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Content

Cleaning up Toxic Air

This editorial is based on Devise holistic plans to clean up toxic air which was published in The Hindustan Times on 30/08/2023. It talks about the issue of rising Air Pollution in Indian cities and a holistic approach towards cleaning toxic air.

Tag: Biodiversity & Environment, GS Paper-3, Environmental Pollution & Degradation.

The noxious mix of vapors in Delhi is **shaving off nearly 12 years from a resident's life expectancy**, a global report has estimated, painting a damning picture of the administrative apathy that led the air to deteriorate year after year, intervening only with stop-gap measures once it literally gets too difficult to breathe. The **Air Quality Life Index 2023 report of the University of Chicago's Energy Policy Institute (EPIC) found that Delhi, Noida and Gurugram were the worst global performers.** In India, the northern plains — home to nearly 40% of the population — were found to be the worst performers with the average resident losing about eight years of life expectancy due to pollution.

What is Air Pollution?

Air pollution is the **contamination of air due to the presence of substances in the atmosphere that are harmful to the health of humans and other living beings**, or cause damage to the climate or to materials. Some of the common air pollutants are:

➢ **Particulate Matter (PM10 and PM2.5)**: These are **tiny solid or liquid particles that are suspended in the air**. They can come from natural sources, such as dust, pollen, and volcanic eruptions, or from human activities, such as burning fossil fuels, wood, and waste, or from industrial processes, such as mining, construction, and agriculture.
  ○ **PM2.5 is more dangerous than PM10** because it can penetrate deeper into the lungs and bloodstream and cause more health problems.

➢ **Ozone (O_3)**: This is a gas that is formed when sunlight reacts with nitrogen oxides and **volatile organic compounds (VOCs)** in the air.
  ○ Ozone can be beneficial or harmful depending on where it is found in the atmosphere.
    ● **In the stratosphere, ozone protects the Earth from harmful ultraviolet (UV) rays** from the sun.
    ● However, **in the troposphere, it is a pollutant** that can cause irritation in the eyes, nose, and throat, damage the lungs, and cause respiratory diseases.

➢ **Nitrogen Dioxide (NO_2)**: This is a gas that is formed when nitrogen oxides (NOx) react with oxygen in the air.

  ○ NO_x are **emitted from combustion processes**, such as motor vehicles, power plants, and industrial boilers.
  ○ NO_2 **can cause respiratory problems**, such as coughing, wheezing, and shortness of breath, and increase the risk of infections and allergies.
  ○ NO_2 also **contributes to the formation of ozone and particulate matter** in the air.

➢ **Carbon Monoxide (CO)**: This is a **colorless, odorless gas** that is **produced by incomplete combustion of carbon-containing fuels**, such as gasoline, diesel, coal, wood, and charcoal.
  ○ CO can **reduce the amount of oxygen that reaches the organs and tissues** of the body, especially the heart and brain.
  ○ CO can **cause headaches, dizziness, nausea, fatigue, confusion, and even death** at high levels of exposure.

➢ **Sulfur Dioxide (SO_2)**: This is a gas that is formed when sulfur-containing fuels, such as coal and oil, are burned.
  ○ SO_2 c**an cause irritation of the eyes, nose, and throat**, coughing, breathing difficulties, and asthma attacks.
  ○ SO_2 also reacts with water vapor and other chemicals in the air to form **acid rain**, which can damage plants, soil , water , and buildings.

➢ **Water Vapor:** Water vapor is the **most abundant greenhouse gas** in the atmosphere, and it plays a key role in regulating Earth's climate.
  ○ However, water vapor is **not a direct pollutant**, because it is part of the natural water cycle.
    ● Water vapor **becomes a pollutant when it interacts with other greenhouse gasses**, such as **carbon dioxide** and **methane**, and amplifies their warming effect.
      ■ This is called the **water vapor feedback loop**.

What are the Primary Causes of Air Pollution in India?

➢ **Vehicular Emissions**: Vehicles are one of the major sources of air pollution in India, especially in urban areas. According to a study by the **Centre for Science and Environment (CSE)**, **vehicles contribute to 40% of PM2.5 emissions in Delhi**, 30% in Mumbai, 28% in Kolkata, and 20% in Bengaluru.

➢ **Industrial Chimney Wastes**: Industries are another major contributor to air pollution in India, especially in the northern and eastern regions.
  ○ According to a report by **Greenpeace India, 139 of the 287 coal-based thermal power plants in India violated the emission norms set by the Ministry of Environment in 2019.**

- These plants emitted sulfur dioxide, **nitrogen oxides**, carbon monoxide, lead, mercury, and VOCs, which can cause **acid rain**, **smog**, climate change, and health problems.

➢ **Burning Fossil Fuels**: Power plants, factories, and households that use coal, oil, or natural gas as fuel also contribute to air pollution in India by emitting greenhouse gasses.

- According to the World Bank Group, **India is the third-largest emitter of CO_2 in the world,** after China and the United States.

➢ **Agricultural Activities**: Farming practices such as burning crop residues, using fertilizers and pesticides, and raising livestock also produce air pollution in India.

- According to a **study by the IIT Delhi, crop burning contributed to 44% of Delhi's PM2.5 concentration** during the peak pollution season in November 2019.
  - Crop burning also emits smoke, dust, ammonia, **methane**, and nitrous oxide into the air.
  - These pollutants can affect soil quality, biodiversity, and human health.

➢ **Indoor Air Pollution**: Cooking with biomass fuels such as wood, dung, or charcoal is another source of air pollution in India, especially in rural areas.

- According to a report by the **World Health Organization (WHO), more than 800 million people in India rely on solid fuels for cooking.**
  - These fuels produce smoke and indoor air pollutants at concentrations five times higher than coal.
  - These pollutants can cause eye irritation, lung infections, **chronic obstructive pulmonary disease (COPD)**, and premature deaths.

➢ **Burning of Garbage Waste**: Many people in India dispose of their household waste by burning it in open spaces. This practice releases toxic chemicals and dioxins into the air, which can cause cancer and other diseases.

- According to a **study by The Energy and Resources Institute (TERI), waste burning contributed to 29% of Delhi's PM10 concentration** during the winter season in 2018.
- Waste burning also emits **black carbon**, which **is a short-lived climate pollutant** that can accelerate global warming.

➢ **Slaughter Industry:** The emission of methane from the digestive processes of ruminant animals such as cows and buffaloes is a significant contributor to greenhouse gas emissions. **Methane has a global warming potential 28 times higher than carbon dioxide over a 100-year period.**

- Additionally, the **decomposition of animal wastes and carcasses releases pollutants like ammonia, hydrogen sulfide, and volatile organic compounds**.
- Another concern is the **burning of animal wastes and carcasses as a disposal method, which releases particulate matter, carbon monoxide, nitrogen oxides**, and other harmful substances into the air.
- According to a report by the **Centre for Science and Environment (CSE)**, India's **slaughter industry generates about 2.7 million tonnes of solid waste and 3.6 billion liters of wastewater per year.**
  - The report also reveals that most **slaughterhouses do not have proper waste management systems or pollution control devices**, and often violate environmental norms and regulations.

What are the Challenges in tackling Air Pollution?

➢ **Weak enforcement** and **compliance** of existing regulations and standards that can prevent or penalize polluting activities.

➢ **Inadequate financing** and **incentives** for adopting clean technologies and practices that can reduce emissions from various sectors.

➢ **Low awareness** and **engagement** of the public and other stakeholders on the causes, effects and solutions of air pollution.

➢ **Lack of capacity** and **expertise** among the relevant institutions and stakeholders that can design, implement and evaluate effective air pollution policies and programs.

➢ **Lack of adaptation** and **resilience** to the changing climatic conditions and extreme weather events that can exacerbate air pollution levels and effects.

➢ **Lack of research** and **innovation** that can generate evidence-based solutions and technologies for air pollution mitigation and adaptation.

➢ **Clean technologies have evolved** rapidly, but financing and regulation lag behind.

➢ **Inefficient transportation systems and poor land use patterns.**

➢ **Presence of many unregulated small-scale industries**, such as brick kilns, metal smelters, foundries, tanneries, etc., that operate without proper environmental permits or controls.

What should be the Way Forward?

➢ **Vertical forests:** Creating skyscrapers covered with vegetation not only helps absorb carbon dioxide and produce oxygen but also provides habitat for biodiversity. They can act as natural air purifiers and contribute to the overall aesthetics of the city.

➤ **Installing Air Purifiers and Smog Towers:** They can filter out airborne particulates and improve air quality. These devices can use various technologies, such as electrostatic precipitation, activated carbon, or **high efficiency particulate air (HEPA) filters**, to capture and remove pollutants from the air.

➤ **Developing and Promoting Low-Carbon Technologies:** Technologies such as solar panels, hydrogen fuel cells or biofuels, wind turbines, biogas plants and electric vehicles that can reduce the dependence on fossil fuels.

  ○ These technologies can also provide clean and renewable energy sources, create green jobs, and mitigate climate change.

➤ **Urban Green Spaces:** Creating urban **green spaces such as parks, gardens and rooftops that can improve air quality, reduce heat island effect and provide recreational benefits**. Urban green spaces can also enhance biodiversity, sequester carbon, and improve the aesthetic appeal of the city.

➤ **Congestion Pricing and Low Emission Zones:** Implementing congestion pricing or low emission zones that can **charge vehicles for entering certain areas of the city or restrict the entry of high-polluting vehicles.**

  ○ These policies can encourage drivers to switch to cleaner vehicles or use public transportation, reducing the traffic congestion and emissions in the city centers.

➤ **Biomass Briquettes/Pellets:** Biomass pellets are **made from agricultural or forest residues**, such as rice husk, sawdust, or bagasse, and can provide a cheap and efficient fuel source for rural households.

➤ **Biomimicry:** Using biomimicry to design **buildings and materials that can mimic natural processes of air purification**, such as the **Eastgate Centre in Zimbabwe** that uses passive cooling inspired by termite mounds.

  ○ Biomimicry can also inspire innovations such as self-cleaning paints, smog-eating concrete, or artificial leaves.

  ○ Biomimicry is a **practice that learns from and mimics the strategies found in nature** to solve human design challenges.

➤ **Supporting Innovative Solutions:** Supporting social enterprises or **start-ups that can provide innovative solutions for air pollution**, such as Graviky Labs, Chakr Innovation, HelpUsGreen, etc.

  ○ Graviky Labs created **Kaalink**. By attaching it to generators and fuel tanks, Kaalink captures pollution and transforms it into usable ink.

➤ **Street Furniture for Pollution Mitigation:** Installing Street furniture to drive away pollution. With urbanization coming into the picture, there is a lack of space to plant more trees.

  ○ Green City Solutions have set up **moss covered tree benches** in significant landmarks in cities across Europe which can suck the pollutants.

➤ **Air Purifying Helmets:** These are **helmets that have a built-in air purifier that can filter out harmful pollutants from the air.** The helmets are designed for bikers who are exposed to high levels of air pollution on the roads. The helmets also have sensors that can monitor the air quality and alert the user when it is unsafe.

  ○ A Delhi-based startup called **Shellios** is testing a prototype of such a helmet.

➤ **Differential Toll Treatment:** This is a **policy that charges higher toll fees for vehicles that emit more pollutants**, such as diesel trucks and old cars. Differential toll treatment **can incentivize drivers to switch to cleaner vehicles** or use public transportation, reducing the traffic congestion and emissions on the roads.

➤ **Hot Lanes:** These are lanes that are **reserved for vehicles that have high occupancy, such as carpooling or public buses**. Hot lanes can encourage people to share rides or use mass transit, reducing the number of vehicles on the roads and the emissions they produce. Hot lanes can also reduce travel time and fuel consumption for the users.

Conclusion

In India, more basic livelihood issues often dominate the electoral discourse, allowing the authorities to escape scrutiny on the pollution front. But **no country has progressed economically without caring for the health of its citizens**. The government needs to take the health hazards of pollution seriously. The first step on this journey would be to delink air action plans from the winter and develop holistic year-long strategies.

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Reducing Fertilizer Subsidy

This editorial is based on Can PRANAM reduce fertiliser subsidy bill? which was published in The Hindu Businessline on 30/08/2023. It talks about the recently launched PM PRANAM Scheme and how promoting the scheme will help the government reduce subsidy bills and fiscal deficits.

Tag: Agriculture, GS Paper-3, Agricultural Resources, Direct & Indirect Farm Subsidies

Union Budget 2023–24 launched the **PM-PRANAM** to promote the balanced use of chemical and alternative fertilizers, generating awareness of regenerative agriculture (RA).

RA is an outcome-based food production system that nurtures and restores soil health, protects the climate and water resources and biodiversity, and enhances farms' productivity and profitability.

What is the PM PRANAM Scheme?

➢ It stands for **PM Programme for Restoration, Awareness, Nourishment, and Amelioration of Mother Earth**.

➢ It **aims to reduce the use of chemical fertilizers** and promote the balanced use of alternative fertilizers .

➢ It will **save the subsidy burden on chemical fertilizers**, which is projected to increase to Rs 2.25 lakh crore in 2022-2023.

➢ It will make Indian agriculture more resilient to the changing climate.

➢ It will **incentivise those states that use less chemical fertilizers** than their average consumption in the last three years.

    ❍ The **states will receive 50% of the subsidy savings as a grant**, which they can use for asset creation, technological adoption, and awareness generation related to alternative fertilizers.

➢ It will **involve the participation of farmers, panchayats, farmer producer organizations** and **self-help groups** that are involved in the reduction of fertilizer use .

➢ It is **in line with the government's focus on promoting green agriculture and sustainable agricultural practices** with environmental concern.

