pre-import conditions.

- Advance Authorisation Scheme allows duty free import of inputs, which are physically incorporated in an export product.
- The pre-import conditions **based on the licensing period** is challenging for industries.

Methodological and transparency issue

- The government had introduced **Manufacture and Other Operations in Customs Warehouse (MOOWR)** in **2019**.
 - It is to facilitate **duty free imports for exports** under the Customs bonded warehouse.
- This scheme is similar to **Export Oriented Units (EOU)** of the FTP.
- The EOU scheme has **dual monitoring**, one by Development Commissioner and another by customs.
- It is being difficult for industries **to conversion of existing units under EOU scheme into MOOWR scheme**.
- There is a **lack of transparency** in different operations and provisions.

Issue with imports regulations

- Imports are subject to compliance with **domestic laws** as outlined in the Para 2.03 of the FTP.
- It provides a generic guideline and actual regulations are multiple and **not available at a single point**.

Suggestions

- The RoDTEP **benefits needs to be extended** to Advance Authorization holders and EOU's on priority basis.
- +These taxes and duties are also applicable on excluded sectors and therefore **need to be refunded to all sectors**.
- The list of **long pending cases needs to be sorted out** immediately by withdrawing the pre-import condition retrospectively.

- The examination of **pre-import condition should be limited to the actual violation** based on actual import with **respect to export**.
 - It should **not be based on the licensing period**.
- The government should **take into account the details of imports and against each authorisation** on individual merits and help redeem such cases.
- To achieve the \$1,000 billion exports target by 2030, it is **important to resolve pending cases in a justified** and time-bound manner
 - This will help exporters to focus on **boosting exports rather than grappling** with their **existing cases**.
- it is better to bring about a **simple methodology for conversion of existing units under EOU** scheme into **MOOWR scheme**.
- There are significant ambiguities on the scope of operations, depreciation provisions relating to capital goods etc, which **need to be addressed for greater transparency**.
- There is **need to provide greater clarity** and explanation of laws, rules, orders, regulations and technical specifications stipulated in the existing FTP.
- There is a need to **separate appendix in the Handbook of Procedures** covering all compliances under various domestic laws is required.

Directorate General of Foreign Trade (DGFT) must ensure that the new FTP focusses more on addressing operational issues of Export-Import Bank of India (EXIM) operations as they reduce not only the cost of doing operations but also improves firm level export competitiveness.

ONDC, India's Open E-Commerce Network, Starts Beta Testing

The **Open Network for Digital Commerce (ONDC)**, which is a government-backed project aimed at **enabling small merchants** and **mom-and-pop stores** in parts of the country to access processes and technologies that are typically deployed by **large e-commerce platforms** such as **Amazon and Flipkart**, is expected to extend beta testing in Delhi after having commenced services in Bengaluru.

DEMOCRATISING E-COMMERCE



What is ONDC

Developed by DPIIT, Open Network for Digital Commerce (ONDC) aims to help merchants and consumers by forming a single network for all businesses from retail goods, food to mobility

What is ONDC?

It is an **initiative** aimed at **promoting open networks** for all aspects of **exchange of goods and services over digital** or electronic networks. ONDC is to be based on **open-sourced methodology**, using open specifications and open network protocols independent of any specific platform. It is being developed as a counter to the current stranglehold of two big players in the **Indian e-commerce market**, which is largely dictated by **Amazon** and **Walmart-owned Flipkart**. In May this year, the Department for Promotion of Industry and Internal Trade (DPIIT) went live with a test run of ONDC in cities like Delhi-NCR, Bengaluru, Coimbatore, Bhopal, and Shillong where it plans to onboard 150 sellers. On 30 September 30 the services launched across **16 pin codes in Bengaluru**.

What are the plans for Delhi?

According to reports, **ONDC is expected to expand beta testing into areas** with strong delivery and logistics footprint of its network participants, as well as the capacities of these logistics players that can be deployed. Further, the segments to be launched initially are expected to be **electronics, home decoration** and **fashion**.

How does ONDC work?

How does it work

Once a retailer lists products or services using ONDC's open protocol, the business can be discovered by consumers on e-commerce platforms that follow the same protocol

▶ A consumer searching for the product can see the location of the seller and may opt to buy from the neighbourhood shop that can deliver faster compared to an e-commerce company

Has it been tested

"A mock transaction was successfully completed where Paytm acted as the buyer, Growth Falcons the seller and Goodbox the logistics provider," a DPIIT official said

What's next

Under Start-up India, DPIIT is going to organise another hackathon between January 7 and 9 where it will invite start-ups and all major e-commerce players to test the concept

The **ONDC platform** lies in the **middle of the interfaces** hosting the buyers and the sellers. So far, **the buyer side interface is being hosted by Paytm**, whereas the **seller side interface** is being hosted by other players like **GoFrugal**, etc. When a buyer searches for an item on the Paytm app, from where ONDC has gone live, the app will connect to the ONDC platform, which will connect it to seller side interfaces that will list all the companies from where you can buy the particular item. On ONDC, there will be **several other backend partners** such as **logistics service providers, enterprise resource planners, e-commerce store** hosting service providers, etc.

What are the challenges ONDC aims to address?

An **ONDC strategy paper** published earlier this year has flagged the rising dominance of global players in **India's e-commerce ecosystem**, pointing out that the large quantum of investment required to build competitors to the integrated solutions offered by the big players has become an entry barrier for digital marketplaces. It also flagged the **inability of marketplace sellers** to move out of the platform ecosystem, given that the value created by these small players is stored with the larger platforms. With this in mind, **ONDC aims to transform the marketplace ecosystem** from an **operator-driven platform-centric model** to a **facilitator-driven interoperable decentralised network**. News reports also pegged that the Bengaluru launch only saw 600 orders between ONDC launch on 30 September and 6 October. Industry players also point to multiple gaps in the arrangement, including clarity over data handling, end to end linkages and supplier liability.

Why did Interpol refuse India's request for notice

- The **Interpol has rejected a second request by India** to issue a **Red Corner Notice** against **Gurpatwant Singh Pannun**, the Canada-based founder and legal advisor of the pro-Khalistan outfit **Sikhs for Justice (SFJ)**, whom the Union Ministry of Home Affairs has listed as a “**terrorist**” under the **Unlawful Activities (Prevention) Act (UAPA)**.
- The Interpol has said **India has failed to provide sufficient information** to support its case, and that the **UAPA has been criticised** for being “misused”

to target minority groups and human rights activists without “respecting” their right to due process and a fair trial, The Indian Express has learnt.

- While acknowledging that Pannun is a “**high-profile Sikh separatist**”, the Interpol has said that his activities have a “**clear political dimension**”, which cannot be the subject of a Red Corner Notice according to Interpol’s Constitution, The Indian Express reported on October 12.

What is Interpol?

- The **Interpol**, or **International Criminal Police Organization**, is an **inter-governmental organisation** comprising **195 member countries**, which helps police forces in all these countries to better coordinate their actions. According to the Interpol website, the organisation enables member countries **to share and access data on crimes and criminals**, and offers a range of technical and operational support.
- The Interpol general secretariat coordinates the organisation’s day-to-day activities. It is run by a **secretary general** (currently Jurgen Stock of Germany, who has been Interpol’s chief executive since 2014), with its **headquarters in Lyon, France**, with a global complex for **innovation in Singapore**, and several satellite offices in different regions.
- **Interpol has a National Central Bureau (NCB) in each member country**, which is the central point of contact for both the general secretariat and the other NCBs around the world. **Each NCB is run by police officials of that country**, and usually sits in the government ministry responsible for policing. (Home Ministry in India.)
- **Interpol** manages **19 police databases with information on crimes** and criminals (from names and fingerprints to stolen passports), accessible in real-time to countries. It also offers **investigative support** such as **forensics, analysis, and assistance** in locating fugitives around the world, according to the Interpol website.

What is a Red Notice?

- Criminals or suspects often **flee to other countries to evade facing justice**. A **Red Corner Notice**, or **Red Notice (RN)** alerts police forces across the world about fugitives who are wanted internationally.

- Interpol says “**Red Notices are issued for fugitives** wanted either for prosecution or to serve a sentence. A Red Notice is a request to law enforcement worldwide to locate and provisionally arrest a person pending extradition, surrender, or similar legal action.”
- **RNs contain information** that helps **identify wanted persons**, such as **their names, dates of birth, nationality**, and **physical attributes** such as the colour of their hair and eyes, as well as pictures and biometric data such as fingerprints, if they are available. **RNs also mention the crime(s)** they are wanted for.
- An **RN is published by Interpol** at the request of a member country. The fugitives may be wanted for prosecution or to serve a sentence. The country issuing the request need not be the **home country of the fugitive**; Interpol acts on the request of a country where the alleged crime has been committed.
- As of 12 October 2022, the Interpol website contained a list of **7,135 public RNs** in circulation. The **number of valid RNs** which are not public is several times more. These RNs are restricted for use by law enforcement authorities only. An RN is published on Interpol’s website only in cases where the help of the public is needed to locate an individual, or if those individuals pose a threat to public safety.

Is an RN a warrant of arrest?