    ❍ It will support the existing initiatives such as **National Mission for Sustainable Agriculture (NMSA)**, **National Initiative on Climate Resilient Agriculture (NICRA)**, and **PM Krishi Sinchaayi Yojna (PMKSY)**.

What are the Issues with Fertilizer Usage in India?

➢ **Imbalance in Fertilizer Use**: India has a **recommended ratio of 4:2:1 for nitrogen (N), phosphorus (P), and potassium (K) fertilizers**, but the actual ratio is much higher for N and lower for P and K. This leads to nutrient deficiencies, soil degradation, and lower crop yields.

    ❍ According to a report by **NITI Aayog**, the average **NPK ratio in India was 8:3:1** in 2015-16, which is far from the recommended ratio of **4:2:1**.

➢ **Excessive Use of Nitrogenous Fertilizers**: **India is the third-largest producer and the second-largest consumer of urea**, a nitrogenous fertilizer. However, excessive use of urea has negative impacts on soil health, water quality, and greenhouse gas emissions. Urea also subsidizes the production of other fertilizers, which creates distortions in the fertilizer market.

➢ **Lack of Domestic Production and Dependence on Imports**: India has limited domestic resources of P and K fertilizers, and **relies heavily on imports from other countries. This makes India vulnerable to fluctuations in global prices and availability of these fertilizers.** Moreover, India has not invested significantly in expanding its domestic fertilizer production capacity since the 1990s.

    ❍ According to the annual report of the Department of Fertilizers, India has a domestic production capacity of **24.66 million metric tons** of P&K fertilizers, which meets only **50%** of the domestic demand.

      ● The rest is met through imports from countries like China, Russia, Morocco, Jordan, and Saudi Arabia.

➢ **Inefficient Distribution and Subsidy System**: India has a complex and costly system of subsidizing fertilizers to farmers, which involves multiple agencies, intermediaries, and leakages. The subsidy system also does not adequately incentivize farmers to use fertilizers efficiently or adopt organic or bio-fertilizers.

    ❍ The fertilizer subsidy has become a sticky item in the expenditure list of the Union Budget. The government has earmarked Rs 1.75 trillion for fertilizer subsidy in the 2023-24 Budget, above a trillion rupees for a fourth year in a row.

    ❍ The dependence on LNG for fertilizer production exposes India to high and volatile global gas prices, and a soaring fertilizer subsidy bill.

      ● The use of LNG in the fertilizer sector was as high as 63% of the total gas consumption in FY 2020-21.

What are the Effects of Improper Utilization of Fertilizers?

➢ **Environmental Pollution:** Excess use of fertilizers causes environmental pollution as their residual and unused amounts will become pollutants for air, water, and soil.

    ❍ **Eutrophication:** Excess use of fertilizers can lead to eutrophication in the water bodies, which is the excessive growth of algae and other aquatic plants that deplete the oxygen level and harm aquatic life.

➢ **Soil degradation:** Continuous use of nitrogenous fertilizer alone can reduce the soil fertility and cause deficiencies of other major and micronutrients. It can also affect the soil microflora and fauna that are essential for maintaining the soil quality.

➢ **Reduced Crop Quality:** Improper fertilizer application can result in the excessive growth of certain plant parts (e.g., leaves and stems) at the expense of reproductive structures (e.g., fruits and grains), leading to reduced crop quality and yield.

➢ **Groundwater Contamination:** Nitrate leaching from overused fertilizers can contaminate groundwater, posing health risks to people who rely on these sources for drinking water. Elevated nitrate levels in drinking water can lead to **methemoglobinemia or "blue baby syndrome."**

➢ **Health Concerns:** Pesticides and herbicides often used in conjunction with fertilizers can pose health risks to farmers and consumers when used improperly or excessively.

➢ **Economic Burden:** Excessive fertilizer use can be economically unsustainable for farmers, as it can increase input costs without corresponding increases in crop yields. This can lead to indebtedness among small and marginal farmers.

➢ **Greenhouse Gas Emissions:** The production and application of synthetic fertilizers contribute to greenhouse gas emissions, particularly nitrous oxide (N_2O), which is a potent greenhouse gas that contributes to climate change.

➢ **Imbalance in Crop Nutrient Uptake:** Inappropriate fertilizer application can result in an imbalance of nutrients in the soil, which can affect the nutrient uptake by crops and may require corrective actions in subsequent growing seasons.

How can the PM PRANAM Scheme help reforming the Fertilizer Regime?

➢ **Reduction in Subsidy Bills:** PM Pranam can contribute to **reducing the government's subsidy bills by promoting alternative or bio-fertilisers**. The government aims to set up 10,000 Bio-Input Resource Centres, creating a national-level micro-fertiliser and pesticide manufacturing network.

   ❍ By supporting the production and adoption of these **bio-fertilisers**, PM Pranam can gradually reduce the financial burden on the government in terms of chemical fertilizer subsidies.

➢ **Fiscal Deficit Control:** Lowering subsidy bills through the promotion of PM Pranam can help in controlling India's fiscal deficit. **Fiscal deficits** can be a significant economic challenge, and reducing subsidies is one way to address this issue.

➢ **Gradual Phase-Out of Chemical Fertiliser Subsidies:** PM Pranam can serve as a catalyst for the gradual phase-out of subsidies on chemical fertilizers. **By providing support and incentives for the adoption of alternative fertilizers, the government can reduce its financial commitment to chemical fertilizer subsidies.**

➢ **Support for Farmer Fertiliser Cooperatives:** PM Pranam can help farmer fertilizer cooperatives scale up their production of biofertilizers. This support can lead to increased economies of scale and a more extensive distribution network for alternative fertilizers.

➢ **Incentivizing Sales and Distribution Networks:** It's important to work out pricing and margin strategies for biofertilizers to incentivize sales and distribution networks. PM Pranam **can facilitate this by providing incentives to cooperatives and businesses involved in biofertilizer production** and distribution.

➢ **Demonstration and Certification:** PM Pranam can support initiatives to demonstrate the effectiveness of alternative fertilizers on farmer fields. This is **crucial for building trust and encouraging farmers to adopt these products**. Certification of these bio-fertilisers can also ensure quality and help farmers or their organizations realize better prices for their produce.

What are Other Governments Initiatives?

➢ **One Nation One Fertilizer (ONOF):** This scheme, also known as **Pradhan Mantri Bhartiya Jan Urvarak Pariyojana (PMBJP)**, was launched in 2022 by the Ministry of Chemicals and Fertilizers. Under this scheme, **all fertilizer manufacturers under the fertilizer subsidy scheme are required to use a single brand and logo for fertilizers**. The brand name is **Bharat** and it covers all types of fertilizers, including urea, DAP, NPK, and MOP.

   ❍ The aim of this scheme is to standardize fertilizer brands across the country, clear up the confusion of farmers regarding the availability and quality of fertilizers, reduce the cost and increase the availability of fertilizers, and save freight subsidy by minimizing cross-country movement of fertilizers.

➢ **Direct Benefit Transfer (DBT):** This system was introduced in 2016 by the Department of Fertilizers to provide subsidy amount to farmers to purchase fertilizers. Under this system, the subsidy is transferred to the fertilizer companies after the sale is made to the farmers through point of sale (PoS) devices installed at retail outlets.

   ❍ The aim of this system is to ensure timely supply of fertilizers, prevent diversion and leakages of subsidy, promote balanced use of fertilizers, and create a transparent and accountable system for subsidy payments.

➢ **Nutrient Based Subsidy (NBS):** This scheme was launched in 2010 by the Department of Fertilizers to provide subsidy on nutrients rather than on products. **Under this scheme, the subsidy rates for nutrients such as nitrogen (N), phosphorus (P), potassium (K), and sulphur (S) are fixed by the government in advance for each financial year.** The manufacturers and importers are free to decide the retail price of their products based on the market conditions.

○ The aim of this scheme is to encourage the production and consumption of complex fertilizers, promote balanced use of NPKS nutrients, reduce the subsidy burden on the government, and induce competition among fertilizer companies.

➤ **Neem Coated Urea (NCU)**: This scheme was launched by the government in 2015 to promote the use of organic urea to preserve soil health and yield better crops. Under this scheme, farmers are only making use of neem coated organic urea to cut down savings by around 10%. The urea that is coated with neem tree seed oil is called neem coated urea.

  ○ The government mandated **all the indigenous and imported urea to be neem coated** to make the urea slow release and difficult to use for non-agricultural purposes.

  ○ The scheme **aims to regulate the use of urea, enhance the availability of nitrogen to the crop, reduce the cost of fertilizer application, prevent wastage and diversion of subsidy**, and decrease soil and water pollution caused by urea.

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India's Role in Food Security

This editorial is based on A CLIMATE QUESTION FOR G20 which was published in The Indian Express on 04/09/2023. It talks about Food Security and how India could help ensure food security for itself and the world as well.

Tag: Agriculture, GS Paper-3, Agricultural Resources, GS Paper - 2, Poverty & Hunger.

Chandrayaan-3's successful landing on the moon, and this quarter's (Q1FY24) GDP growth rate of 7.8%, will bolster India's image as a global leader. **India can showcase not only its scientific prowess in space technologies but also the management of its economy**, which looks set to clock the highest growth rate amongst **G20** countries for two successive years. This will surely be lauded by many, and Prime Minister is likely to announce India's emergence on the global stage during this Amrit Kaal up to 2047, making science and economy deliver for humanity at large under the philosophy of '**Vasudhaiva Kutumbakam**' – One Earth, One Family, One Future.

What is the Status of Food Security Globally?

According to the **World Bank**, **approximately 9.2% of the world's population faced hunger in 2022**, compared with 7.9% in 2019. Moderate or severe food insecurity affected 29.6% of the global population (2.4 billion people) in 2022, with 11.3% being severely food insecure.

In 2023, the **World Food Programme (WFP) estimates that more than 345 million people face high levels of food insecurity**. This is more than double the number in 2020.

Some of the Causes of Food insecurity:

➤ **Russia-Ukraine War: Russia-Ukraine war** has disrupted the Global supply chain. Moreover, following Russia's invasion of Ukraine, trade-related policies imposed by countries have surged. The **global food crisis has been partially made worse by the growing number of food trade restrictions put in place by countries** with a goal of increasing domestic supply and reducing prices.

  ○ As of June, 2023, twenty countries have implemented 27 food export bans, and 10 have implemented 14 export-limiting measures.

➤ **Domestic Inflation:** Domestic food Inflation in many countries have added fuel to the fire and further aggravated the problem of food insecurity in the world. For Example, India has imposed a ban on wheat and rice exports to support its domestic population.

➤ **Climate Variability and Extremes:** Climate change has affected the availability and quality of water, land, and biodiversity, which are essential for food production. It has also altered the patterns and intensity of pests, diseases, and natural disasters, which has reduced crop yields and livestock productivity. **Climate change** has also increased the volatility of food prices and reduced the purchasing power of vulnerable households.

  ○ According to the **Global Report on Food Crises, weather and climate extremes were the primary driver of acute food insecurity in 12 countries in 2021**, affecting nearly 57 million people.

➤ **Economic Slowdowns and Downturns:** They have reduced the income and employment opportunities of poor and marginalized people, who have spent a large share of their income on food. **Economic shocks have also affected the supply and demand of food, leading to higher food prices and lower food quality.** Economic crises have also undermined the provision of public services and social protection, which are crucial for food security and nutrition.

  ○ As per EU Science Hub report, **in 2023, economic shocks are expected to be the main driver of acute food insecurity in 22 countries**. These shocks are expected to affect up to 153.3 million people.

Why is Food Security Crucial?

➤ **Health and Nutrition**: Food security improves the health and well-being of individuals by preventing malnutrition and its associated health problems, such as stunting, cognitive impairment, and disease susceptibility.

○ **Malnutrition** i**s responsible for the death of 3.1 million children a year**, which is nearly half of all deaths in children under the age of 5.

➢ **Economic Stability**: **Food security** enhances the economic stability of individuals and nations by enabling them to be more productive, generate income, and participate in trade. Food insecurity, on the other hand, can reduce productivity and cause economic instability.

○ A study by the **World Bank estimated that the global cost of undernutrition in terms of lost productivity and human capital was USD 3.5 trillion per year.**

➢ **Social Stability**: Food security promotes social stability by preventing food-related conflicts, violence, and migrations. Food insecurity can spark social unrest and instability due to food shortages, price hikes, and unequal access.

○ A report by the United Nations found that food insecurity was a key factor in 58% of the conflicts that occurred between 2017 and 2019.

➢ **Reduced Poverty**: Food security contributes to poverty reduction by allowing people to afford and access nutritious food and invest in other essential needs, such as education and healthcare. These can help them escape the cycle of poverty.

➢ **Environmental Sustainability**: Food security **supports environmental sustainability by encouraging the adoption of climate-smart agricultural practices** that conserve natural resources, protect biodiversity, and mitigate climate change. Unsustainable agricultural practices can damage the environment and threaten food security.

➢ **National Security**: Food security **strengthens national security by ensuring a reliable food supply that is not dependent on external factors**, such as global food prices or supply chain disruptions. Food insecurity can make nations vulnerable to these factors and compromise their sovereignty.

➢ **Human Dignity and Equity**: Food security **respects human dignity and equity by recognizing food as a basic human right that should be accessible to all people** regardless of their socioeconomic status or geographical location. Food insecurity can violate this right and create disparities among people.

○ The **right to food is a legal right that is recognized in the Universal Declaration on Human Rights and the International Covenant on Economic, Social and Cultural Rights (ICESCR).**

➢ **Resilience to Crises**: Food security builds resilience to various crises, such as natural disasters, economic downturns, and pandemics, **by providing adequate food reserves and distribution systems that can cope with these challenges**. Food insecurity can exacerbate the impact of these crises and hinder recovery.

○ Distribution of free foodgrains by the Indian government to the poor and vulnerable during **Covid-19** lockdowns is a fine example of this.

➢ **Sustainable Development**: Food security advances sustainable development by achieving one of its main goals (**Goal 2: Zero Hunger**) and supporting other related goals, such as poverty reduction, good health, gender equality, and environmental sustainability. These goals are interlinked and mutually reinforcing.

How can India help the World ensure Food Security?

➢ **Developing Cost-Effective Technologies:** India has shown the ability to achieve technological marvels at a very minimal cost after the success of **Chandrayaan 3**. Following the same track, it can also develop technologies to help farmers overcome challenges of extreme weather events. It could then share these technologies with other countries of the **Global South**.

○ This is feasible and can be done cost-effectively, provided it's on the government's priority list and there is a time-bound action plan.

➢ **Leveraging Technology for Agri Transformation:** The ultimate goal is to **enhance the efficiency and resilience of agri-value chains and promote digitisation as a catalyst for agricultural transformation**. This can be done through establishment of standardized agricultural data platforms as **digital public goods** and harnessing novel digital technologies to revolutionize the agri-food sector.

○ **Sensor-equipped drips, drones and LEOs (Low Earth Orbits)**, for instance, can be used in agriculture to get "more from less", saving the planet's scarce resources.

➢ **Increasing Investment:** India spends only **0.48% of agri-GDP on agri-R&D**. This needs to be doubled, if the country has to play the role of a leader. Higher investment in agri-R&D, especially **biofortification**. Encouraging research in biofortification and disseminating information on fortified crop varieties to farmers is key to achieving nutritional security.

○ ICAR scientists have already demonstrated that even basic staple crops such as wheat, rice, maize, and millet can be bio-fortified with enhanced iron, zinc, and even **anti-oxidants**.

○ ICAR has created 87 varieties of climate-resistant and nutritious crops. For example, India has released zinc-rich rice and wheat, which can be shared with countries of the Global South.

- ➤ **Establishing a Sustainable Multilateral Trading System:** Strengthening a rules-based, open, predictable, transparent, non-discriminatory, inclusive, equitable and sustainable multilateral trading system is the need of the hour. India should also improve its food systems by strengthening local, regional, and international agri-food value chains. This can lead to affordable and accessible food, agricultural inputs, and products.
  - ❍ A **sustainable multilateral trading system with the WTO at its core, can increase market predictability** and boost business confidence.
- ➤ **Promoting Millets:** India aims to promote millets globally, even among **G20** members, but it requires significant efforts in terms of product innovation and dissemination to make it a staple food like quinoa.
- ➤ **Re-thinking Agri-Policies:** India needs to re-purpose agri-policies to a more environmentally sustainable and nutritious food system. Current policies of open-ended and assured procurement with **Minimum Support Price (MSP)** for say paddy and wheat, coupled with massive subsidies on fertilizers, power, and irrigation, have caused damage to our natural resources, especially soil, water, air, and biodiversity.
- ➤ **Developing a Sustainable Agri Model:** So far, India has not come up with a major move in this direction, nor have the US or China. **G20** countries can come up with a model and time frame to make agriculture less damaging to the planet
  - ❍ Time is running out and the **G20** needs to work closer, faster, and smarter with demonstrable results by 2030 to feed this world and also save the planet, by making it green and clean.

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Decoding One Nation, One Election

This editorial is based on One nation, one election: Better for voter, better for citizen which was published in The Indian Express on 05/09/2023. It talks about the drawbacks associated with the idea of having simultaneous elections for both the Lok Sabha and State Assemblies - an idea mooted by the Union Government.

Tag: Polity, GS Paper - 2, Federalism, Representation of People's Act

One nation, One election is among the critical reforms in the current central government's agenda. In fact, the former President of India, Ram Nath Kovind, in his address to Parliament in January 2018, mentioned this as one of the reforms proposed by the government. He said that

citizens are concerned about frequent elections in one part of the country or another, which adversely impact the economy and development. The Prime Minister has spoken emphatically about the desirability of having one election across the country. Therefore, the idea is not a bolt from the blue.

What is the Central Idea behind One Nation, One Election?

- ➤ The central idea behind **One nation, One election** is to synchronize the timing of Lok Sabha and State Assembly elections across all States to reduce the frequency of polls throughout the country.
- ➤ This concept was the practice till 1967, but it was disrupted due to various reasons such as defections, dismissals, and dissolutions of government.
  - ❍ The cycle was **first broken in 1959** after the Centre invoked **Article 356** to dismiss the then-Kerala government.
  - ❍ Subsequently, due to defections and counter-defections between parties, several Legislative Assemblies dissolved post-1960, which eventually led to separate polls for Lok Sabha and State Assemblies.
  - ❍ Currently, the assembly polls in the States of Arunachal Pradesh, Sikkim, Andhra Pradesh and Odisha are held together with the Lok Sabha elections.
- ➤ The idea of conducting simultaneous elections was **advocated in 1999 by the Law Commission** headed by BP Jeevan Reddy.

What are the Benefits of having One Nation, One Election?

- ➤ **Focused Governance:** It enables the government to concentrate on governance once the elections are over. **Today, there is some election or the other in some part of the country, at least every three months. The entire attention of the country becomes focused on these elections. From the Prime Minister to Union ministers, from chief ministers to ministers to MPs, MLAs and panchayat members** — everyone gets deeply involved with these elections, as nobody wants to lose.
  - ❍ There is a virtual paralysis of administration at various levels in varying degrees. This reflects very badly on India's growth prospects.
- ➤ **Continuity in Policy Decisions:** The **Model Code of Conduct (MCC)** comes to play just after the elections are announced by the **Election Commission (EC)**. No new policy decisions are taken during elections due to the MCC. Therefore, key policy decisions get delayed both at the Centre and in the states and local bodies.

○ Even **when no fresh policy decision is necessary, implementation of ongoing projects gets derailed during election periods** as the political executive as well as government officials would be engaged with election duties, neglecting routine administration.

➢ **Reduced Cost of Elections:** One of the main reasons for political corruption is frequent elections. **An enormous amount of money has to be raised at every election. Election expenses of political parties can be reduced drastically if elections are held simultaneously**. There would be no duplication of fundraising. This would save the public and business community from a lot of pressure for election donations, multiple times.

○ According to a report, during 2019 Lok Sabha Elections, Rs 60, 000 Crores were spent.

○ Furthermore, the expenses incurred by the **EC** can be reduced if elections are held simultaneously.

● Of course, the EC would have to invest a considerable amount of money initially to put in place the necessary infrastructure.

○ Moreover, the **same electoral rolls can be used for all the elections**. This will save a tremendous amount of time and money spent in updating electoral rolls.

● It will also make it easier for the citizens as they would not have to worry about their names missing from electoral rolls once they are enlisted.

➢ **Reduced Deployment of Security Forces:** A large number of police personnel and paramilitary forces are engaged to ensure that elections are conducted peacefully. **This involves massive redeployment, involving huge costs. It also diverts key law enforcement personnel from their critical functions.** Such deployment can be curtailed with simultaneous elections.

➢ **End of Horse Trading:** Holding elections at specific periods **could potentially reduce horse-trading** by elected representatives, which remains a concern even with **anti-defection law** in place. **Holding elections at fixed intervals can make it harder for them to switch parties or form alliances for personal gains**.

➢ **Reduced Freebies and Improved State Finances:** Frequent elections lead to governments taking policy decisions to woo the electorate at every election. Even though **this cannot be stopped fully, the frequency with which governments have to announce freebies will come down**. Frequent elections have led to a situation where many state governments are broke. With a smaller number of elections, their finances could be in better shape.

What are the Challenges associated with ONOE?

➢ **Feasibility: Article 83(2) and 172 of the Constitution** stipulates that the tenure of Lok Sabha and State Assemblies respectively will last for five years unless dissolved earlier and there can be circumstances, as in **Article 356**, wherein assemblies can be dissolved earlier. Therefore, the ONOE plan raises serious questions:

○ What would happen if the Central or State government collapses mid-tenure?

○ Would elections be held again in every State or will the President's rule be imposed?

➢ **Logistical Challenges:** It will pose logistical challenges in terms of availability and security of electronic voting machines, personnel and other resources. EC may face difficulties in managing such a massive exercise.

➢ **Against the Idea of Federalism:** The idea of ONOE does not square with the concept of '**federalism**' as it is established on the notion that the entire nation is "one" contradicting the content of Article 1 which envisages India as a "Union of States".

➢ **Legal Challenges:** The **Law Commission** headed by Justice B. S. Chauhan reported the simultaneous elections are **not feasible within the existing framework of the Constitution.**

○ It said that the Constitution, the **Representation of the People Act 1951 and the Rules of Procedure of Lok Sabha and State Assemblies would require appropriate amendments** to conduct simultaneous polls.

○ The commission also recommended to **receive ratification from at least 50% of the States** which may not be an easy peasy task.

➢ **Overshadowing the Regional interests:** The present form of recurrent elections can be seen as beneficial in a democracy as it allows voters to have their voices heard more frequently. As the underlying issues of national and State polls are different, the present framework prevents the blending of issues, ensuring greater accountability.

○ A 2015 study by the IDFC Institute found "**a 77% chance that the winning political party or alliance will win both the Lok Sabha and Assembly elections in that state when held simultaneously**". - undermining the distinctive demand and needs of each state.

➢ **May Not be so Cost Effective:** Various estimates by the **Election Commission**, **NITI Aayog** show that the **costs of conducting all State and parliamentary elections in a five-year cycle work out to the equivalent of Rs. 10 per voter per year.** The **NITI Aayog** report has also

said that when elections are synchronized, it will cost the equivalent of Rs. 5 per voter per year.

- ○ In the short term, simultaneous elections will increase the costs for deploying far larger numbers of **EVMs and VVPATs**. So, amending the constitution to **save Rs 5 for every voter in a year may not be a good idea.**

➢ **Election Expenses aren't always Bad:** There is economic research to suggest that such election spending by parties and candidates actually benefits the economy and the government's tax revenues by boosting private consumption and serving as a stimulus.

What can be the Way Forward?

➢ **Building consensus** among all political parties and states on the need and feasibility of simultaneous elections. This could be done through dialogue, consultation, and deliberation among various stakeholders.

➢ **Amending the Constitution**, the **Representation of the People Act 1951**, and the Rules of Procedure of Lok Sabha and State Assemblies to enable simultaneous elections.

- ○ This would require a two-thirds majority in both houses of Parliament and ratification by at least half of the states.

➢ **Investing in the infrastructure and technology** required for conducting simultaneous elections, such as **electronic voting machines (EVMs), voter-verified paper audit trail (VVPAT)** machines, polling booths, security personnel, etc.

➢ **Aligning the electoral cycles** of Lok Sabha and State Assemblies **by either extending or curtailing their terms**, as per a one-time constitutional amendment.

➢ **Establishing a legal framework to deal with situations such as** no-confidence motions, premature dissolution of assemblies, hung parliaments, etc., that may arise during simultaneous elections.

- ○ It can be **held twice in a year**, so that if the assembly of any state is dissolved prematurely, the re election can be conducted for that state in the next cycle.

➢ **Creating awareness among the voters** about the benefits and challenges of simultaneous elections, and ensuring that they are able to exercise their franchise without confusion or inconvenience.

Conclusion

The Government should not implement ONOE in a hurry, it should conduct additional study, evaluate the data, and solicit feedback from voters, opposition party leaders, and local parties on how to implement the concept. Hence, let India decide whether it needs "One Nation, One Election" to be implemented or not.

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India and New World Order

This editorial is based on At G20, the end of old multilateralism – and the beginning of a new order which was published in The Indian Express on 05/09/2023. It talks about the decline of the traditional multilateral world order and the emergence of a new one, highlighting India's pivotal role in this transformation.

Tag: International Relations, GS Paper-2, Bilateral Groupings & Agreements, Groupings & Agreements Involving India and/or Affecting India's Interests

It's clear that post-Cold War **multilateralism**, which involves cooperation between multiple countries, has reached a low point both on a global and regional scale. This is evident from the recent East Asia Summit in Jakarta and the **G20** summit in Delhi, which underscore the serious and possibly permanent problems in the previous system of global cooperation.

Post-Cold War multilateralism refers to the period after the end of the Cold War in 1991, when many countries around the world engaged in various forms of cooperation and coordination on issues such as trade, security, human rights, and environmental protection. This was facilitated by the absence of major conflicts between the two superpowers, the United States and the Soviet Union, and their respective allies. The post-Cold War multilateralism was based on liberal principles such as democracy, rule of law, and free markets, and was supported by institutions such as the United Nations, the European Union, the Association of Southeast Asian Nations, and the World Trade Organization.

What is the New World Order?

The new multilateral world order is a term that refers to the emergence of new forms of cooperation and dialogue among different countries and regions in the 21st century. It is a response to the challenges and opportunities posed by **globalization**, climate change, pandemics, terrorism, and other issues that require collective action and shared solutions.

Some of the features of the new multilateral world order are:

➢ The expansion and diversification of the existing multilateral institutions, such as the **UN, the IMF, and the World Bank**, to include more voices and perspectives from the developing world and the **Global South**.

➢ The creation and strengthening of new regional and sub-regional organizations, such as the **BRICS, the African Union, the Association of Southeast Asian Nations, and the European Union**, that aim to promote regional integration, development, security, and cooperation.