- An **RN is only an international wanted persons’ notice**; it is not an **international arrest warrant**. Interpol itself does not want individuals; they are wanted by a country or an international tribunal.
- This means the **Interpol cannot compel law enforcement authorities** in any country to arrest the subject of an RN. It is up to individual member countries to decide what legal value to give to an RN, and the authority of their national law enforcement officers to make arrests.
- The Interpol says that an **RN must comply with its constitution and rules**. It says on its website that “**every Red Notice request is checked by a specialised task force to ensure it is compliant with (Interpol) rules**”.
- The Interpol argues that an RN is issued only after a competent court has taken cognisance of a chargesheet against the fugitive.

What is SFJ?

- Fringe organisation SFJ, run by a few radical Sikhs of foreign nationality in the US, Canada, the UK, etc, was declared unlawful under the provisions of Section 3(1) of the Unlawful Activities (Prevention) Act, 1967. The group has recently been in news for increasing activities and gaining publicity in Canada which has a sizable Sikh and Punjabi population.
- On September 19 this year, over a lakh Canadian Sikhs took part in voting for the Khalistan Referendum in Brampton, Ontario organised by SFJ. Visuals that have since gone viral on social media depicted men and women queueing up in large numbers to vote for the Referendum.
- Recently, The BAPS Swaminarayan Mandir in Toronto was vandalised by 'Canadian Khalistani extremists', one among series of attacks or vandalism incidents involving pro-Khalistani elements in the past few months.

Why India is seeking a red notice against Pannun?

- Multiple agencies have filed cases against Pannun who has been declared as an "individual terrorist" under the fourth schedule of UAPA (Unlawful Activities Prevention Amendment Act).
- Earlier in May, Pannun had been accused of being the perpetrator behind the pro-Khalistani banners and graffiti that appeared on the Himachal Pradesh Legislative Assembly building in Dharamshala.
- The Centre by its July 10, 2019 notification had declared SFJ unlawful association and had banned it for five years, saying the group's primary objective was to establish an "independent and sovereign country" in Punjab and it openly espouses the cause of Khalistan and in that process, challenges the sovereignty and territorial integrity of India.
- This was later upheld by a Unlawful Activities (Prevention) Act tribunal headed by Delhi High Court Chief Justice D N Patel.
- India had on September 23 issued an advisory for Indian nationals and students in Canada to remain vigilant amid increasing incidents of crimes and anti-India activities in the country.

Official Language Committee's Recommendations

Official Language Committee

- The Official Language Committee, headed by the Union Home Minister, was set up to review and promote the use of Hindi language in official communication, as mandated by Article 351 of the Indian Constitution. It was constituted in 1976 under Section 4 of The Official Languages Act, 1963. The first report of the Committee was submitted in 1987.
- The essence of the Official Languages Act, 1963, is to provide something to each of the differing groups to meet its objections and safeguard its position. Whenever the parties in the State see any attempt to disturb this status quo, their reaction is always uniform — a virulent opposition.

Recommendations

- The committee recommended using Hindi as a medium of instruction in IITs, IIMs and central universities in Hindi-speaking states.
- High Courts in non-Hindi speaking states, where proceedings are recorded in English or a regional language, must make translations available in Hindi since they are often cited in judgements.
- Government officials and other employees in the central government not using Hindi in Hindi-speaking states will face consequences in the Annual Performance Assessment Report (APAR).
- If imposed, these rules will be applicable only in states where Hindi is the official language.
- States like Tamil Nadu and Kerala are exempted under The Official Languages Act, 1963 and the Rules and Regulations (of the Act), 1976.
- According to the rules, Hindi is official language in A category states, which include Bihar, Haryana, Himachal Pradesh, Madhya Pradesh, Chhattisgarh, Jharkhand, Uttarakhand, Rajasthan, and Uttar Pradesh, and the UTs of Delhi and Andaman and Nicobar Islands.
- Category B states, where Hindi is used less than 65 per cent, include Gujarat, Maharashtra, and Punjab, and the Union Territories of Chandigarh, Daman and Diu and Dadra and Nagar Haveli.
- Category C states are those where the use of Hindi is less than 65 per cent.

- The Committee suggests fully using Hindi as a medium of communication in A category states, while other states can use regional languages.
- Its ultimate aim is to minimize the usage of the English language in official communication and increase the usage of Hindi.

Government's Effort to Promote Hindi and Other Regional Language

- **Three-Language Formula (Kothari Commission 1968)**
 - **First language:** It will be the **mother tongue** or regional language.
 - **Second language:** In **Hindi** speaking states, it will be other modern Indian languages or English. In non-Hindi speaking states, it will be Hindi or English.
 - **Third Language:** In Hindi speaking states, it will be **English or a modern Indian** In the non-Hindi speaking state, it will be **English or a modern Indian language.**
- The new **National Education Policy (NEP) in 2020** too had attempts to “promote Hindi, Sanskrit” and regional languages. The **NEP says that mother tongue or the regional language would be the “preferred” mode of instruction until Class 5, and possibly Class 8.**
 - **NEP 2020 it was decided to push for the three-language formula, to promote multilingualism and national unity.**

Position of Hindi in India with respect to other Regional Languages

- **As per, 2011 Linguistic census:** there are 121 mother tongues in India.
 - 8 crores individuals or 43.6% population declared Hindi as its mother tongue and 11% of the population reported Hindi as their second language.
 - So, 55% of the population knows Hindi as either as mother tongue or as their second language.
 - Bengali 9.72 crore individual and 8% population, as 2nd most spoken language in India.
 - The share of the languages like Bengali, Malayalam and Urdu has declined but Hindi and Punjabi speakers have increased.

- Between 1971 to 2011 the speakers of Hindi multiplied by the 2.6 times from 20.2 Crore to 52.8 crores.

Constitutional Status of Hindi

- **Schedule 8** of the Indian Constitution has 22 Official Languages, **including Hindi as well.**
- **Article 351** states that, it is the duty of the Union to **encourage the spread of the Hindi language** to make it lingua franca (a shared language of communication used by people who are speakers of different languages) in India without interfering with its genius, style and expressions.
- **Article 348 (2)** provides that the Governor of the State may, with the previous consent of the President, authorize the use of the **Hindi language** or any other language used for **any official purpose of the State, in the proceedings of the High Court** having its principal seat in that State provided that **decrees, judgments or orders passed by such High Courts shall be in English.**
- As per **Article 343(1)** of the Constitution of India, **Hindi in Devanagari script shall be the official language of the Union.**
- The **Official Language Act, 1963** provides under **Section 7** that the use of Hindi or official language of a State in addition to the English language may be authorized, with the consent of the President of India, by the Governor of the State for the purpose of judgments, decrees etc. made by the High Court for that State.

The landmark Bijoe Emmanuel case cited by SC judge

The Supreme Court delivered a split verdict in the hijab ban case with one of the two judges upholding the Karnataka High Court order on validating the government's ban, and the other set aside the High Court ruling.

Split Verdict

- A split verdict is passed when the Bench cannot decide either by a unanimous decision or by a majority verdict.
- It can only happen when the Bench has an even number of judges.
- In case of a split verdict, the case is heard by a larger Bench.

Differing views



“ The right to express herself by wearing a hijab, stops at the school gate... Freedom of expression guaranteed under Article 19(1)(a) does not extend to the wearing of headscarf

**JUSTICE HEMANT
GUPTA**



“ Wearing a hijab should be simply a matter of choice. It may be the only way her conservative family will permit her to go to school, and in those cases, her hijab is her ticket to education

**JUSTICE SUDHANSHU
DHULIA**

Religious freedom protected under the Constitution

- The Preamble of the Constitution states that India is a secular country.
- **Article 25 to 28** of Part-3 (Fundamental Rights) of the Constitution confers Right to freedom of religion.
- **Article 25(1)** - Guarantees the freedom of conscience and the right freely to profess, practise and propagate religion.

- However, the state can restrict the right for grounds of public order, decency, morality, health and other state interests.
- **Article 26** - Talks about the freedom to manage religious affairs subject to public order, morality and health.
- **Article 27** - States that no person shall be compelled to pay any taxes for the promotion or maintenance of any particular religion.
- **Article 28** - Talks about the freedom as to attendance at religious instruction or religious worship in certain educational institutions.

In **S R Bommai vs Union of India (1994)**, the Supreme Court said that the state should free itself from religious affinity.

Hijab case

- The dispute erupted in Karnataka, when some Muslim students who wanted to wear hijab to classes were denied entry on the grounds that it was a violation of the college's uniform policy.
- The Karnataka government issued an order stating that uniforms must be worn compulsorily where policies exist and no exception can be made for the wearing of the hijab.
- Several educational institutions cited this order and denied entry to Muslim girls wearing the hijab.
- Petitions were filed in the Karnataka High Court on behalf of the aggrieved students.

Karnataka High Court judgement

- The Karnataka High Court made three primary findings in its judgment.
- **Essential practice**- It held that the use of a hijab is not essential to the practice of Islam.
- Thus, the right to freedom of religion was not violated.
- **Right to freedom**- It ruled that there exists no substantive right to freedom of expression or privacy inside a classroom and, therefore, these rights were not at stake here.
- In High Court's belief, classrooms are "qualified public spaces" where individual rights must give way to the interests of "general discipline and decorum".

- **State discrimination-** It held that the ban did not stem directly out of the government's order, which only called for a uniform dress code to be prescribed by the State or school management committees.
- Hence, the law did not discriminate, either directly or indirectly, against Muslim students.