➢ The emergence of informal networks and initiatives, such as the Alliance for Multilateralism, the **G20, and the Quad**, that seek to address specific issues or challenges that transcend national boundaries and require coordinated action.

➢ The recognition of the multipolar reality of the world, **where no single country or bloc can dominate or dictate the global agenda**, and where different actors have to engage in dialogue and negotiation to find common ground and mutual benefit.

What are the Reasons behind Decline of Existing Multilateralism?

➢ **Rise of China and its Expansionism:** One of the primary reasons behind the decline of existing multilateralism is the rise of China as a global economic and military power. **China's expansionist policies, both in Asia and globally, challenge the existing multilateral order**. Its unilateral efforts to alter borders with neighbors and its assertive territorial expansionism have created tensions and destabilized regional and global institutions.

➢ **Economic and Security Threats from China:** The economic and security threats posed by China have compelled countries like the United States, Japan, and India to reevaluate their engagement with China. This has led to efforts to de-risk their massive economic interdependence with China, which has implications for existing multilateral economic institutions.

➢ **Russian Actions:** The **Russian occupation and annexation of Ukraine's Crimea in 2014 marked a significant challenge to the post-Cold War security order**, particularly in Europe. This event disrupted multilateralism by causing rifts and conflicts in the international community.

➢ **Contradictions Within the Multilateral System:** The multilateral system itself has **faced internal contradictions and challenge**s. These internal disagreements and conflicting interests among member states have weakened the effectiveness of multilateral organizations and impeded consensus-building.

➢ **Rise of Alternative Security Forums:** In response to China's expansionism, **alternative security forums like the Quad, AUKUS, and trilateral compacts have emerged**. These forums reflect a shift away from traditional multilateral institutions, raising questions about the continuing relevance and centrality of existing regional organizations like **ASEAN**.

➢ **Changing Perspectives of Key Players:** The changing perspectives of key players, such as India, have also contributed to the decline of existing multilateralism. **India's evolving view of the international order, shifting**

from concerns about a **"unipolar Asia" dominated by China to a more proactive engagement with the United States and its allies**, has altered the dynamics of multilateralism in the Indo-Pacific region.

➢ **Global Financial Crisis and Expanding the G7:** The 2008 global financial crisis underscored the need to expand the **Group of Seven (G7)** to include middle powers to restore global economic stability. While this was a positive step toward addressing global challenges, it also highlighted the limitations of the existing multilateral framework.

How can India Shape the New World order?

➢ India can play a **leading role in the Quad and ASEAN**, as well as other regional and sub-regional forums, to promote a free and open Indo-Pacific region that is based on the rule of law, respect for sovereignty, and peaceful resolution of disputes.

  ○ India can also enhance its maritime security cooperation with like-minded countries to counter the challenges posed by China's assertiveness in the region.

➢ India can **contribute to the re-globalisation process** by diversifying its trade and investment partners, especially in the Global South, and by developing its domestic capabilities in key sectors such as manufacturing, services, and innovation.

  ○ India can also **advocate for a more democratic and equitable global governance system** that reflects the realities and aspirations of the emerging economies.

➢ India can **use its hosting of the G20 summit as an opportunity to showcase its vision and achievements as a global leader**, as well as to forge consensus on important issues such as **climate change**, sustainable development, health security, and digital transformation.

➢ India can also **bridge the gap between the developed and developing countries by highlighting their common interests and challenges**, and by proposing solutions that are inclusive and pragmatic.

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Bridging the Malnutrition Gap

This editorial is based on Bridging the malnutrition gap, the Bemetara way which was published in The Hindu on 07/09/2023. It talks about the nutritional gap in India and how to tackle it effectively.

Tag: Social Justice, GS Paper - 2, Issues Related to Children, Issues Related to Women, Government Policies & Interventions.

As India has entered into the **Amrit Kaal (the 25-year-long leadup to India@100)** , there is much to be proud about; significant advances have been made in science, technology, and medicine, adding to the country's ancient, traditional, and civilisational knowledge base, wisdom and wealth.

Still, it is disconcerting that even after seven decades of Independence, India is afflicted by public health issues such as child **malnutrition**. Poor nutrition not only adversely impacts health and survival but also leads to diminished learning capacity, and poor school performance. And in adulthood, it means reduced earnings and increased risks of chronic diseases such as diabetes, hypertension, and obesity.

What is Malnutrition?

➢ **Malnutrition refers to deficiencies or excesses in nutrient intake, imbalance of essential nutrients** or impaired nutrient utilization.

➢ The **double burden of malnutrition consists of both undernutrition and overweight and obesity**, as well as diet-related noncommunicable diseases.

➢ Undernutrition manifests in four broad forms: **wasting**, **stunting**, underweight, and micronutrient deficiencies.

  ○ **Wasting**: It is defined as **low weight-for-height**.

    ● It often indicates recent and severe weight loss, although it can also persist for a long time.

    ● It usually occurs when a person has not had food of adequate quality and quantity and/or they have had frequent or prolonged illnesses.

    ● Wasting in children is associated with a higher risk of death if not treated properly.

  ○ **Stunting:** It is defined as **low height-for-age**.

    ● It is the result of chronic or recurrent undernutrition, usually associated with poverty, poor maternal health and nutrition, frequent illness and/or inappropriate feeding and care in early life.

    ● Stunting prevents children from reaching their physical and cognitive potential.

  ○ **Underweight:** It is defined as **low weight-for-age**.

    ● A child who is underweight may be stunted, wasted or both.

To What Extent is India Affected by the Issue of Malnutrition?

➢ According to Worldometer, **India is the largest contributor** of undernourished people in the world, with around 14.37% of its population not receiving enough nutrition.

➢ As per the Government's **National Family Health Survey 5 (NFHS 5)**:

  ○ 36% of children under age five years are stunted

  ○ 19% are wasted

  ○ 32% are underweight

  ○ 3% are overweight

➢ Anemia, also referred to as low hemoglobin; affects a staggering 67% of children below the age of 5 years.

➢ Anemia is much **more prevalent in women**, as a hefty 57% of Indian Women suffer from it, compared to the relatively low 25% of Men in India (Under 50 years).

➢ Moreover, 19% of Women and 16% of Men under 50 are undernourished, while 24% of Women and 23% of Men are victims of obesity.

  ○ Approximately **40% of the humongous population of 1.4 Billion is malnourished.**

What are the Primary Causes behind prevailing Malnutrition in India?

➢ **Economic Inequality**: Due to the low economic status of some parts of the population, their diet often lacks in both quality and quantity. Poor people often cannot afford nutritious food or have limited access to it. They also face food insecurity due to natural disasters, conflicts, or price fluctuations.

➢ **Lack of Primary Health Infrastructure**: Many people in India do not have access to basic health services, such as immunization, antenatal care, or treatment of infections. This increases the risk of diseases and complications that can worsen malnutrition.

  ○ The WHO recommends a doctor to population ratio of 1 per 1000 and an ideal nurse density of 3 per 1000 people. **In India, there are 0.73 doctors and 1.74 nurses per 1000 people.**

➢ **Lack of Awareness and Illiteracy**: Many people in India are not aware of the importance of nutrition or the best practices to ensure it. They may not know **how to prepare balanced meals, what foods to avoid during pregnancy or breastfeeding, or how to prevent micronutrient deficiencies**. Illiteracy also limits their ability to access information and education on nutrition.

➢ **Weak Public Distribution System (PDS)**: The PDS is a government program that provides subsidized food grains and other essential commodities to poor households. However, the **PDS suffers from many problems, such as corruption, leakage, diversion, poor quality, and inadequate coverage. As a result, many people who need food assistance do not receive it or receive insufficient amounts.**

- According to a report by the **CAG**, **only 49% of the food grains allocated under the PDS reached the intended beneficiaries in 2012-13.**
- ➢ **Poor Implementation of Integrated Child Development Scheme (ICDS)**: The **ICDS** is another government program that **aims to improve the nutrition and health of children under six years old and pregnant and lactating women**. The ICDS provides supplementary food, health check-ups, immunization, growth monitoring, and pre-school education through **anganwadi** centres (community-based mother and child-care centres).
  - However, the ICDS also faces many challenges, such as inadequate funding, staff shortage, low quality of services, and low participation rates.
  - According to the **NFHS-5**, **only 50.3% of children under six years received any service from an anganwadi centre in the last 6 months.**
- ➢ **Poor Sanitation**: Poor sanitation and hygiene practices can increase the exposure to pathogens and parasites that can cause infections and diseases. These can affect the absorption and utilization of nutrients in the body and lead to malnutrition.
  - The **NFHS-5** found that only 69% of households use an improved sanitation facility.

What Steps have been taken by the Government?

- ➢ **Mission Poshan 2.0**: This is a flagship initiative that aims to strengthen nutritional content, delivery, outreach and outcomes with focus on developing practices that nurture health, wellness and immunity to disease and malnutrition. It also involves improving nutritional quality and testing in accredited labs, strengthening delivery and leveraging technology to improve governance.
- ➢ **Integrated Child Development Services (ICDS) Scheme**: This is a comprehensive scheme that provides specific interventions targeted towards the vulnerable groups such as children below 6 years and women. It includes services such as supplementary nutrition, health check-ups, immunization, pre-school education, nutrition and health education, etc.
- ➢ **Pradhan Mantri Matru Vandana Yojana (PMMVY)**: This is a maternity benefit programme that provides cash incentives to pregnant women and lactating mothers for the first living child. It aims to improve their health and nutrition during pregnancy and post-delivery.
- ➢ **Mid-Day Meal Scheme**: This is a school-based programme that provides cooked meals to children studying in classes I-VIII in government and government-aided schools. It aims to enhance enrolment, retention and attendance of children and also improve their nutritional status.

- ➢ **Scheme for Adolescent Girls (SAG)**: This is a scheme that targets adolescent girls aged 11-18 years who are out of school. It provides them with supplementary nutrition, life skills education, vocational training, health check-ups, etc.
- ➢ **Mother's Absolute Affection (MAA)**: This is a programme that promotes breastfeeding among mothers and infants. It provides awareness, counseling, support and monitoring to ensure optimal breastfeeding practices.
- ➢ **Poshan Vatikas**: This is a programme that supports the development of nutrition gardens at **anganwadi** centres to meet dietary diversity gap leveraging traditional knowledge in nutritional practices.

What More should be Done?

- ➢ **Develop a Focused SBCC Action Plan:** States should collaborate to **develop a well-structured and focused Social and Behavior Change Communication (SBCC) Action Plan** specifically tailored to address malnutrition. This plan should outline the objectives, target audience, key messages, and strategies for effective communication.
- ➢ **Institutionalize Nutrition Counseling:** Nutrition counseling should be institutionalized as a fundamental component of the healthcare system. This means integrating it into existing healthcare infrastructure, such as primary health centers and community health programs, to ensure that it becomes a routine part of healthcare services.
- ➢ **Raise Awareness on Exclusive Breastfeeding (EBF):** Emphasize the importance of **exclusive breastfeeding during the first six months of a baby's life**. Launch awareness campaigns that educate mothers and families about the benefits of EBF, including optimal techniques for holding, latching, and manually emptying the breast for better milk transfer.
- ➢ **Antenatal and Postnatal Breastfeeding Counseling:** Implement a systematic approach to **provide breastfeeding counseling to pregnant women during antenatal checkups and continue this support through frequent home visits after delivery**. Evidence suggests that such counseling significantly improves breastfeeding practices and reduces undernutrition.
- ➢ **Complementary Feeding Practices:** Address the gap in complementary feeding practices by **educating parents and caregivers on when to start complementary feeding (around six to eight months), what and how to feed, frequency, and appropriate quantities**. Make this information accessible to all socio-economic groups.
- ➢ **Prime Minister's Involvement:** Engage the Prime Minister to provide strong support and visibility to

nutrition programs, **similar to initiatives like Swachh Bharat Abhiyaan, through platforms like 'Mann Ki Baat.**' This can help in mobilizing resources and generating public awareness.

➤ **Revise and Overhaul POSHAN 2.0:** Reevaluate the implementation of the POSHAN 2.0 program to identify and rectify any flaws. **Ensure that the system is effectively reaching mothers and children during the critical first 1,000 days of life.**

➤ **Exploration of Alternative Distribution Channels:** Consider distributing supplementary nutrition, such as Take-Home Ration packets, through the **Public Distribution System (PDS)** to free up anganwadi workers for counseling. This can streamline the delivery of essential nutrition to beneficiaries.

➤ **Combine Human Resources:** Develop and test a new system that **integrates the human resources of the Integrated Child Development Scheme (ICDS) and the healthcare system, from the village to the district and state levels**. This would create a more efficient and accountable system for delivering services during the first 1,000 days of a child's life.

➤ **Utilize Mass Media**: Leverage mass media and television shows to organize **informative discussions and discourses on caring for infants and young children** during the first 1,000 days. This can reach mothers and caregivers beyond the public health system.

➤ **Continuous Monitoring and Evaluation:** Establish a robust system for monitoring and evaluating the effectiveness of these interventions, making necessary adjustments based on the results to ensure the sustained reduction of child malnutrition.

What Lessons Can be learnt from Bemetara Village?

➤ Bemetara in Chhattisgarh is a district where the number of Severe Acute Malnutrition (SAM) children there was as high as 3,299 in December 2022.

○ There was a lack of proper knowledge about feeding practices. This is why nutrition counseling combined with robust monitoring was chosen as the modus operandi for this area.

➤ Potth Laika Abhiyaan (Healthy Child Mission) is a nutrition counseling programme that is being implemented in 72 of the most affected AWCs.

➤ **Ground-level staff** from the Health and Women and Child Development departments **have been well trained on how to provide nutrition counseling** in the region.

➤ **Every Friday, the parents of the targeted SAM and Medium Acute Malnutritioned (MAM) children are summoned** and counseled.

○ They are taught in simple Chhattisgarhi language the importance and the constituents of "Tiranga Bhojan" (a balanced diet), the need to wash hands regularly and many other tips in order to lead a healthy lifestyle.

○ The progress of the targeted children is being monitored.

➤ **Local leaders such as Sarpanchs, Panchayat sachivs and religious heads have also participated** in the counseling sessions.

➤ **Door-to-door visits to the houses of targeted children** are also done to monitor their progress.

➤ As a result of the **simple mantra of nutrition counseling along with regular monitoring and evaluation, as many as 53.77% of targeted children were brought out of malnutrition**, in a span of nine months.

○ When comparing this with a random control group of 20 AWCs where this mission was not being implemented, only 30.6% children were taken out of malnutrition.

➤ **This mission is a zero cost one**, requiring no more than a few training sessions and regular monitoring. Thus, it has shown itself to be cost effective as well.

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BRICS Expansion: Challenging Western Dominance

This editorial is based on The implications of the expansion of BRICS which was published in The Hindu on 06/09/2023. It talks about the recent expansion of the BRICS along with their efforts to promote cooperation and build institutions outside Western control.

Tag: International Relations, India and its Neighbourhood, Bilateral Groupings & Agreements, Groupings & Agreements Involving India and/or Affecting India's Interests, Regional Groupings, Important International Institutions.

Recently, during the **15th BRICS summit** held in Johannesburg, it was announced that the existing five-member BRICS grouping, **consisting of Brazil, Russia, India, China, and South Africa, had taken a significant step by inviting six new countries to join**. These new invitees are Iran, **Saudi Arabia, and the United Arab Emirates (UAE)** from West Asia; **Egypt and Ethiopia** from Africa; and **Argentina** from Latin America.

BRICS is shaping the future of international relations by advocating for multipolarity, asserting strategic autonomy, and fostering economic cooperation among its diverse members. **Amidst criticism from Western commentators, BRICS is carving out a unique path in global politics**, making its recent summit a pivotal moment in modern history.

What is BRICS?

Brazil	Russia	India	China	South Africa

Population
3 billion
42% of the world

GDP
21 trillions $
23% of the world

Territory
40 million km²
30% of the world

BRICS main cooperation areas

FINANCE
HEALTH
TECHNOLOGY
SECURITY
BUSINESS

Territory (2019) millions km²: 1.2 | 9.6 | 3.3 | 17.1 | 8.5

GDP (2019) billions US$: 358.8 | 14,140 | 2,940 | 1,640 | 1,850

Population (2019) millions people: 58.8 | 1,400 | 1,350 | 146.7 | 210

Source: IMF, World Bank

CGTN

What are the Objectives of BRICS?

➢ **Rejection of Emerging Global Binary Divide:** India and other BRICS members reject the idea of an emerging global binary divide, which suggests a world characterised by two opposing and dominant powers, often likened to a new **Cold War**. **They do not agree with this perspective and consider it short-sighted**.

➢ **Assertion of Strategic Autonomy:** BRICS members, including India, are emphasizing their commitment to asserting their strategic autonomy. This implies that **they want to make independent decisions and policies on the global stage**, rather than being aligned with any particular superpower or bloc.

➢ **Multipolar World Order:** BRICS countries are advocating for a multipolar world order. They **envision a world where power and influence are distributed among multiple major players** rather than being concentrated in the hands of a few dominant nations.

➢ **Demand for Voice and Respect for Interests:** BRICS member nations are demanding that their voices be heard and their interests respected in international affairs. This **suggests a desire for a more equitable and inclusive global governance system** where the concerns of emerging economies are taken into account.

What are the Views of BRICS Towards West-led Organisations?

➢ **Unequal Voting Power:** One of the primary concerns of BRICS nations is the unequal distribution of voting power within institutions like the **International Monetary Fund (IMF)** and the **World Bank**.

  ○ These organisations **give more influence to Western countries, particularly the United States and European nations**, based on their financial contributions. BRICS members argue that **this inequity diminishes their ability to shape policies and decision-making processes**.

➢ **Lack of Representation:** BRICS nations have argued that the leadership and decision-making bodies of these institutions do not adequately represent the

diversity of the global economy. They believe that these institutions should better reflect the economic weight and contributions of emerging economies like themselves.

What are the Criticisms Against BRICS?

➢ **Lack of Shared Vision:** Western commentators have criticised BRICS for not having a clear and cohesive shared vision. This implies that the five-member countries may **not have a unified and consistent approach** to global issues or may not be working towards common objectives.

➢ **Being a "Talk-Shop":** BRICS is accused of being primarily a forum for discussion and dialogue rather than an organisation that takes concrete actions or achieves meaningful outcomes.
   ○ In other words, **it is seen as a platform where leaders from these countries engage in discussions but do not produce tangible results** or solutions.

➢ **No Worthwhile Achievements:** Critics argue that BRICS has not produced any substantial or significant achievements that would justify its existence as a bloc. They may contend that the **group's activities have not had a meaningful impact on global affairs** or have failed to address key challenges effectively.

How BRICS is Challenging this West-led World Order?

➢ **Ongoing and Comprehensive Nature of BRICS Interactions:** Since 2009, the BRICS member countries have been **holding annual summit meetings**. Additionally, the BRICS framework is supported by various ministerial and expert conclaves, **implying that it's not just a summit but also a platform for sustained engagement**.

➢ **Alternative Institutions:** In response to their dissatisfaction with Western-dominated institutions, BRICS nations have **taken steps to create alternative financial institutions**. The most notable example is the establishment of the **New Development Bank (NDB)**, also known as the BRICS Bank and **Contingent Reserve Arrangement** (CRA).
   ○ The NDB aims to **provide financing for infrastructure and sustainable development projects in member countries** and other emerging economies. This initiative is seen as a **way to reduce dependency on Western institutions**.
   ○ CRA aims to assist member countries facing short-term **balance-of-payments** pressures.

➢ **Use of Local Currencies:** BRICS members have agreed to encourage the use of local currencies in internal trade and financial transactions among themselves and with other trading partners.

   ○ This **demonstrates a desire to reduce reliance on major global currencies like the US dollar** and **promote the use of their own currencies** in international transactions.

➢ **Advocacy for Reform:** BRICS nations are advocating for significant reforms in the existing international order. They **seek a more representative and fairer global system that takes into account the interests and voices of emerging economies**.
   ○ This reform agenda includes **calls for changes in international financial institutions** and global governance structures.

➢ **Increased Economic Influence** The BRICS grouping collectively possesses considerable economic power. The expansion of BRICS membership has further boosted its influence. The group represents a significant portion of the world's population, **Gross Domestic Product (GDP)**, **global trade**, and **energy production**.

➢ **Energy Sector Impact:** The passage highlights the significant impact of BRICS expansion on the energy sector. With the inclusion of new members, BRICS **countries collectively produce a substantial share of the world's oil, making them a crucial player in global energy markets**. This underscores their potential to shape energy policies and markets.

What are the Geo-strategic Values of the New BRICS Members?

➢ **Energy Resources:** The inclusion of new BRICS members from West Asia, such as Saudi Arabia and Iran, is significant due to their substantial energy resources. **Saudi Arabia is a major oil producer, and a significant portion of its oil production goes to BRICS countries like China and India**.
   ○ Iran, despite facing sanctions, has increased its oil production and exports, primarily directed toward China. This **highlights the importance of energy cooperation and trade** among BRICS members.

➢ **Diversification of Energy Suppliers:** Russia has been a significant supplier of oil to China and India. With the inclusion of Brazil as a new member, Russia is exploring additional markets for its energy exports, which **demonstrates the potential for diversified energy sources within BRICS**.

➢ **Strategic Geographical Presence:** Egypt and Ethiopia are strategically located in the **Horn of Africa** and the **Red Sea** region, which is of immense geostrategic importance due to its **proximity to critical maritime trade routes**. Their presence adds to the geopolitical significance of BRICS in this region.

➢ **Latin American Economic Influence:** Argentina, as one of the largest economies in Latin America, brings

economic influence to the BRICS grouping. Latin America has historically been a region of interest for global powers, and **Argentina's inclusion strengthens BRICS' presence in this part of the world**.

VISUALIZING THE 2023 BRICS EXPANSION

BRICS, a bloc of developing countries formed in 2010, is set to welcome six new members at the beginning of 2024.

▲ **Members**   ▲ **New Members**   ▲ **Applied for membership**

RUSSIA

SAUDI ARABIA
EGYPT

CHINA

INDIA

IRAN
UAE

ETHIOPIA
China has provided Ethiopia with billions in financing to **construct major infrastructure projects.**

ARGENTINA
Argentina is a major producer of lithium, **a critical metal for the clean energy transition.**

BRAZIL

SOUTH AFRICA
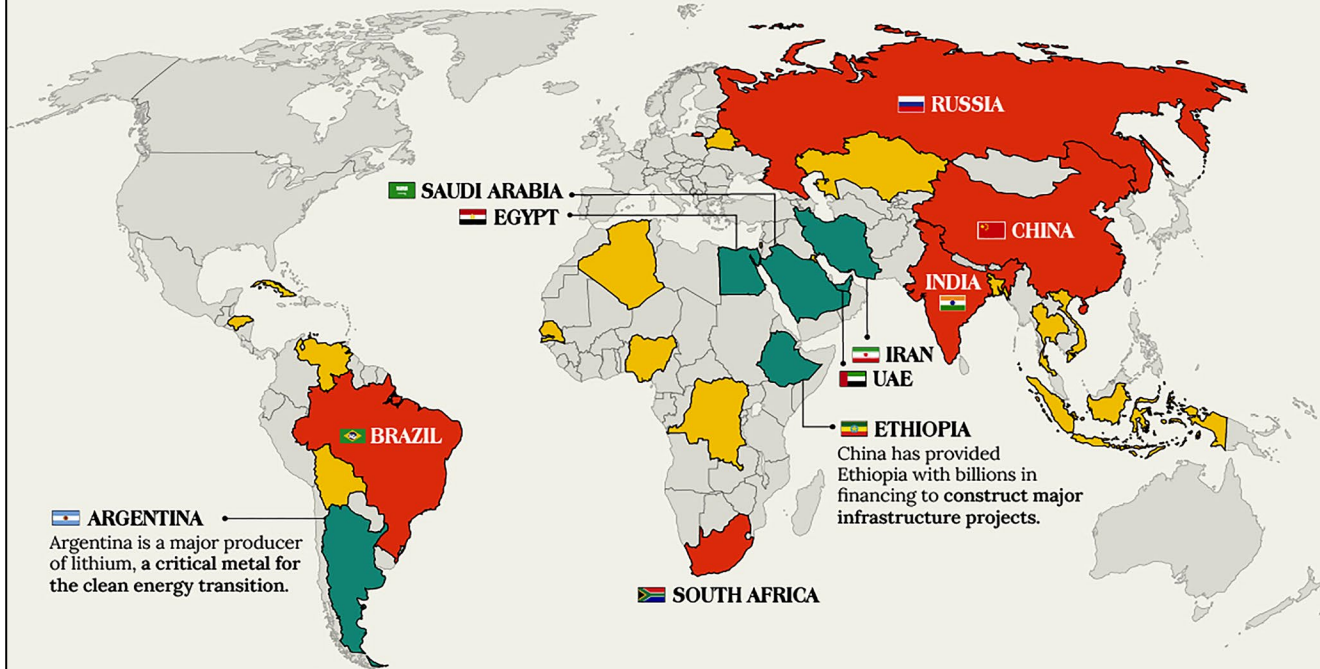
SHARE OF GLOBAL

GDP 2023 EoY PROJECTION   **BRICS total with new members** ▼

3.6% 18.4%

29% Saudi Arabia is the only **trillion-dollar economy** being added to BRICS.

POPULATION 2023

17.8% 17.7%

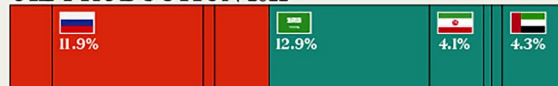**46%** Adding high-population-growth countries like Ethiopia means BRICS could soon represent over **half the world's population.**

OIL PRODUCTION 2022

11.9% 12.9% 4.1% 4.3%

43% The addition of Saudi Arabia, Iran, and the UAE will **more than double BRICS' share of global oil production.**

EXPORTS OF GOODS* 2022

14.4%

25% BRICS' share of global exports will increase slightly, continuing to be led by China.

*Merchandise trade only.

What are the Regional Developments Shaping BRICS Membership Expansion?

➢ **Independent Foreign Policy:** Both Saudi Arabia and the UAE are noted for pursuing independent foreign policy paths, particularly since 2020. This implies that they have sought to assert their sovereignty and make **foreign policy** decisions that **align with their own national interests rather than being heavily influenced by external powers**, such as the United States.

➢ **Ending the Qatar Blockade:** Saudi Arabia's decision to end the **blockade on Qatar** in January 2021 is also considered a significant step in this regard. As a result, there was a significant change in the **Gulf region**, as it **signaled a willingness to resolve regional disputes and improve relations with neighboring countries**.

➤ **Iran-UAE Relations:** UAE has normalised ties with Iran and aims to expand its maritime presence in the Gulf, **Gulf of Aden**, Red Sea, and Horn of Africa.

○ **Iran's inclusion in BRICS offers opportunities for regional economic cooperation** and the revival of connectivity projects through **Chabahar port**, which India is involved in.