Essential religious practices test

- In ***Bijoe Emmanuel vs State of Kerala (1986)***, students of the Jehovah's Witnesses denomination were allowed to abstain from singing national anthem as it was claimed to contradict their religious faith.
- In 2004, the Supreme Court held that the Ananda Marga sect had no fundamental right to perform **Tandava dance** in public streets, since it did not constitute an essential religious practice of the sect.
- The Supreme Court of Canada in ***Multani case (2006)*** upheld the right of a Sikh student to wear a Kirpan while attending the class, without harming others.
- In 2016, the Supreme Court upheld the discharge of a Muslim airman from the Indian Air Force for **keeping a beard**, distinguishing the case from that of Sikhs who are allowed to keep a beard.

The Essential Practices Doctrine

- The essential practices doctrine owes its existence to B.R. Ambedkar's speech in the Constituent Assembly.
- Ambedkar strived to distinguish "religious" from "secular" by arguing that the state should be allowed to intervene in matters that are connected to religion but are not intrinsically religious.
- In *Shirur Mutt case (1954)*, the Supreme Court held that the term "religion" will cover all rituals and practices integral to a religion.
- The test to determine what is integral is termed the "essential religious practices" test.

Supreme Court judgment

- The Supreme Court delivered a split verdict in the Karnataka hijab case.
- **Support for hijab wearing-** One of the judges held that '**secularity**' meant '**tolerance to diversity**'.
- He said that asking a pre university schoolgirl to take off her hijab at her school gate is an invasion on her privacy and dignity.
- It is violative of the Fundamental Right given to her under **Article 19(1)(a) and 21** of the Constitution of India.
- He referred to submissions that the hijab ban has led to dropout or transfer of students affecting their education.
- He also countered that although school was a public place, it was not correct to draw a parallel between a school and a jail or a military camp.
- **Support for hijab ban-** The other judge said '**secularity**' meant '**uniformity**' and upheld the Karnataka High Court ruling validating the ban on wearing hijab in classrooms.
- He views that hijab would affect the creation of a homogenous group of students and would create a segmented society.
- He rejected the argument that denying students the right to wear a headscarf also denies them the right to attend classes as it is a voluntary act of the students.
- He held that adherence to uniform was a reasonable restriction to free expression that reinforced equality.

Looking ahead

- The judgement results in any questions popping up in the mind of people.
 - Would the same standards that banish a female hijab apply to a turban worn by a male Sikh student?
 - Can government colleges deny education to students who are seen to be violating a uniform code?
 - Is the hijab or even a full covering in any manner violative of the process of imparting education?
 - Can a government committed to female education deny education to those it deems improperly dressed?
 - Should implementation of a dress code be prioritised over imparting education to all that seek it?
- These questions will probably soon engage the attention of a larger bench.

What are kamikaze drones?.

Ukraine's capital region was struck by kamikaze drones. Kamikaze Drones are small unmanned aircraft that are packed with explosives that can be flown directly at a tank or a group of troops that are destroyed when it hits the target and explodes. They are called Switchblade because their bladelike wings spring out on launch. These kamikaze drones are not new, and have also been supplied by the US to Ukraine in its ongoing war with Russia.

Countries possessing such drones: Although the Kamikaze might be the most advanced form of this genre of drones, Russia, China, Israel, Iran and Turkey all have some version of it.

Key Features

1. **Lightweight:** Weighing just five-and-a-half pounds, including its small warhead, the Switchblade can be taken into battle in a backpack and fly up to 7 miles to hit a target.
2. **Difficult to detect:** These small lethal drones are difficult to detect on radar. They can even be programmed to hit targets without human intervention, based on facial recognition.
3. **Can Adjust Blast Radius:** The drone has a feature that allows the operator to adjust the blast radius. So, it can kill the driver of a vehicle but not a

passenger, for example. The weapon can be “waived off” up to two seconds before impact.

4. **Cameras for Centralised View of Area of Operation:** The Switchblade also has cameras that show a target seconds before impact.

INS Arihant launches Submarine Launched Ballistic Missile

SLBM

- The **Submarine Launched Ballistic Missiles (SLBMs), sometimes called the ‘K’ family of missiles**, have been indigenously developed by Defence Research and Development Organisation (DRDO).
- The family is codenamed after Dr APJ Abdul Kalam, the centre figure in India’s missile and space programmes who also served as the 11th President of India.
- Because these missiles are to be **launched from submarines, they are lighter, more compact and stealthier than their land-based counterparts**, the Agni series of missiles which are medium and intercontinental range nuclear capable ballistic assets.
- Part of the K family is the SLBM K-15, which is also called B-05 or Sagarika. It has a range of 750 km.
- India has also developed and successfully tested K-4 missiles from the family, which have a range of 3,500 km.
- The tests conducted were a key step towards ultimately deploying K-4s on the INS Arihant.
- It is also reported that more members of K-family — reportedly carrying the code names K-5 and K-6, with a range of 5,000 km and 6,000 km respectively — are under development.

The Strategic Significance

- The successful user training launch of the SLBM by INS Arihant is significant to prove crew competency and validate the SSBN programme.

- **A robust, survivable and assured retaliatory capability is in keeping with India's 'no first use' commitment.**
- These submarines can not only survive a first strike by the adversary, but can also launch a strike in retaliation, thus achieving '**Credible Nuclear Deterrence**'.
- The development of these capabilities is important in the light of **India's relations with China and Pakistan.**
- China: The PLA Navy currently operates 6 nuclear-powered ballistic missile submarines (SSBNs) and 46 diesel-powered attack submarines (SSs).
- Pakistan: It Navy operates 5 diesel-electric submarines and 3 mini submarines of under 150 tonne displacement.

INS Arihant

- **Launched in 2009** and Commissioned in 2016, **INS Arihant** is **India's first indigenous nuclear powered ballistic missile** capable submarine built under the **secretive Advanced Technology Vessel (ATV) project**, which was initiated in the 1990s.
- INS Arihant and its class of submarines are **classified as 'SSBN'**, which is the hull classification symbol for nuclear powered ballistic missile carrying submarines. While the Navy operates the vessel, the operations of the SLBMs from the SSBN are under the purview of **India's Strategic Forces Command**, which is part of **India's Nuclear Command Authority**.
- In **November 2019**, after **INS Arihant completed its first deterrence patrol**, the government announced the establishment of India's "**survivable nuclear triad**" — the capability of launching **nuclear strikes from land, air and sea platforms**. Then Defence Minister Nirmala Sitharaman had tweeted: "India has achieved completion of her nuclear triad with the first successful deterrence patrol by INS Arihant. This places India in the league of the few countries that can design, construct and operate **Strategic Strike Nuclear Submarines (SSBN)**."
- The **second submarine** in the **Arihant class, SSBN Arighat**, is reported to have been **launched in 2017**, and said to be undergoing sea trials at present. In December last year, UK-based magazine Jane's Defence Weekly reported, citing satellite imagery sources, that India had launched its third Arihant-class submarine.
- In addition, **India operates 15 conventional diesel electric submarines** (classified as SSK), and some more are on the way.

Why does India slam 'methodology' of Global Hunger Index?

- **India** has experienced remarkable economic growth in recent years and **remains one of the fastest growing economies in the world**. However, **hunger and malnutrition** are still areas of concern in spite of many strides.
- While the food security situation is progressively improving, **access to nutritional and balanced food is problematic** for the vulnerable population. India has slipped 6 places and ranked **107, out of 121 countries, in Global Hunger Index (GHI) 2022**. In response the Indian government has raised **methodological concerns**.

Global Hunger Index (GHI)

- In common parlance, hunger refers to discomfort due to a lack of food. However, the **GHI** is not such a simplistic measure **“it captures the multidimensional nature of hunger”**.
- There are **4 measures** it used by GHI:
 - **Undernourishment**: The share of the **population whose caloric intake is insufficient**.
 - This makes up 1/3 of the GHI score.
 - **Child Stunting**: The share of children under the age of 5 **who have low height for their age**, reflecting chronic undernutrition.
 - This makes up 1/6 of the GHI score.
 - **Child Wasting**: The share of children under the age of 5 **who have low weight for their height**, reflecting acute undernutrition.
 - This makes up 1/6 of the GHI score.
 - **Child Mortality**: The share of children who **die before their 5th birthday**, reflecting in part the fatal mix of **inadequate nutrition and unhealthy environments**.
 - This makes up 1/3 of the GHI score.
 - The overall score is placed on a **100-point scale** and a lower score is better.
 - A score between **20 and 34.9 is pegged in the “serious” category and this is where India finds itself with a total score of 29.1. (GHI 22)**

Indian government criticised GHI 2022

- The **Indian government has questioned the methodology of GHI**. There are two major sub-parts to the government's contention:
 - First, that the GHI uses **"an erroneous measure of hunger"**, that **3 out of the 4 variables used are related to children** and cannot be representative of the entire population.
 - Second, that the **4th indicator of GHI**, the proportion of undernourished population is **"based on an opinion poll conducted on a very small sample size of 3000"**, which is **not justified with a country like India** representing one-fifth of the world's population.



Hunger and Malnutrition in India - Causes

- **Poverty Backing Hunger: Poor living conditions** limit the availability of food for children, while **overpopulation, coupled with limited food access**, result in **malnutrition** in children, especially in rural India.
- **Faulty Public Distribution:** There has been a **wide variation in the distribution of food in urban and rural areas**, with **grains being diverted to the open market in order to make a higher profit**, and poor quality grains being sold in ration shops, and the irregular opening of these shops contributing to hunger and malnutrition.

- **Unidentified Hunger:** Due to the **arbitrary nature of the criteria used to determine a household's Below Poverty Line status** and the fact that these criteria vary from state to state, **food consumption has declined significantly due to the inaccurate classification** of above poverty line (APL) and below poverty line (BPL).
 - Besides this, the **poor quality of grains** have further contributed to the problem.
- **Hidden Hunger:** India is experiencing a severe **micronutrient deficiency (also known as hidden hunger)**. There are several causes of this problem, including **poor diet, disease, and a failure to meet micronutrient needs during pregnancy** and lactation.
 - Lack of **adequate knowledge amongst mothers regarding nutrition, breast-feeding and parenting** is another area of concern.
- **Gender Inequality:** Due to patriarchal mindset, **gender inequality places the girl child at a disadvantage** compared to boys and causes them to suffer more since they are last to eat and considered less important.
 - In contrast to boys, **girls are deprived of mid-day meals due to a lack of access to school.**
- **Lack of Immunisation:** Children are neglected when it comes to **preventive care (specifically immunizations)** due to lack of awareness and not given access to health care for diseases due to **affordability issues.**
- **Lack of Audit for Nutritional Programmes:** Although a number of programmes with improving nutrition as their main component are planned in the country, there is **no specific nutritional audit mechanism at local governance level.**

Looking ahead

- **Viewing Nutrition Through Different Lenses: Better nutrition involves more than just food,** it includes health, water, sanitation, gender perspectives, and social norms. Therefore, there is a **need to look forward to comprehensive policy to fill the nutritional gap.**
 - If **Swachh Bharat Abhiyan, Beti Bachao Beti Padhao and nutrition policies like Poshan Abhiyan are interlinked,** India's nutritional situation will undergo holistic changes.
- **Bringing Social Audit Mechanism:** States and Union Territories should compulsorily carry out the **social audit of the mid-day meal scheme in**

every district, with the help of local authorities and simultaneously work on **nutritional awareness**.

- Use of **information technology** to improve program monitoring can be thought of too.
- **Re-orienting PDS**: There is a need to be re-orient and an up-scale **Public Distribution System** to make it more transparent and reliable and ensure **availability, accessibility and affordability of nutritious food**, also making a positive impact on the purchasing power of the lower socio-economic segment of the population
- **Agriculture-Nutrition Corridor**: Currently, India's **nutritional hubs (villages) are the most deprived of adequate nutrition**, there is a need to devise mechanisms to check **"Nutritional security of villages"** in line with **agricultural-commerce**.
 - Recognising the importance of this link, the **Ministry for Women and Child Development** launched the **Bharatiya Poshan Krishi Kosh in 2019**.
- **Women-led SDG Mission**: There is a need to redesign existing **direct nutrition programs** and linking it with **women's self-help groups** can make India realise the **Sustainable Development Goal- 2** to end hunger and all forms of malnutrition by 2030.
- **Reducing Waste, Reducing Hunger**: India wastes about **7% of its total annual food production** and almost 30% of the fruits and vegetables because of **inadequate warehousing facilities and cold storages**.
 - According to the **International Institute of Refrigeration**, if developing countries had the same level of refrigeration infrastructure as developed countries, they would save **200 million tonnes of food or around 14% of their food supply**, which can help in tackling hunger and malnutrition.

What is Uttarakhand's revenue police system?.

- In the wake of the murder of 19-year-old **Ankita Bhandari**, allegedly by her employer **Pulkit Arya**, the demand to replace the **'Revenue Police' system** in Uttarakhand has once again gained ground. In the murder case, there are

allegations of the **revenue police not registering a complaint in time** and even siding with the accused.

- **Ankita Bhandari** was killed on the night of 18 September 2022. The accused then informed the **local Patwari** (as the area falls under revenue police jurisdiction) about her disappearance but no case was registered. Patwari Vaibhav Pratap did not inform anyone about the case and went on leave. After the matter came to the limelight, the case was transferred to the **regular police** on 22 September 2022 and three accused, including Arya, were arrested for murder.
- **Patwari Pratap** was suspended and later arrested by the **Special Investigation Team (SIT)** probing the case, for negligence and on suspicion of siding with the accused.
- After the case, Uttarakhand Assembly Speaker **Ritu Khanduri** wrote to CM Pushkar Singh Dhami, requesting him to end the revenue police system. The state cabinet has now given its nod to a **proposal to replace the system with the regular police**.
- Although the **regular police force exists in Uttarakhand**, its jurisdiction does not extend to several hilly areas. At present, the **revenue police jurisdiction covers over 50 per cent of the state** in terms of area, and **about 25 per cent of the population**.
- Uttarakhand is the only the state in the country where nearly 60 % of the area is still under revenue police, a system introduced by the British in 1861, in which revenue officials act as cops with the right to arrest an accused and investigate cases.

The Revenue Police system

- The **system of revenue police** was brought **by the British over a century ago** when crime in the hilly areas was low. The motive was to save money and resources by not deploying regular police.
- Under the **unique revenue police system**, civil officials of the revenue department have the powers and functions of the regular police. Whenever a crime takes place, the **revenue police of the area files an FIR**, investigates the case, arrests the accused and also files a chargesheet in the local court.
- **In case of heinous crimes** like murder, rape, or crimes against Scheduled Castes (SC) and Scheduled Tribes (ST), the case is **transferred to the regular police**. The process, however, takes days or sometimes months, as the revenue police first forwards the information to the district

Superintendent of Police (SP), and the SP will hand over the case to a regular police station. Often, the delay causes the disappearance of crucial evidence or weakens the case in other ways.

- In other states, the **core function of revenue officials is to maintain land, cultivation and revenue records of villages**, and collect revenues on behalf of the government. The revenue officials like patwari and kanungo compile data on crop production, perform election-related duties, and collect census and literacy data. They are also given the duty of implementing government schemes and preparing birth, death, and caste certificates.

History of Revenue Police

- In the 1800s, the **rulers of Tehri lost their territories to Gurkhas**. They requested the British to oust the Gurkhas from Garhwal and promised to pay in return. However, after the war, they could not pay up and in exchange, the British kept the western part of Garhwal.
- In the year 1815, the **British ousted the Gurkhas** and as per the **famous treaty of Saigauli**, the **river Kali became the international border of the British India and Nepal**. As the British wanted the natural resources and minerals found in present-day Uttarakhand for revenue, they put in place a revenue system with the posts of patwari, kanungo, lekhpal, etc , common in the Mughal administration. However, they realised that the hills saw little crime, and it was decided unofficially that no special police was required except in towns like **Almora, Ranikhet, and Nainital**.
- **After 1857, the British Police Act 1861 came into existence**. It now became necessary to give the **revenue police system a legal basis**. In 1874, the Scheduled Districts Act came into force. One of the objects of this Act was to make special provisions for such parts of British India which due to their distinct geographical, demographical and socio-economic features were never brought under the general laws.
- Under this, the **patwari was given the power of a station officer of police**. His supervisory officer was confirmed to be the kanungo. The practice continued even after Independence.
- **Seven years after Uttarakhand was carved out of Uttar Pradesh**, the **Uttarakhand Police Act replaced the Act of 1861**. However, in the hill parts of the state, revenue officials continue to have the powers and functions of the police officer.

Problems with the revenue police system

- **Advocating the need to end the revenue police system**, a **retired IPS officer** who served both in Uttar Pradesh and Uttarakhand said the revenue police system has become obsolete in times when crime has become global.
- The **biggest problem with the revenue police**, he said, is the fact that revenue officials are given the **additional task of policing with none to minimal training**.
- “One of the major tasks of the police, along with **investigating and solving a crime**, is to **prevent criminal activities**. The prevention of crime, either by collecting intelligence or creating a fear of law and order, cannot be done by the revenue officials. In investigations, they sometimes take days or months to transfer cases and all evidence is gone by then. Being a border state, **Uttarakhand is very important from a strategic point of view**. In this scenario, the existence of revenue police brings major threats,” he said.
- Also, in a tourist state like **Uttarakhand**, problems arise when a case is connected to other states. Coordination with other districts or states, which the regular police can do, is difficult for the revenue police. They also have a constraint when seeking forensic help.
- **In the case of regular police**, there is a **hierarchy**. Based on the seriousness of a criminal case, an official ranging from a **Sub-Inspector (SI) to a Deputy SP** can take over. However, in the case of the revenue police, **the patwari is the highest investigation officer**.
- Also, **revenue police officers do not fall under the Police-Forces (Restriction of Rights) Act**, which restricts certain rights conferred by the Constitution to the members of the forces charged with the maintenance of public order. This is to ensure proper discharge of their duties and the maintenance of discipline. Thus, on several occasions, revenue officials have gone on strike from policing duties, demanding adequate resources or freeing them from policing responsibilities.