Conclusion

The expansion of the BRICS group has brought considerable geo-strategic value to the grouping. The BRICS through its current summit has asserted that their "strategic partnership" will be directed at achieving "a more representative, fairer international order". The recent expansion of BRICS's membership has shaped a grouping that is aligned in terms of global perceptions and interests and collectively provides considerable economic clout to the enlarged conclave. The group's efforts to assert their strategic autonomy in a multipolar world order have been described as a "turning point in modern history".

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Addressing Water Scarcity

This editorial is based on the Article **India is staring at water poverty** *which was published in The Hindu Business Line on 07/09/2023. It talks about the upcoming threat of Water Scarcity in India and solutions to it.*

Tag: Social Justice, GS Paper-3, Agricultural Resources, Water Resources, Conservation of Resources.

According to data released by the **India Meteorological Department**, the **South-West monsoon** during June-August 2023 has been below normal in 42% of the districts. In August, rainfall in the country was 32% below normal and in the southern States it was 62%. **In the last 122 years — that is, since 1901 — India received the lowest rainfall in August this year.** With only about a month left for the end of the **South-West monsoon**, the reduced rainfall will not only affect agriculture severely but it could also lead to massive water shortages in different regions of the country.

What does the Data Indicate?

➤ The **net amount of water that can be used in India in a year is estimated at 1,121 billion cubic meters (bcm)**. However, the data published by the Ministry of Water Resources shows that the total water demand will be 1,093 bcm in 2025 and 1,447 bcm in 2050.

○ This means that there will be a major water shortage in India within 10 years.

➤ As per the **Falkenmark Water Index** (used for measuring water scarcity throughout the world), wherever the amount of water available per capita is below 1,700 cubic meters in a year, there is water scarcity.

○ Going by this index, **almost 76% of people are already living with water scarcity** in India.

The Curious Case of Tamil Nadu:

In Tamil Nadu, which is one of the water-scarce States in terms of per capita availability, water demand was more than its supply even before 1990-91. For example, the total water requirement of Tamil Nadu was 31,458 million cubic meters (mcm) in 2004, but the supply was only 28,643 mcm. This means that Tamil Nadu has been experiencing water shortage for the last 30 years.

What are the Primary Reasons behind Water Scarcity in India?

➤ **Uneven Distribution of Rainfall:** India experiences uneven distribution of rainfall, with the majority of precipitation occurring during the monsoon season (June to September). States like Kerala and Meghalaya receive excessive rainfall, while arid regions like Rajasthan and Gujarat face chronic water shortages.

○ The cumulative rainfall till September 1, 2023 was 11% lower than long-term average.

➤ **Over-extraction of Groundwater:** Excessive groundwater extraction for irrigation, industrial, and domestic purposes has led to the depletion of aquifers. According to a report by the Central Ground Water Board, India was overexploiting its groundwater resources at an alarming rate, especially in states like Punjab, Haryana, and Tamil Nadu.

○ The **Central Ground Water Board** reported in June 2022 that **Punjab's groundwater in the first 100 meters will be exhausted by 2029**.

● The groundwater in the 300 meter reach will be exhausted by 2039.

➤ **Inefficient Water Management:** Inefficient water management practices, such as wastage in irrigation systems, lack of water storage infrastructure, and inadequate maintenance of water sources, contribute to water scarcity.

○ The **World Bank** reported that India loses over 50% of its irrigation water due to inefficiencies.

➤ **Rapid Urbanization and Industrialization:** Urbanization and industrial growth have led to increased water demand in cities and industrial hubs. The **NITI Aayog's Composite Water Management Index (CWMI)** highlighted that many Indian cities are grappling with water scarcity due to growing populations and urban expansion.

➢ **Pollution of Water Sources:** Pollution of rivers, lakes, and groundwater sources further exacerbates water scarcity. Water pollution affects the quality and quantity of water available for human and environmental use.

  ○ The **Central Pollution Control Board** reported that many of India's major rivers, including the **Ganges** and **Yamuna**, were heavily polluted, impacting water quality and availability.

➢ **Climate Change:** Changing weather patterns and increasing temperatures associated with climate change have a profound impact on water resources. **Erratic monsoons, prolonged droughts, and altered precipitation patterns have disrupted the availability of water** in various regions.

  ○ **El Nino**, which occurs due to global warming and often reduces the rainfall in India, is becoming the new normal in recent years.

➢ **Inefficient use of water for agriculture**: Agriculture is the largest consumer of water in India, accounting for about 85% of the total water use. However, most of the irrigation methods are outdated and wasteful, resulting in low water productivity and high water losses. Moreover, some crops such as sugarcane, cotton, and paddy are water-intensive and are grown in regions with declining water tables.

  ○ The government policies that provide **minimum support price (MSP)** and electricity subsidies for these crops encourage farmers to overuse water.

➢ **Lack of Adequate Water Infrastructure:** Insufficient investment in water infrastructure, including storage reservoirs, canals, and treatment facilities, has limited the capacity to manage and distribute water efficiently.

➢ **Population Growth:** India has the largest population in the world, with about 1.4 billion people. The population is expected to grow to 1.7 billion by 2050. This puts a huge demand on the limited water resources available in the country.

➢ **Inadequate Policy Implementation:** Weak enforcement of water conservation measures, groundwater regulations, and environmental laws has hindered efforts to address water scarcity.

What could be the Effects of Water Scarcity in India?

➢ **Health Issues**: Lack of access to safe drinking water can cause various health problems such as dehydration, infections, diseases, and even death. A report by the **NITI Aayog** stated that around 2 lakh people die in India every year due to inadequate water supply.

  ○ According to the **World Bank**, **India has 18% of the world's population, but only has enough water resources for 4% of its people. In 2023, around 91 million Indians will not have access to safe water.**

➢ **Ecosystem Damage**: Water scarcity also poses a threat to the wildlife and the natural habitats in India. Many wild animals have to venture into human settlements in search of water, which can lead to conflicts and endangerment. Water scarcity also disrupts the biodiversity and the ecological balance of the ecosystems.

➢ **Reduced Agriculture Productivity**: Water scarcity can have a negative impact on the agricultural sector, which consumes 85% of the country's water resources. Water scarcity can reduce crop yields, affect food security, and increase poverty among farmers.

➢ **Economic Losses**: Water scarcity can hamper the economic growth and development of India. Water scarcity can affect industrial production, reduce energy generation, and increase the cost of water supply and treatment. Water scarcity can also affect tourism, trade, and social welfare.

  ○ In the report, 'Climate Change, Water and Economy', the **World Bank** (2016) underlines that countries with water shortages may face a major setback in economic growth by 2050.

What Steps have been taken by the Government?

➢ **National Water Policy, 2012**

➢ **Pradhan Mantri Krishi Sinchayee Yojana**

➢ **Jal Shakti Abhiyan- Catch the Rain Campaign**

➢ **Atal Bhujal Yojana**

➢ **Per Drop More Crop**

How to Address the Water Scarcity?

➢ **Reducing Overconsumption**: One of the main drivers of water scarcity is the excessive and inefficient use of water by various sectors, such as agriculture, industry, and households. By **using modern technologies, such as IoT, AI, and remote sensing, water consumption can be measured and managed more effectively**.

  ○ For example, **remote sensing and satellite monitoring can help farmers plan irrigation procedures based on weather conditions and local topography**. This can save water and increase crop productivity.

    ● Prashant Maroo a Chhattisgarh farmer used **IoT** in his farm which resulted in a 20% increase in crop yield and reduced water consumption.

  ○ Also, India needs to reform its electricity subsidy policies.

➢ **Improving Water Efficiency**: Another way to address water scarcity is to improve the performance of water systems and infrastructure, such as distribution networks, treatment plants, and storage facilities. By repairing leaks, reducing losses, and upgrading

equipment, water wastage can be minimized and water quality can be enhanced.

○ For example, **UNICEF** has rehabilitated urban water distribution networks and treatment systems in several countries to reduce water leakage and contamination.

➢ **Expanding Water Sources**: Explore alternative or additional sources of water, such as rainwater harvesting, aqueducts, desalination, water reuse, and groundwater extraction. These methods can increase the availability and accessibility of water for different purposes and locations.

○ For example, **desalination** can convert seawater into freshwater for drinking and irrigation in coastal areas.

➢ **Protecting Water Resources**: Protect and restore the natural resources that provide and regulate water, such as rivers, lakes, **wetlands**, forests, and soils. These ecosystems play a vital role in maintaining the water cycle, filtering pollutants, preventing erosion, and mitigating floods and droughts.

○ For example, **restoring wetlands can improve water quality and quantity** by storing runoff and recharging groundwater.

➢ **Changing Water Policies**: Reform the policies and institutions that govern water management and allocation. This involves **setting clear rules and incentives for water use, pricing, and conservation**; promoting stakeholder participation and cooperation; enhancing monitoring and enforcement; and integrating water issues into broader development plans.

○ For example, **introducing minimum support policies for less water-intensive crops** can reduce the pressure on agricultural water use.

○ India also needs to relook its existing **MSP** regime which promotes the cultivation of water guzzling crops such as paddy and Sugarcane.

➢ **Using Micro Irrigation Techniques:** Using practices such as Drip and Sprinkler irrigation can not only reduce the water consumption but also can increase the productivity.

○ As per the **MS Swaminathan committee** report on 'More Crop and Income Per Drop of Water' (2006), drip and sprinkler irrigation can save around 50% of water in crop cultivation and increase the yield of crops by 40-60%.

➢ **Using Buried Clay Pot Plantation Technique:** The success rate of this method is 90% and it has very high efficiency, even better than drip irrigation. As plantation in Rajasthan is difficult and survival remains a challenge, **this method is very effective in saline soil and desert conditions**. It has proved useful for land restoration in very arid environments.

○ Buried clay pot irrigation is an **ancient method of irrigation that uses porous clay pots to water plants**. The pots are filled with water and buried in the ground, with only the neck protruding above the soil.

● The water seeps through the clay and slowly disburses to the surrounding plants. The pots can provide moisture and water to the plant for at least five days.

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G20: A Forum for Developing World

This editorial is based on the Article How India made G20 a forum for developing countries which was published in The Indian Express on 11/09/2023. It talks about the inclusion of the African Union in G20 as an achievement of India's Presidency and reflects its commitment to the developmental agenda of the Global South.

Tag: International Relations, Bilateral Groupings and agreements, Groupings and agreements involving India and/or Affecting India's Interests, Regional Groupings, Effect of Policies and Politics of Countries on India's interest, Deglobalisation and protectionism, Indian Diaspora, Important International Institutions, International Treaties and agreements

The 18th G20 Summit, hosted by New Delhi in September 2023, witnessed a historic expansion of the group with the admission of the **African Union (AU)** as a permanent member. The AU, a continental body of 55 member states, now has the same status as the **European Union,** the only regional bloc with full membership.

➢ The move was proposed by India in June 2023 and welcomed by the AU and other **G20** members. The inclusion of the AU in G20 is an achievement of India's Presidency and reflects its commitment to the developmental agenda of the Global South.

What is Development Cooperation Under India's G20 Presidency?

➢ India assumed the G20 Presidency in December 2022, with the theme of **'Vasudhaiv Kutumbkam' i.e. '**One Earth · One Family · One Future'**.** India's vision for the G20 Presidency was to promote green development, climate finance, and **LiFE (Lifestyle for Environment)**; accelerate inclusive and resilient growth; advance progress on **Sustainable Development Goals;** foster technological transformation and digital public infrastructure; reform multilateral institutions for the 21st century; and support women-led development.

G-20 (The Group of Twenty)

About

- In 1999, following the **Asian Financial Crisis** of the **1990s, G20** was established as a Forum for **Finance Ministers and Central Bank Governors**.
- Raised to the **Summit level in 2008** to address the global financial and economic crisis of 2008.

Aims

- Secure global financial stability by involving world's largest advanced and emerging economies.

Structure and Functioning of G20

- The **G20** Presidency rotates annually
- No permanent **Secretariat** or **Headquarters**
- **19 countries** are divided into **5 groups**
- The presidency rotates between each group

Troika

- It is a working association between the **current presidency**, **past presidency** and **next presidency**.

Challenges

- No Enforcement mechanism
- No legal binding
- Polarization of Interests:
  - Russia Ukraine Conflict
  - China's strategic rise
  - NATO's expansion

G20 India 2023

- India assumed the **18th G20 Presidency from December 1, 2022** for a **one-year period**.
- **Theme:**
  - **"Vasudhaiva Kutumbakam"** a Sanskrit word which Stands for **"One Earth · One Family. One Future"**.
  - This is taken from the ancient Sanskrit text of the '**Maha Upanishad**'.

G20 COUNTRIES

Argentina | Australia | Brazil | Canada | China | European Union | France

Germany | India | Indonesia | Italy | Japan | Mexico | Russia

Saudi Arabia | South Africa | South Korea | Turkey | United Kingdom | United States

Drishti IAS

➢ India also introduced new initiatives such as a Disaster Risk Reduction Working Group; Startup 20 Engagement Group; **Launch of Global Sovereign Debt Roundtable**; and a proposal for a **global biofuel alliance.**

➢ India's G20 Presidency also showcased its development cooperation with Africa and other developing regions. India has been a longstanding partner of Africa, sharing its experience and expertise in various fields such as agriculture, health, education, energy, infrastructure, digital technology, capacity building, and peacekeeping.