The plans and the challenges

- The **Uttarakhand High Court**, in a **landmark judgment in 2018**, ordered the state government to abolish the “**century-old practice**” of the revenue police system.
- “...more than a century old practice of the revenue police system... in many parts of the state of Uttarakhand is ordered to be abolished within six

months,” the order stated. The court order came in the backdrop of a woman’s alleged killing by her in-laws for dowry in 2011 in a village in the Tehri Garhwal district, which comes under the revenue police system.

- **However, the state challenged the matter in a higher court.**
- Earlier this month, **after the Ankita Bhandari murder case**, the state cabinet gave its nod to a proposal to replace the revenue police system in the state with regular police. The plan is to be implemented in a phase-wise manner. In the first phase, the area of existing police stations and police outposts will be increased.
- In addition to that, permission has been **granted to six new police stations and 20 police outposts in areas** where there is a rise in **tourism and commercial activities**.
- A **former police officer in the state welcomed the decision**, but said that doing away with the **revenue police system will not be an easy task**. “Many people have a vested interest in letting this continue. In areas under the jurisdiction of revenue police, the fear of police isn’t there and it allows several illegal activities,” he said, mentioning past incidents when violent protests were held after the government transferred areas from revenue police to normal police.

Securing India’s cyberspace from quantum techniques

- **Unprecedented growth in technology has blurred boundaries** by connecting people and transforming governance. The **Digital India Programme** launched by the Government of India, which aims to provide **government services digitally and promote digital literacy**, is driving this transformation by building world-class digital infrastructure for the country.
- However, there exist gaps **which can be exploited by the adversaries and deprive us of the benefits of digital technologies**. Cyber adversaries are becoming more sophisticated and resourceful. Among more than 100 countries that were hit by **WannaCry (an advanced ransomware attack)**, **India was the third worst affected**.
- **With technology protocols still being developed** and evolving at a gradual pace, **it is very difficult to avoid such cyber-attacks** and considering the fact that India is moving towards a digitised life where the existence will highly

depend on elements like **cloud computing, 5G in telecom, e-Commerce and quantum technology** it is **imperative to keep a check on loose ends.**

Glossary of Cyber Threats

- **Clickjacking:** Act of **tempting internet users to click links containing malicious software** or unknowingly share private information on social media sites.
- **Denial of Service (DOS) Attack:** The deliberate act of **overloading a particular service like website** from multiple computers and routes with the aim of disrupting that service.
- **Man in Middle Attack:** In this kind of attack, the **messages between two parties are intercepted during transit.**
- **Ransomware:** It is a form of malware which first **hijacks a computer's data and thereafter posts a message demanding money** (usually in the form of bitcoins) to restore it.
- **Spyware:** Malware that **secretly monitors a user's computer**
- **Zero Day Vulnerability:** A zero-day vulnerability is a flaw in the machine/network's operating system or application software which has not been fixed by the developer and **can be exploited by a hacker who is aware of it.**

Challenges Related to India's Cyber-Space

- **Internet Polarisation:** Currently there are **no common rules and norms that govern the internet;** therefore, it enables the **illegitimate prioritisation of some websites over others** through **ad-based technology**, forcing viewers to browse and **deteriorating internet democracy.**
- **Multiplying Capacity, Adding Vulnerability:** **Artificial Intelligence (AI)** along with advances in new generation provide us with immense power to redefine and restructure lives.

- **AI is capable of producing autonomous lethal weapon systems** that can kill and destroy lives and targets without any human interference.
- Vulnerability to illegal activities ranging from **selling drugs, fake currency and intellectual property thefts** also **posing major concern to national security**.
- **Global Threat of Cyber Warfare and Internet Battlefields: Data has become a new "oil" for the world, which can be used to ignite cyberwarfare at any time.** All the major power centres in the world are converting their cyberspace into a warfare-ready domain.
 - The **Internet** is at high risk of potentially being used as an **intelligence gathering platform**.
- **Inter-Dependent Cyberspace:** The supply chains are increasingly increasingly, **personal data-based platforms are taking centre stage**. This makes a **company's security wall thin**, and **data breaches are becoming more common**.
- **China's Quantum Lead:** China's quantum advances expand the **spectre of quantum cyberattacks against India's digital infrastructure**, which already faces a barrage of attacks from Chinese state-sponsored hackers.
 - **India's dependence on foreign, particularly Chinese hardware**, is an additional vulnerability.
- **No Legal Backing for Internet of Things (IoT):** With the **Internet of Things** now becoming the backbone of modern ventures, organisations and even basic ways of living, it is worrying that **India has no dedicated law for IoT**.
- **Rising Fake News Concern:** Increasing **access to free information online**, either through news-based apps and services or messages forwarded via **social media** platforms, also known as **internet intermediaries**, has resulted in the rise of fake news with often grave consequences in the real world.
 - **Lack of awareness and digital illiteracy** makes them even more vulnerable.

Government Initiatives for Cyber Security

- **National Cyber Security Policy, 2013**
- **National Cyber Security Coordination Centre (NCCC)**
- **Cyber Swachhta Kendra**

- **Indian Computer Emergency Response Team (Cert-In)**

Looking ahead

- **Quantum-Resistant system:**With traditional internet models at risk and considering the **increasing potential of military applications of quantum technology**, the deployment of **“quantum-resistant” systems in India** is the **need of the hour**.
 - The **Union Budget 2020-21** had proposed to spend Rs 8,000 crore on the newly launched **National Mission on Quantum Technologies and Applications** is a **welcome step in this direction**.
- **Towards Techno-Diplomacy:**India needs to strengthen its diplomatic **partnerships with other “techno-democracies” countries** and advanced economies **to pool in the ideas and resources** for tackling emerging **cross border cyber threats and move towards secured global cyberspace**.
- **Linking Cooperative Federalism with Cybersecurity:**State Lists include police and public order, and therefore, states must ensure that police are well equipped to deal with cybercrime.
 - In addition, **since the IT Act and major laws are centrally enacted, the central government can look forward to developing uniform statutory procedures** for law enforcement agencies.
 - Also, the centre and states must commit adequate funds to develop much-needed cyber infrastructure.
- **Enhancing Cyber Forensic Laboratories:**In order to keep pace with new technologies, cyber forensic laboratories need to be upgraded.
 - The **National Cyber Forensic Laboratory and the Cyber Prevention, Awareness and Detection Centre (CyPAD)** initiative of the Delhi Police are good examples.
- **Blending Ethical Values with Cybersecurity:**Technology has reached a stage where we need **global understanding and commonality of ethics and morality**, for more judicious use of cyber resources for individual and global good.
- **Filling the Infrastructural Gaps:** There is need to **expand India’s cyberspace by filling the physical infrastructural gaps** and move towards **cyber-inclusion amalgamated with cyber-security measures**.
- **Cyber-Awareness Campaign:**In a world of **e-governance, where government is becoming e-government, citizens are being e-citizens**, there is need to make strides to promote **cyber-awareness among citizens**,

including **safe online transactions and not sharing personal information with unauthentic websites.**

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Stubble Burning, Pollution, And Politics

The **Green Revolution** transformed the way agriculture was practised in India, **especially in Punjab and Haryana**. The economics of high-yielding varieties of paddy and wheat, supported by a guaranteed buyer (the government) and **minimum support prices led to a crop duopoly, and vitalised the practice of stubble burning.**

According to an **official report**, more than **500 million tonnes of parali (crop residues) is produced annually in the country**, cereal crops (rice, wheat, maize and millets) account for 70% of the total **crop residue**.

Stubble burning begins around **October and peaks in November, coinciding with the withdrawal of southwest monsoon.**

The **prevention of stubble burning is not guaranteed by only banning and punishing the farmers**. In order to prevent this from happening in the future, **there needs to be a permanent and effective solution.**

- The Indian farmers have been practising stubble burning for decades now and multiple factors lead to it. Some of them are:
 - One factor is being a **cheaper way to get rid of crop debris**.
 - Another is the boom of **Mechanised Harvesting**, which leaves behind **1- 2ft tall stubble which takes around 1.5 months to decompose on its own.**
 - However, **farmers do not have sufficient time as they need the soil prepared for the next crop**,so instead of waiting for the residue to decompose they burn it.