➢ India has extended concessional lines of credit worth USD 10.5 billion for 182 projects in Africa through the **Export-Import Bank of India**. India has also launched several flagship programs such as the **Pan-African e-Network Project**, Team-9 Initiative, **India-Africa Forum Summit**, India-Africa Trade Council, **India-Africa Health Sciences Platform,** and India-Africa Institute of Agriculture and Rural Development. India has also supported Africa's participation in multilateral platforms such as the **International Solar Alliance, Coalition for Disaster Resilient Infrastructure,** and **Nalanda University**.

What are the Advantages and Opportunities for Africa After Inclusion in G20?

➢ The inclusion of the AU in G20 is a significant step towards more inclusive and representative global governance. The AU represents a continent with 1.4 billion people and a collective **GDP** of USD 3 trillion.

➢ Africa is also one of the fastest-growing regions in the world, with a projected growth rate of 4.1% in 2023.

➢ Africa's voice and perspective are essential for addressing global challenges such as poverty eradication, climate change, health security, digital transformation, trade facilitation, debt sustainability, and peace and security.

➢ The inclusion of the AU in G20 also offers benefits and opportunities for both Africa and G20 members.

   ❍ **For Africa,** it provides a platform to advance its common interests and aspirations on the global stage, such as

   ● The implementation of Agenda 2063 and Agenda 2030,

   ● The operationalization of the African Continental Free Trade Area (AfCFTA),

   ● The mobilization of climate finance and technology transfer, and

   ● The reform of international financial institutions.

   ❍ **For G20 members,** it opens new avenues for cooperation and partnership with Africa in various sectors such as infrastructure development, renewable energy, digital economy, health care, education, agriculture, tourism, and culture.

   ● It also enhances mutual understanding and trust among G20 members and African countries.

What are the Challenges Africa and the World Will Face in its Engagement with G 20?

The inclusion of the AU in G20 also poses some challenges and requires some actions to ensure its effectiveness and sustainability. Some of these challenges are:

➢ The AU will have to coordinate its positions and priorities with its member states and regional economic communities to ensure coherence and consistency in its engagement with the G20.

➢ The AU will have to strengthen its institutional capacity and human resources to participate effectively in the G20 processes and meetings across various tracks and work streams.

➢ The AU will have to balance its commitments and obligations with other regional and global platforms such as the African Union Commission (AUC), African Union Development Agency (AUDA-NEPAD), **United Nations (UN),** European Union (EU), **Commonwealth, Francophonie,** etc.

➢ The AU will have to manage its expectations and interests with those of other G20 members who may have different agendas and perspectives on various issues.

➢ The AU will have to ensure that its participation in the G20 leads to tangible outcomes and benefits for Africa's development.

Way Forward:

The AU should establish a dedicated mechanism or unit within its structures to coordinate its engagement with the G20. This mechanism or unit should liaise closely with the AUC, AUDA-NEPAD, regional economic communities, member states, civil society, the private sector, and other stakeholders to formulate and communicate Africa's positions and priorities on the G20 agenda.

➢ The AU should seek technical and financial support from the G20 members and other partners to enhance its capacity and resources to participate effectively in the G20 processes and meetings.

   ❍ The AU should also leverage its existing partnerships and platforms such as the India-Africa Forum Summit, the Africa-EU Partnership, the Africa-China Forum, etc. to mobilize support for its G20 engagement.

- ➢ The AU should align its G20 engagement with its existing frameworks and strategies such as Agenda 2063, Agenda 2030, AfCFTA, etc.
  - ○ The AU should also ensure coherence and complementarity between its G20 engagement and its other regional and global engagements such as the AUC, AUDA-NEPAD, UN, EU, Commonwealth, Francophonie, etc.

- ➢ The AU should adopt a constructive and pragmatic approach in its G20 engagement, seeking common ground and consensus with other G20 members on various issues. The AU should also be flexible and adaptable to changing circumstances and emerging challenges in the global arena.

- ➢ The AU should monitor and evaluate its G20 engagement, measuring its impact and outcomes on Africa's development. The AU should also disseminate and communicate its G20 engagement to its member states and other stakeholders, highlighting its achievements and challenges.

Conclusion

- ➢ The inclusion of the AU in G20 is an achievement of India's Presidency and reflects its commitment to the developmental agenda of the **Global South.** It is also a recognition of Africa's importance and potential in the global economy and governance. The AU should seize this historic opportunity to advance its interests and aspirations on the global stage while contributing to the global public good.

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Synthetic Human Embryos: A Breakthrough or A Dilemma

This editorial is based on the Article "Without sperm or egg, how scientists grew whole model of human embryo" which was published in The Indian Express on 08/09/2023. It talks about the development of Synthetic human embryos and the ethical issues raised around it.

Tag: Science & Technology, Achievements of Indians in Science & Technology, Nanotechnology, Biotechnology

The recent announcement of the creation of synthetic human embryos using stem cells has sparked a lot of interest and debate in the scientific and ethical communities.

Synthetic human embryos, or SHEEFs (Synthetic Human Entities with Embryo-like Features), are structures that resemble early human embryos but are made from stem cells without the direct contribution of **egg or sperm cells.**

These structures have the potential to provide valuable insights into human development, **genetic disorders**, and pregnancy loss, but also raise serious ethical and legal questions about their status, use, and regulation.

What are Synthetic Human Embryos and How are They Made?

- ➢ **About Synthetic Human Embryos (SHE):** These are not formed by the fusion of an egg and a sperm cell. They are made **from pluripotent stem cells,** which are cells that can develop into almost any cell type in the body.
  - ○ **These stem cells can be derived from embryos, or reprogrammed from adult cells, such as skin or blood cells.**

- ➢ **Creating SHE:** By manipulating the culture conditions and the signals that guide cell differentiation, researchers can coax **stem cells to self-organize into three-dimensional structures** that mimic some aspects of early embryonic development.
  - ○ **For example,** these structures can **form a blastocyst-like cavity, a placenta-like tissue, and a primitive streak-like structure**, which marks the **beginning of gastrulation, the process by which the three germ layers (ectoderm, mesoderm, and endoderm) are formed.**

- ➢ **First SHE:** The **first synthetic human embryos** were reportedly created by a team at the University of Cambridge and the California Institute of Technology and their work was presented at the **International Society for Stem Cell Research** in June 2023.
  - ○ According to the report, these **synthetic human embryos were grown to a stage equivalent to just past 14 days old,** which is the legal limit for studying natural human embryos in many countries.

What are the Rules Related to the Development of Synthetic Human Embryos?

- ➢ The laws and rules related to the development of synthetic human embryos vary widely across different countries and regions of the world.
  - ○ **Complete Prohibition:** Some countries have **strict regulations that prohibit or restrict** any form of human embryo research, such as **Germany, Italy, Ireland, Poland, and Slovakia.**
  - ○ **Research Allowed:** Other countries have **more permissive regulations that allow some forms of human embryo research** under certain conditions and oversight, such as Australia, Canada, France, Japan, Singapore, South Korea, Sweden, the UK, US.

- However, most of these regulations do not explicitly address synthetic human embryos or other types of stem cell-based embryo models.
- **India's Context:** In India, there is **no specific legislation that regulates synthetic human embryo research**. However, there are **some guidelines that apply to stem cell research in general.**
- The **Indian Council of Medical Research (ICMR)** issued the **National Guidelines for Stem Cell Research in 2017**, which provide ethical principles and norms for conducting stem cell research involving humans or animals.

What are the International Agreements Related to the Development of SHEs?

- **At the international level,** there is **no binding treaty or convention that regulates synthetic human embryo research.** However, there are **some non-binding declarations** and recommendations that provide some guidance and standards for this field. For example:
  - The **Universal Declaration on the Human Genome and Human Rights (UNESCO),** 1997:
    - It states that "**practices which are contrary to human dignity, such as reproductive cloning of human beings, shall not be permitted**" and that "interventions on the human genome should only be undertaken for preventive, diagnostic or therapeutic purposes and only with the informed consent of the person concerned".
  - The **Universal Declaration on Bioethics and Human Rights (UNESCO), 2005:**
    - It states that **"human dignity, human rights, and fundamental freedoms are to be fully respected"** in any scientific research involving **human beings**, and that "the interests and welfare of the individual should have priority over the sole interest of science or society".
  - **Guidelines by the International Society for Stem Cell Research:**
    - Issued for Stem Cell Research and Clinical Translation in 2021, which provide detailed recommendations for conducting ethical and responsible stem cell research involving human embryos, stem cells, organoids, and other models.

What is the Significance of Synthetic Human Embryos?

- **Study Human Development:** Synthetic human embryos can **provide a powerful tool for studying human development,** especially the early stages that are difficult to access or observe in natural embryos.

- This can help researchers understand how different cell types and tissues are formed, how genes are regulated, how diseases are caused or prevented, and how pregnancy is established or lost.

- **Alternative to Human Embryos for Research:** Synthetic human embryos can offer a valuable **alternative or complement to natural human embryos for research purposes.**
  - This can **reduce the reliance on donated IVF embryos,** which are often scarce or unavailable, and avoid some of the ethical concerns associated with their use or destruction.

- **Application in Regenerative Medicine:** Synthetic human embryos can **enable novel applications for regenerative medicine and biotechnology.**
  - For example, synthetic human embryos could be used to generate specific cell types or tissues for transplantation or therapy, such as blood cells, nerve cells, heart cells, liver cells, etc.
  - Synthetic human embryos could also be **used to create models of disease or injury for drug testing or screening.**

What are the Issues Involved in the Development of Synthetic Human Embryos?

- **Unclear Regulations:** Synthetic human embryos may pose ethical challenges regarding their moral status, use, and regulation.
  - As discussed above, synthetic human embryos raise questions about whether they have any **interests or rights that need to be respected,** how they should be used and regulated, who should have access to them, and who should oversee their use.

- **Setting Unrealistic Expectations/False Notions:** Synthetic human embryos may **create social problems regarding their public perception and acceptance**.
  - They may elicit negative reactions from some segments of society who may view them as unnatural, immoral, or dangerous.
  - Synthetic human embryos may also generate **unrealistic expectations or false hopes among some patients or consumers who may seek them for unproven or inappropriate purposes.**

- **Issues of Cloning and Synthetic Life Forms:** Synthetic embryos may pose some safety and social challenges.
  - There is still a lot of **uncertainty about the long-term effects** and consequences of **manipulating stem cells and creating synthetic life forms or cloning.**
  - There is a need for more rigorous testing and monitoring before applying these technologies to humans or animals.

What can be Done to Address the Issues Related to SHE?

- ➢ **Need a Comprehensive Discussion:** There is no simple or definitive answer to the ethical questions related to the development of SHE, as they involve complex and diverse perspectives and interests.
  - ❍ Therefore, there is a need for more dialogue and debate among various actors and sectors, such as researchers, ethicists, policymakers, regulators, clinicians, patients, donors, advocates, media, and the public.
- ➢ **Need Collaboration Across the Regions:** There is also a need for more collaboration and coordination among different countries and regions, as these technologies have global implications and applications.
  - ❍ There is a need for more harmonised and standardised laws and guidelines that govern this field, as well as more transparency and accountability of the practices and outcomes that occur in this field.
- ➢ **Need to Balance the Risks:** Ultimately, there is a need for more balance and caution in pursuing this field, as it involves both opportunities and risks. There is a need for more respect and care for the synthetic embryos that are created, as well as for the natural embryos that are used or affected by this field.
  - ❍ There is a need for more wisdom and foresight in using this field, as it has both benefits and costs for humanity.

Conclusion

Synthetic human embryos are a new frontier of science that offers both promise and peril. They have the potential to enhance our understanding of human development and improve our health, but they also pose ethical dilemmas and social challenges. They require careful consideration and regulation to ensure that they are used for good and not for evil. They demand more dialogue and debate to ensure that they are accepted and respected by society. Likewise, they challenge us to rethink our views and values on human life.

■■■

Increasing Voter Turnouts

This editorial is based on the "Steps to increase voter turnout in elections" which was published in The Hindustan Times on 11/09/2023. It talks about increasing Voter Turnout in elections in India.

The past few months have been dominated by speculation about the scheduling of the next general elections.

But what has gone relatively unnoticed is an ambitious new strategy launched by the **Election Commission of India (ECI)**, called the **Turnout Implementation Plan (TIP)**, the latest in a series of interventions by the poll watchdog that began with the **Systematic Voter Education and Electoral Participation (SVEEP) programme** in 2010 that resulted in India creating a turnout record in Lok Sabha elections of 2014.

In 2009, the voting percentage stood at 58%, which went up to 66.4% in 2014, and 67.6% in 2019. Now, the **ECI** hopes to push it past 70%.

What is the Election Commission's Turnout Implementation Plan (TIP)?

- ➢ It is a targeted voter outreach initiative to enhance voter turnout in the 2024 Lok Sabha elections. The **TIP aims to push the voter turnout past 70%** by focusing on four key areas:
  - ❍ **Voter Registration:** A rigorous revision of the **electoral rolls** and **remote voting** that can empower millions of internal migrants.
  - ❍ **Voter Awareness:** A comprehensive voter education campaign that covers all aspects of electoral participation, such as how to register, how to verify, how to vote, and how to report any issues or grievances.
  - ❍ **Voter Facilitation:** A user-friendly and accessible ICT platform that provides various services and information to voters, such as online registration, polling station location, voter helpline, etc.
  - ❍ **Voter Feedback:** A feedback mechanism that collects data and insights from voters, election officials, civil society organisations, and media on various aspects of electoral processes and outcomes.
- ➢ It **focuses on 10 large states and around 250 constituencies** where the voter turnout was below or slightly above the 2019 national average.
- ➢ It **involves District Election Officers (DEOs)** pinpointing reasons for low voter turnout and addressing local causes.
- ➢ It also **emphasises the need for specific communication efforts to counter voter apathy** and engage apathetic groups such as the youth and urban electors.
- ➢ It **involves a comprehensive profiling of booths with low turnout** and **tailoring solutions** to the unique characteristics of each booth.