Issues Associated with Stubble Burning in India

- **Environmental Degradation:**Stubble burning **emits toxic pollutants** in the atmosphere containing harmful gases like **Carbon Monoxide (CO), methane (CH₄), carcinogenic polycyclic aromatic hydrocarbons, volatile organic compounds (VOC).**
 - These pollutants disperse in the surroundings and **eventually affect air quality and people's health by forming a thick blanket of smog.**This is one of the primary causes of **Delhi's air pollution.**
- **Soil at Risk:**Soil becomes **less fertile, and its nutrients are destroyed** when the husk is burned on the ground. It **generates heat that penetrates into the soil,** causing an increase in **erosion, loss of useful microbes and moisture.**
 - Due to the **loss of 'friendly' pests, the wrath of 'enemy' pests has increased**and as a result, **crops are more prone to disease.** The solubility capacity of the upper layers of soil have also been reduced.
- **Climate Change Induced Stubble Burning:**The **shortened harvesting season due to climate change** has forced the farmers to **rapidly clear their fields between the kharif and rabi crops,** and the quickest of these ways is to burn off the remaining stubble post-harvest.
- **Increased Backing, Increased Burning:**Policy moves in subsequent decades has included the introduction of **subsidies for electricity and fertilisers, and ease of access for credit in agriculture** has significantly increased the crop yields and agricultural productivity, that has in turn **cemented the issue of stubble burning.**

Chhattisgarh Model of Stubble Utilisation

- An innovative experiment has been undertaken by the **Chhattisgarh government by setting up gauthans.**
- **A gauthan is a dedicated five-acre plot, held in common by each village,**where all the **unused stubble is collected through parali daan (people's donations)** and is **converted into organic fertiliser** by mixing with cow dung and few natural enzymes.
 - This scheme has also **generated employment among rural youth.**

Politics

- Production of rice in large swathes of areas surrounding the NCR is largely a Green Revolution phenomenon after the mid-1960s. The Green Revolution, as we know, was intended to somehow achieve self-sufficiency in food grain production. It was not as important as to which areas the rice production came from. Research on developing high-yielding varieties was biased towards plain areas with higher potential for irrigated agriculture. The technology thus developed was not scale-neutral. More so, unlike in the traditional paddy-growing areas in eastern, southern, and central India where rice is the principal staple food, in Punjab, Haryana, and Western Uttar Pradesh, rice is hardly consumed by the growers. Rice became a commercial cash crop in the newfound granary giving birth to the recurrent stubble burning menace.
- While the country succeeded in achieving the desired objective, there were unintended consequences of large proportions that have persisted over time. Paddy cultivation is water-intensive and requires flooding for irrigation. The fertile plains of areas with rayati settlement system received high investment and heavy subsidies for developing irrigation infrastructure coupled with heavy exploitation of groundwater. Incentivized progressive farmers in these areas started producing paddy with assured market intervention by the State unmindful of their non-rice-consuming habits. Paddy became a commercial crop in Punjab, Haryana, and Western Uttar Pradesh, and the direct beneficiaries were the big farmers.
- **High-yielding paddy developed by scientists and cultivated in these areas is mostly a dwarf variety**, matched well for mechanized harvesting. With hardly any risk of cyclones and floods in the new-found granary for rice, productivity soared with more sunny days during Kharif season and controlled irrigation facilities. Mechanized harvesting left a higher stubble, which became a burden for farmers who had transformed their status from tillers to supervisors and did not like to bear the additional costs of clearing their fields for subsequent sowing during the Rabi season. The easy option was 'stubble burning', a polluting activity.
- Eastern, southern and central India do not suffer from the menace of stubble-burning even when paddy is grown in both Kharif and Rabi seasons. The reasons are not difficult to glean. Rice not being their commercial crop, farmers did not necessarily go for dwarf varieties and excessive farm mechanization. Tall variety paddy not only withstands excessive rains and longer submergence in floodwaters but also gives better overall returns. After harvesting, paddy straw is used for animal feed, besides being the main construction material for thatched houses and roof cover to cool pucca houses. Indeed the returns from by-products almost equal the price of rice, thereby compensating for the higher costs of paddy cultivation. Productivity

of paddy crop being low and risks on account of heavy rains and floods being higher in the traditional paddy-growing coastal and low-lying plains, farmers would stop growing this crop in case of earnings from by-products were not there.

- **Stubble-burning, in a nutshell, is an unintended consequence of the technology developed for the Green Revolution.** The solution, thus, lies in the development of suitable varieties of seeds and harvesting technologies. Crop diversification and production practices are other aspects that require greater attention. At the same time, research scientists and industry leaders need to work harder to develop suitable seed varieties and inexpensive tools for farmers to prevent them from stubble-burning before cheaper Chinese products start flooding our market to handle the concerns of arm-chair environmental activists and newsmakers from the electronic media. Unregulated and excessive use of water, which is offered almost free of cost to farmers, is affecting the soil health by causing salinity, etc. Indiscriminate exploitation of groundwater, heavy usage of chemical fertilizers, and pesticides are causing serious health hazards leading to more deaths than from the Corona pandemic besides polluting and depleting the underground water.
- Polluted ground/river water, as well as food crops including fruits and vegetables, pose much bigger dangers today than air pollution caused by stubble-burning. Administrators, researchers, and farmers need to open their eyes to the pollution building up under the ground and over it, which is the bigger silent killer. The exploitation of groundwater requires stringent regulations. Organic agriculture deserves to be encouraged by offering a higher support price for quality produce. The role of politicians is critically important– they need to understand that a healthy environment is important for a healthy popularity contest.

Looking ahead

- **Post-Harvest Regulation and Incentivisation:** There is a need to replicate the schemes like the **MGNREGA** for **harvesting and composting of stubble burning**, and **regulate** post-harvest management at ground level.
 - The **government can also provide incentives to farmers** who reuse and recycle their stubble.

- **Using Stubble as a Fodder:** Wheat stubble can be used as a fodder for cattles, the **Tudi**, which is made from wheat stubble, is considered to be the **best dry fodder for cattle** because of its nutritional value.
- **Technical Intervention:**
 - **Microbe Pusa:** Several innovative measures have been developed to reduce stubble burning, **The Indian Agricultural Research Institute developed a microbe Pusa**, that **hastens decomposition and converts stubble to compost** within 25 days, **improving soil quality** as a result.
 - **Happy Seeder:** Instead of burning the stubble, a **tractor-mounted machine called the Happy Seeder** can be used that **“cuts and lifts rice straw, sows wheat into the bare soil, and deposits the straw over the sown area as mulch.**
- **Recycling and Reusing Stubble:** Stubble can be recycled to make products including **paper and cardboard**. Also, it can be used as a manure.
 - For example, in **Palla village outside Delhi**, the **Nandi Foundation purchased 800 MT of paddy residue from farmers to turn it into manure.**
 - Crop residue can also be used for various purposes like **charcoal gasification, power generation, as industrial raw material for production of bio-ethanol.**

Understanding DMH-11: what, why and how?

- **Agricultural experiments in India** have a long and dubious record, but **biotechnology** has added a new twist with **genetically modified** crops. The use of genetic engineering tools to **address agricultural vulnerabilities** is not just limited to India. A number of other countries are in line to deploy new genetic modified tools as well.
- **India, USA, Brazil, Argentina and Canada** are **5 top GM growing countries**, together accounting for approx. **90% area of the Genetically Modified cultivation**. While proponents of genetic modification argue that **it has the**

potential to solve India's agricultural productivity problem, opponents point to the **negative implications on environment and human health**.

- It is therefore essential to conduct a more **thorough and comprehensive assessment of Indian agriculture's experiences with genetic modification**.

Genetic Modification

- “Genetic modification” involves **altering the genes of an organism**, be it a plant, animal or microorganism.
- GM technology involves **direct manipulation of DNA** instead of using controlled pollination to alter the desired characteristics.
 - It is one the **approaches to crop improvement**, all of which aim at adding desirable genes and **removing undesirable ones to produce better varieties**.

Regulation of Genetic Modified Crops in India

- In India, the regulation of all activities related to **Genetically modified organisms** and products are regulated by the **Union Ministry of Environment, Forest and Climate Change (MoEFCC)** under the provisions of the **Environment (Protection) Act, 1986**.
 - **Genetic Engineering Appraisal Committee (GEAC)** under MoEFCC is authorised to review, monitor and approve all activities including **import, export, transport, manufacture, use or sale of GMO**.
 - GM foods are also subjected to regulations by the **Food Safety and Standards Authority of India (FSSAI) under the Food Safety and Standards Act, 2006**.
- GEAC recently approved commercial cultivation of **genetically modified mustard**.
 - Before that **Bt cotton** was the only GM crop that was approved for commercial cultivation in 2002.
 - **‘Bt’** is shorthand for **Bacillus thuringiensis**, a bacterium found mainly in the soil that produces proteins toxic to some insects, especially the **cotton bollworm**.

Contributions of Genetic Modification Technique

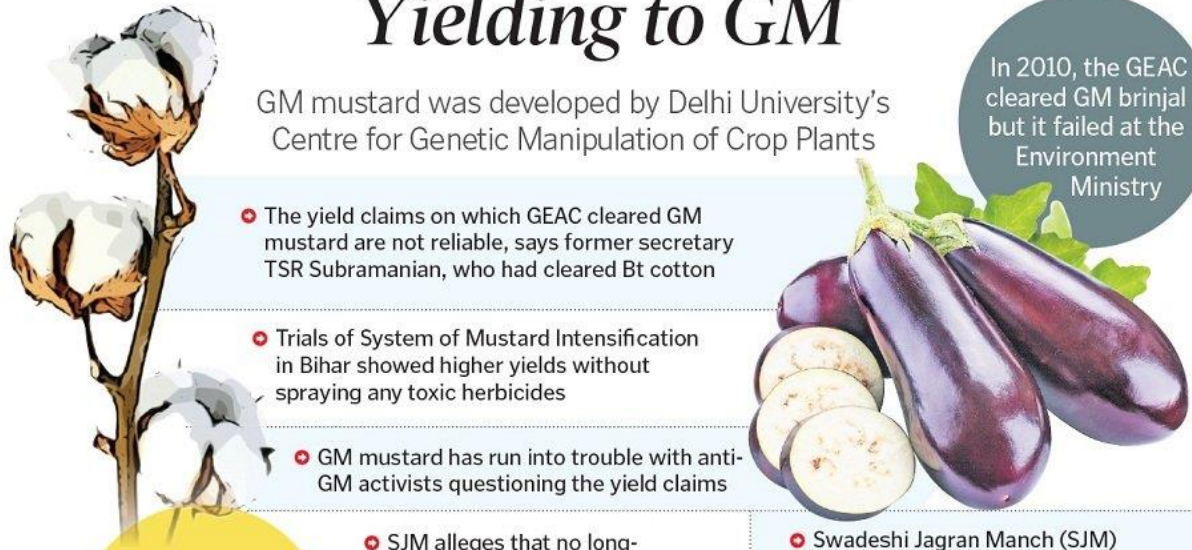
- **Revolutionised Pharma Sector:** GM microbes and plants **revolutionised the production of complex pharmaceuticals** by enabling the generation of safer and cheaper vaccines and therapeutics.
 - Mass production of GM technology based **human insulin, vaccines, growth hormones** and other drugs has greatly facilitated the **availability and access to life saving pharmaceuticals.**
 - **For instance: Human hepatitis B virus vaccine** was prepared using antigen produced by **recombinant technology in yeast**
- **Herbicide Tolerance:** Genetic Modification has played a key role in **herbicide tolerance** and transformed crops to tolerate specific broad-spectrum herbicides, **which kill the surrounding weeds, but leave the cultivated crop intact.**
 - **For example: Soybean, maize, cotton and canola** are modified with herbicide tolerance character.
- **Climate Change Adaptation:** Genetic Modification is already being used to **help the plants adapt to the rapidly changing climate.** Researchers are developing strains of **rice, maize and wheat capable of withstanding longer droughts and wetter monsoon seasons.**
- **Salinity Tolerance:** Scientists have genetically modified plants **to tolerate high levels of salt offering a potential solution to growing food in salty soils.**
 - The researchers inserted a gene to **remove salt present in the form of sodium ions from water** before it reaches the leaves and also adjusts the ionic and osmotic balance of cells in roots.
- **Contributor to Food Security: Genetic Modification** has **improved crop yield, resulting in greater production of the target crop.** Scientists have also engineered pest-resistant crops, **helping local farmers better withstand environmental challenges** that might otherwise wipe out a whole season of produce.
 - **Genetic Modification in microbes** has also significantly contributed to food security for instance the **use of animal-based rennet for cheese production** has been replaced to the **extent of 80-90% by the enzyme chymosin produced by genetically modified microorganisms.**
- **Enhancing Biofuel Production:** A chemical modification was performed on the **crude Jatropha oil (CJO)** with the intention of improving the low thermal and oxidative stability, the **modified jatropha is considered as a viable bio-ethanol feedstock.**

- Additionally, it is giving thrust to the "**National Policy on Biofuels**" which aims for a **20% blend of ethanol in petrol by 2025-26**.

Concerns w.r.t. Genetic Modification

- **Compromising Nutritional Security:** Ironically, some **genetically modified foods have been reported to be void of nutritional value**.
 - As genetic modification tends to **focus more on increasing their** production, prolonging their lifespan, and **detering pests**, the nutritional value of some crops is sometimes compromised.
- **Loss of Indigenous Variety:** Genetically modified production imposes **high risks to the disruption of ecosystem and biodiversity** because the better traits produced from engineering genes can result in the favouring of one organism. **Hence, it can eventually disrupt the natural process of gene flow and** affect the sustainability of indigenous variety.
- **Risk of Allergic Reactions:** Genetically modified food has immense potential of allergic reaction because it is **biologically altered**. The sudden emergence of genetic modification may have a common side effect of allergic reaction for **humans who have adapted to the conventional variety**.
- **Threat to Wildlife:** Altering the genes of plants can also have serious effects on wildlife. For example, **genetically modified plants**, such as **tobacco or rice**, that are used to produce plastic or pharmaceuticals, can endanger **mice or deer who consume crop debris left in the fields after harvesting**.

Yielding to GM



In 2010, the GEAC cleared GM brinjal but it failed at the Environment Ministry

GM mustard was developed by Delhi University's Centre for Genetic Manipulation of Crop Plants

- The yield claims on which GEAC cleared GM mustard are not reliable, says former secretary TSR Subramanian, who had cleared Bt cotton
- Trials of System of Mustard Intensification in Bihar showed higher yields without spraying any toxic herbicides
- GM mustard has run into trouble with anti-GM activists questioning the yield claims
- Swadeshi Jagran Manch (SJM) cited a report by Rapeseed Mustard Research, Bharatpur, to debunk the high yield claims
- The highest yields in mustard are from the five countries which do not grow GM mustard — the UK, France, Poland, Germany and the Czech Republic

Bt cotton, the first GM crop, was approved in 2002

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Looking ahead

- **Towards Bio-Safety:** There is a need to **prevent large-scale loss of biological integrity**, focusing both on **agricultural production as well as plant, animal and human health**.
 - Creation and use of genetically modified crops must be done in collaboration with **stewards of ecosystems** in order to **meet the needs of the environment, local populations, and the wider global community**.
- **Complementing Genetic Modification:** Genetic modifications are not the only solution for food security, it must be combined with improved **farming credit, better use of water** and reducing waste, to create better food options and sustainable crop management.
- **Technical Competency for Effective Regulation:** All regulatory bodies of gm crops, especially the GEAC, should be made technically competent.
 - Specific competence on **Risk Assessment and Risk Management of GM crops** including **Monitoring and Information Systems** skills are the need of hour.

- Also, there is a need to create with immediate effect legally mandated District Level and Panchayat level Committees for **faster documentation, and analysis of GM crops.**
- **Bottom-Up Genetic Modification:** There should be a consultative and participatory process to prioritise crops and traits for genetic improvement through biotechnology with the **goal of addressing the needs of small farmers.**
- **Indigenous Gene Banks:** It is important to preserve the indigenous variety due to its ability to adapt to diseases and nutritional value.
 - **Gene banks** can be created that will **assist various research institutions** in conducting research as well as help in conserving indigenous crops.

Internet Monopolisation

- **Big Tech companies** are transforming **India's digital economy** and society in a multitude of ways. Although tech platforms open up new opportunities for bringing products and services to market, somewhere they also wreak serious real-world harms.
- These companies have been on **the government radar in many countries** for being **big spenders and trying to steamroll competition** by either buying out their rivals or pushing vendors to avoid working with their competitors.
- Recently, the **Competition Commission of India** imposed a penalty of **Rs 1,337.76 crore on Google for "abusing its dominant position" in the Android Mobile Device** ecosystem.
- Considering that **big tech companies transact a large volume of data across the globe**, it is necessary to harmonise, regulate them along with maintaining standards for consumer protection.

Big Tech Companies

- Big Tech collectively describes the **most prolific and prosperous technology companies in today's marketplace** which have inordinate influence on internet users across the globe.
- They are often called the Big Five and include the following companies:
 - **Amazon, Apple, Facebook, Google, and Microsoft**
- At present, **antitrust issues in India** are guided by the **Competition Act, 2002** with the **Competition Commission of India** taking the lead in checking monopolistic practices.
 - Competition Commission of India has raised issues with **Google's commercial flight search option**, its dominant position in the search marketplace.
 - Google was found guilty in 2019 of misusing its dominant position in the mobile Android market to **impose unfair conditions on device manufacturers**.
 - In addition, Google is accused of following a high and unfair commission mechanism for its **Play Store apps**.
 - The government has also proposed amendments to the competition law through the **Competition Amendment Bill, 2022** which is currently under review by **The Parliamentary Standing Committee on Finance**.

Issues Related to Big Tech Companies

- **Internet Monopolisation:** Big tech companies **acquire competitors to buy consumer loyalty instead of earning it**.
 - They **leverage their market power in one line of business to gain monopolies in others**, locking consumers into their ecosystem of products and services.
 - Their consolidated power can also **swing elections and change the political mood of a nation**.
- **Invasion of Privacy:** When a person searches for a product online, the ads related to it appear on almost every internet platform they use. While it has many positive aspects, it has a **massive potential of drastic negative repercussions**.
 - Also, there is a **lack of transparency** in how tech companies process user data, which has made **invasion of privacy a default**.

- **Regulatory Vacuum:** Due to **rapid innovation and advancement by the Big Tech** firms, the **regulators are only able to react, not be in readiness.**
 - These giant platforms maintain that **they are only intermediaries** and therefore, they can't be held liable for the content.
- **Arbitrary Pricing:** In the non-digital arena, **price determination happens through market forces.** However, in the digital space, rules are largely dictated by the large platforms. Consumers are products themselves on these platforms.
 - Concepts like **network effects and winner-takes-all** coupled with **gatekeeping by Big Tech firms** exacerbate the problem.
- **Moral Panic:** Tech platforms are used to **spread disinformation and propagate political polarisation, hate speech,** misogynistic abuse, terrorist propaganda, all things that cause moral panic in general public.

Looking ahead

- **From Ex-Post to Ex-Ante Approach:** There is a need to move towards an **'ex-ante' approach to regulate competition in the digital market economy** instead of the 'ex-post' model followed now.
 - This will **prevent anti-competitive behaviour**, instead of just initiating a probe and penalising after a breach occurs.
- **Regulating Platform-to-Business (P2B) Space:** India must adopt a hard approach towards regulation of the **platform-to-business (P2B) space** in the larger socio-political and **economic interests of small businesses.**
 - Big tech companies enjoy an undeniable monopoly across sectors due to regulatory gaps and consumer loyalty. As **consumers will not easily give up the convenience that this offers**, it is **necessary to create a network of regulatory measures and safeguards centred around them.**
 - To have the greatest impact, **regulation should be sensitive to regional issues.**
 - **Data Management Framework:** The regulatory framework for big tech companies to manage their data can be framed through joint collaboration between **Ministries of Corporate Affairs, Electronics and Information technology, as well as the Competition Commission of India.**

- The government should require BigTech companies to ensure that the **data harvested from consumers will not be used for any purpose other than serving the consumer's interest.**
- **Consumer Awareness:** The government needs to take adequate steps to promote **internet awareness**, such as **checking the authenticity of websites before any transactions are made, and not granting access to unauthorized applications.**

A scan on India's recalibrated free trade agreement strategy

- The **free trade agreements (FTAs)** that India negotiated with the **UK and the EU (European Union)** shows how the trade policy tool is evolving to keep pace with new-age requirements.
- Experts are considering this as an opportunity for introspecting India's approach to FTAs, particularly with the developed countries such as UK, European Union (EU) and Canada.
- **India's FTA strategy** is premised on using these agreements to secure markets for its goods and services.
- However, some of the FTA provisions could actually erode access to these markets.

Old .vs. New

- The **old** FTA agreements were merely **exchanges of Customs duty concessions** between partners, while the new FTAs are considering the strategic requirements of the country.
 - In fact, over the decades, India's FTAs have changed quite dramatically.

- The **recent** agreements go beyond the **exchange of trade concessions** as they are designed to enable a stronger position for India in the **Global Value Chains (GVCs)**.

India signed **10 FTAs** between **1972 & 2011** → Sri Lanka, Bhutan, Nepal, Thailand, other SAARC nations, Singapore, South Korea, Association of Southeast Asian Nations (ASEAN), Japan and Malaysia

Trade agreements signed in 2021 and 2022

<p>India-Mauritius</p> <ul style="list-style-type: none"> Comprehensive Economic Cooperation and Partnership Agreement (CECPA) signed on February 22, 2021 <p>Bilateral trade in 2019-20 \$ 690 MILLION</p>	<p>India-UAE</p> <ul style="list-style-type: none"> Comprehensive Economic Partnership Agreement (CEPA) signed on February 18, 2022 <p>Bilateral trade in 2021-22 \$ 72.8 BILLION</p> <ul style="list-style-type: none"> Trade in services to \$ 15B 	<p>Govt expects CEPA</p> <ul style="list-style-type: none"> To increase trade in goods to \$ 100 B in 5 years To create 10 LAKH jobs for Indians 	<p>India-Australia</p> <ul style="list-style-type: none"> Economic Cooperation and Trade Agreement (ECTA) signed on April 2, 2022 <p>Bilateral trade in 2021 \$ 27.5 B</p>
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Agreements for which negotiations launched in 2022

<p>India-UK</p> <ul style="list-style-type: none"> Negotiations for Free Trade Agreement launched on January 13, 2022 Target set for signing agreement: October 24, 2022 <p>Bilateral trade in 2021-22 \$ 16 B</p> <ul style="list-style-type: none"> Govt expects FTA To boost trade to \$ 32 BILLION by 2030 	<p>India-EU</p> <ul style="list-style-type: none"> Negotiations for FTA relaunched on June 18, 2022 in Brussels after 9 years <p>First round of negotiation to start in New Delhi on June 27, 2022</p> <p>Deadline set for signing: late 2023 or early 2024</p> <p>Trade in 2021-22 \$ 116B</p> <ul style="list-style-type: none"> FTA expected to double trade within 5 years after signing 	<p>Govt expects ECTA</p> <ul style="list-style-type: none"> To boost trade to \$ 100 B by 2030 To create 10LAKH jobs in 4-5 years
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The other expected trade deals

- India-Canada
- India-Israel
- India-GCC (Gulf Cooperation Council)
- India-Oman
- India-Saudi Arabia

Advantages of FTAs

- Reduction in customs duty on goods between signatory countries
- Access to new markets
- Expansion of product basket
- Innovation & competition
- Technology transfer



Why has India not benefited much by earlier FTAs?

Economic Survey of 2016-17 pointed out.

- India has undergone **larger tariff reduction** as compared to the FTA partners.
- Non-tariff barriers, re-routing** of commodities to avail FTA benefit.
- Lack of transparency** in rules of origin certification process.
- Rise in protectionism in **developed countries**.

India's FTA Journey

- **India's FTA journey** started in **1975** with the Bangkok Agreement.
- However, duties were eliminated on substantial tariff lines for the first time in 1998, with the signing of **the India-Sri Lanka FTA**.
- After the **'Look East Policy'** was announced, several agreements were signed with **East Asian** countries.
- However, by 2019, questions were being raised about these FTAs' economic benefits for India.
 - That these agreements **did not in any meaningful way tackle non-tariff barriers**, the benefit to India's FTA trading partners was seen to be more.
- India in 2019 exited the **16-country RCEP (Regional Comprehensive Economic Partnerships)**.
 - Indian believed that the agreement included inadequate safeguards for Indian industries

- Post the withdrawal from **RCEP**, India has started looking at countries from where it can seek Investment, Technology and a potential market for its goods in exchange for access to its markets.
 - Therefore, **FTAs** were signed in quick succession with **Mauritius, the UAE, and Australia**; partners that offer Indian products and services scope for enhanced market access.
- The countries like **UK and Canada** offer many of the factors that India needs to establish a dependable production capability.
- With these **FTAs**, sectors such as gems and jewelry, engineering goods, agro-processed foods, textiles, technology, and financial services are likely to gain.

Major Concerns for India while signing FTAs with developed countries

1. **Undermine domestic manufacturing in India**
 - The provisions in the FTAs with the developed countries like **with the UK and Canada** are likely to shut the doors on **Atmanirbhar Bharat**.
 - This is specifically concerning in the two sectors that are likely to become drivers of economic growth in the near future: **Digital economy and Climate-friendly products**.
 - Mandating almost **unrestricted cross-border data flows** and prohibition on localization of servers might **prevent India from leveraging its huge data**.
 - This would act as hindrance to the advantage for creating a vibrant domestic digital economy for India.
 - The provisions in the existing **FTAs of UK, EU and Canada** are likely to undermine **domestic manufacturing in India**.
 - Reduction in customs duties for facilitating trade in climate-friendly products is likely to threaten the commercial viability of our domestic producers in this sector.
2. **High standards of environmental protection**
 - Another risk to domestic manufacturing arises from the likely commitment to adopt **high standards of environmental protection**, or a move towards harmonization of environmental standards.
 - India has already committed to implementing high standards of environmental protection in its **FTA with the UAE** on a non-binding basis.

- If the domestic producers are unable to adhere to high environmental standards, then they may **not be able to sell even in the domestic market.**
- Provisions in the FTAs are likely to create windows for our **FTA partners** to impose **non-tariff barriers on India's exports.**
 - This will substantially nullify the prospects for enhancing our exports, which might otherwise be available through tariff reductions by our **FTA partners.**
- In a nutshell, the overall impact of the provisions on environment is likely to be that India's path towards a low carbon economy is likely to be driven not by domestic manufacturers, but by imports.
- After joining **the WTO's (World Trade Organization) Information Technology Agreement in 1997**, India brought the **customs duty to zero** which resulted in a severe setback to domestic IT hardware manufacturers.
 - This affected substantially to the country's burgeoning trade deficit.
- 3. **Access to medicines at affordable prices**
- **FTAs** with the developed countries are likely to create another area of concern – access to medicines at affordable prices.
- The past **FTAs** of the developed countries have many provisions that can extend the period of patent protection
 - It further bump-up the windfall profits of these giant patent-based firms.
- If India agrees to similar provisions in the ongoing FTA negotiations, then it would be a huge disservice to the producers of generic medicines.
 - This will also completely undermine Atmanirbhar Bharat in this sector.
- 4. **Changed nature of FTAs from economic objective to geo-political**
- **These agreements** are no longer about trade and economic issues.
 - Instead, they are about creating partnerships with other countries keeping India's difficult geo-political imperatives in mind.
 - If an **FTA** curtails India's economic prospects, it will definitely diminish the country's political weight and stature at the global level.
 - This is likely to further deepen India's strategic problems, and not be an answer to them.
- 5. **No commercial interest**
- The provisions on environment and labor in the **FTAs** are about **promoting societal values of the developed countries** and may not have an underlying commercial interest.
 - Any provision in a trade agreement almost always seeks to pursue economic interests today, or opens windows for them tomorrow.

In the quest for enhancing its exports of goods and services by a few billion dollars through FTAs with the UK, EU and Canada, India faces the risk of compromising its economic prospects, especially in emerging and buoyant sectors of the future. The 'give and take' in these negotiations are likely to see the adverse impacts of the FTAs being stacked much higher than possible gains. The time for an objective introspection is now, keeping the aims of Atmanirbhar Bharat at the forefront. This should be followed by a careful recalibration of India's FTA strategy.

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