What are ECI's Earlier Programs to Increase Voter Turnouts?

➢ **Systematic Voter Education and Electoral Participation (SVEEP) Program:** Launched in 2009, it is a flagship program of the **ECI** for voter education, spreading voter awareness and promoting voter literacy in India.

   ○ The **SVEEP program** is based on multiple general as well as targeted interventions that are designed according to the **socio-economic, cultural and demographic profile of the state** as well as the history of electoral participation in previous rounds of elections and learning thereof.

➢ **Voter Helpline App:** It was launched in 2019 and is a mobile application that provides a single point of service and information delivery to voters across the country.

   ○ The app allows voters to **verify their name in the electoral roll, register online, apply for corrections, download voter ID cards,** get election-related information, lodge grievances, and get real-time voter turnout data.

What are the Challenges to Increasing Voter Turnout in India?

➢ **Voter Apathy:** A significant portion of the eligible Indian population remains disinterested or apathetic towards politics and elections.

   ○ India's urban citizens are often accused of being the bystander in its electoral process — interested but not involved.

   ○ They may be discouraged from voting due to perceived corruption, lack of responsiveness from elected officials, and disillusionment with the political system.

➢ **Logistical Challenges:** India's vast geographical expanse and diverse population present logistical challenges in ensuring that all eligible voters can access polling stations easily.

➢ **Lack of Awareness and Literacy:** Many eligible voters, especially in rural areas, lack awareness about the importance of voting, their rights, and the electoral process.

   ○ High illiteracy rates in some regions also make it difficult for voters to understand the candidates, their manifestos, and how to cast their votes accurately.

➢ **Inconvenient Election Dates:** Elections often take place during inconvenient times, such as extreme weather conditions, festivals, or agricultural harvest seasons, which can discourage voter turnout.

➢ **Security Concerns:** Security issues in certain regions may deter voters from going to polling stations, particularly during tense periods or in areas affected by conflict or insurgency.

   ○ Additionally, instances of voter suppression, such as intimidation and violence in some regions, discourages voter turnout.

➢ **Migration:** Millions of internal migrants in India face challenges in voting due to their transient nature and difficulties in updating their voter registration.

➢ **Technological Challenges:** While technology can facilitate voter registration and improve the electoral process, challenges related to access to technology and concerns about digital security can hinder its adoption.

➢ **Political Parties and Candidates:** Political parties and candidates may not always focus on issues that resonate with the electorate, leading to voter disinterest.

➢ **Voter Identification:** Ensuring accurate identification of eligible voters, while preventing duplication and fraud is a complex task. Exclusion of Eligible voters from the list also results in a lower voter turnout.

What are the Advantages of a Higher Voter Turnout?

➢ **Enhanced Government's Legitimacy**: When more people vote, the election results better reflect the will of the whole population. The elected representatives have a stronger mandate to govern and the government's legitimacy is enhanced.

➢ **Increased Accountability**: When more people vote, the elected officials are more accountable to the voters. Politicians are more likely to be responsive to the needs and concerns of their constituents when they know that a large portion of the population is engaged and watching.

➢ **Political Stability**: When more people vote, the political stability is increased by reducing the chances of contentious or disputed elections. When elections are seen as fair and inclusive, it lowers the potential for protests, unrest, or challenges to the legitimacy of the government.

   ○ Moreover, when more people vote, the **policies are more likely to reflect a broader consensus of the population**.

   ○ Elected officials are more likely to pursue policies that balance various interests when they know they must appeal to a larger and more diverse electorate.

➢ **Civic Engagement**: When more people vote, civic engagement and a sense of civic duty are fostered.

People who participate in elections are more likely to be engaged in other aspects of civic life, such as community organisations and local government activities.

➤ **Informed Decision-Making**: When more people vote, there is a **greater incentive for candidates and political parties to engage in substantive debates and provide clear policy proposals**. Voters are more likely to make informed decisions when they have access to quality information and robust debates.

➤ **Reduced Extremism**: When more people vote, the **influence of extremist or fringe groups is diminished**. Moderate candidates and policies tend to appeal to a broader cross-section of the population, so when more people vote, it can moderate the overall political discourse.

➤ **Diverse Representation**: When more people vote, the **diversity among elected officials is increased, including more women, ethnic minorities, and individuals from different socioeconomic backgrounds**. This diversity can lead to policies that are more inclusive and reflective of the population's needs.

What can be done to Increase Voter Turnout in India?

➤ **Voter Education:** Given that India embraced voter education relatively late, continued and intensified efforts in this area are crucial. Voter education campaigns should focus on informing citizens about the importance of voting, the electoral process, and the impact of their votes on governance.

  ❍ These campaigns can be conducted through various mediums, including TV, radio, social media, and community outreach programs.

➤ **Revision of Electoral Rolls:** Regular and rigorous revision of electoral rolls, especially closer to the election date, is essential. Removing dead, absent, or duplicate names from the voter list and adding eligible citizens ensures that the voter base accurately reflects the population. Technology can play a significant role in streamlining this process.

➤ **Accessibility and Ease of Voting:** Improve the ease of voting by addressing issues related to the physical accessibility of polling stations, reducing wait times, and making the voting process more convenient for citizens. The use of technology can also help streamline the voting process.

➤ **Remote Voting:** Implementing **remote voting options to empower internal migrants who face logistical and financial barriers to voting**. This is particularly beneficial in a country as vast and diverse as India.

  ❍ Political consensus and investment in secure and accessible **remote voting** technology are necessary for this to become a reality.

➤ **One Nation One Election:** Addressing voter fatigue by reducing the frequency of elections, as mentioned in the context of "**One Nation One Election**" could help sustain voter enthusiasm. Streamlining elections could lead to more focused and engaged voter participation.

➤ **Campaign Quality:** Enhance the quality of election campaigns to make them more engaging and informative.

  ❍ Political parties should present compelling agendas and candidates to motivate voters. This can include debates, town halls, and discussions on pressing issues.

➤ **Promote Accountability:** Emphasise the importance of higher voter turnout in holding lawmakers accountable. Encourage citizens to understand that their votes directly impact the performance of elected officials and the overall governance of the country.

➤ **Youth Engagement:** Target youth engagement and encourage young voters to participate actively in the electoral process. Engage schools and colleges to educate students about their voting rights and responsibilities.

➤ **Community Mobilisation:** Encourage community leaders and organisations to play a role in mobilising voters within their communities. Grassroots efforts can be particularly effective in increasing turnout.

Conclusion

Half the countries in the world — including India — fall within the 60%-79% voter turnout band. At a time when India has made rapid strides in establishing itself as a preeminent economic and diplomatic power, it should also aspire to get into the elite club of countries that see 80% turnout in democratic elections.

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Reshaping Fiscal federalism through 16th Finance Commission

This editorial is based on the Article THE NEW SHARING which was published in The Indian Express on 14/09/2023. It talks about challenges faced by the fiscal devolution mechanism and also suggests the terms of reference for the upcoming 16th Finance Commission.

Tag: Economy, GS Paper - 3,Mobilization of resources, GS Paper - 2, Federalism, Co-operative Federalism

The 16th **Finance Commission** (SFC), due to be constituted soon, must be mandated to re-examine the tax-sharing principles in light of the altered landscape of **fiscal federalism** in India. The Terms of Reference (ToR) should be based on combining the authority of the central government and the state governments in collecting and merging their respective indirect taxes.

What was the 101st Constitutional Amendment?

➢ The 101st Constitutional Amendment of 2016 **giving the Union and states concurrent powers of indirect taxation** has been the **most far-reaching change from a fiscal standpoint**, since the setting up of the **First Finance Commission** in 1951.

➢ The amendment introduced a national **Goods and Services Tax (GST)** in India from 1 July 2017.

➢ **GST is based on a system of concurrency of indirect taxes,** where every transaction attracts central as well as state GST.

➢ The inter-state transactions, as well as imports, are levied an **integrated GST.**

➢ With this, a consumption-based taxation system has **replaced a production-based one.**

What have been the Impacts of this Amendment?

➢ The collection of indirect taxes in the state where goods or services are consumed, and not in the state where they are produced, changes both the vertical as well as the horizontal dynamics of **federalism**.

➢ Previously, the central sales tax was based on the origin of goods, which meant that the tax burden was shifted from rich and manufacturing states to consuming states, leading to horizontal imbalances.

➢ However, now with the destination principle for cross-border trading, the poorer and consuming states are benefiting at the expense of more affluent and industrialized ones.

➢ The **IGST**, for instance, **charged during the inter-state supply of goods or services** has been transferred to the destination state. This move from the principle of origin to the principle of destination is reconfiguring the balance of power amongst states.

What are the Challenges for Fiscal Federalism?

➢ The **federal fiscal transfer system still continues to be designed for, and is based on, the principles of jurisdictional separation that is germane to the origin-based tax era**. Its distributional criteria is also based on the earlier regime.

➢ The **disconnect between the operational tax regime and the principles and criteria of tax sharing is inimical to the fiscal federal system** and can create fault lines in the political economy of federalism.

What should be the Mandate of the 16th Finance Commission to ensure better devolutions?

➢ **Re-examine the Tax-Sharing Principles:** The 16th Finance Commission (SFC) needs to be directed to review tax-sharing principles in the context of India's changing fiscal federalism. Its terms of reference should be based on the consolidation of the indirect tax base by the Union and the states.

➢ **Redesign the Statutory Sharing of Indirect Taxes:** The changes necessitate that the statutory sharing of the indirect taxes, both **vertical and horizontal**, is re-examined and redesigned.

  ○ **Vertical Devolution:** To align the principle of vertical sharing with the new system, it is important to start by redefining the divisible pool. For instance, the SFC will be required to specify the modalities of making **IGST** completely a part of the pool.

    ● As of now, only IGST with no **input tax credit** gets shared with the states. There must be a normative basis for credit-in-transition unsettled IGST to be included in the divisible pool.

    ● This also holds for the frequency of settlements, which needs to be stipulated as it has caused a lot of cash flow issues for state governments.

  ○ **Horizontal Devolution:** The criteria for the distribution of the divisible pool among states, will have to be revisited. The existing criteria, especially for equalizing grants, have evolved into a production-based tax system. **This needs to be redesigned for a consumption-based tax system.**

    ● The change from production to consumption will make a significant difference to the distribution of tax revenues as well as the need, nature, and distribution of equalizing grants.

    ● The order of states is likely to change significantly because their ranking by per capita income differs greatly from their ranking by per capita consumption.

➢ **Recommend a method to calculate and allocate the cost of collecting:** The new administration of **GST,** where both the Union and states collect the same taxes, has resulted in a significant increase and wide variation in the cost of tax collection. This cost ranges from 7 to 10 percent.

  ○ Therefore, the SFC should be tasked with recommending a method to calculate and allocate the cost of collecting indirect taxes.

○ Additionally, they should suggest ways to reduce these taxes and improve their collection efficiency.

➢ **Redesign the Grant Mechanism:** The "gap-filling" approach devised by British Banker Otto Niemeyer in 1935 and continued under **Article 275**, should be redesigned in light of the compensation law brought in by the **GST Council**.

○ With the **GST compensation** grants extended to March 31, 2026, the fiscal year after that will be the base year for the SFC award that will be operative from 2027 to 2032.

○ It is very much **evident that every state will seek the extension of the compensation scheme**. Therefore, it is best to enjoin upon the SFC to examine the need for compensation, the raison d'etre for which was to "compensate losses in transition to GST".

○ It is i**mportant to review the need, viability, and desirability of the compensation scheme in light of the revenue performance of GST** during the past six years.

○ The principles of assigning the balance amount of GST compensation cess collection over the compensation released to states to the divisible pool of taxes also need to be laid down.

➢ **New Institutional Structure of Federal Finance:** In the new federal finance institutional structure, the **GST council** and the finance commission must have a formal relationship since they decide the size of the divisible and distribute it. The SFC should investigate how the **GST Council** can act as the Fiscal Council to oversee the implementation of its award during the period when it is not operational.

Conclusion

The important thing to note is that the SFC needs to rethink its approach conceptually, methodologically, and operationally. To achieve this, its terms of reference should not only allow and assist it in doing so, but also encourage and direct it towards this objective.

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The Name Game: Bharat vs India

This editorial is based on India, Bharat and a Host of Implications which was published in The Hindu on 07/09/2023. It talks about the historical, ideological, constitutional, and international implications of the names Bharat and India, and how their use has political implications.

"Bharat" is a **historical and ideological** name for India, while **"India"** is a **constitutional and international name**. The use of these names has become political due to the formation of an opposition alliance called INDIA (Indian National Developmental Inclusive Alliance).

Recently, the **current government under Prime Minister Narendra Modi has used the term "President of Bharat" instead of "President of India"** on an invitation card for the recent **G-20 Summit**. This **shift in terminology has raised eyebrows and suggests a political dimension to the use of these names**.

What is the Historical Background/History Associated with "Bharat" & "India"?

➢ **Origins of the Names:** The words "India" and its variants, such as "Hind" in Arabic, have foreign origins. **These names were historically used by outsiders to refer to the land south and east of the Indus or Sindhu River**.

➢ **Historical Usage:** During Afghan and Mughal rule, **the term "Hindustan" was often used to refer to the northern regions of the Indian subcontinent.**

○ Later, **European colonial powers, particularly the British, used "India"** to describe not only the northern region but also the entire subcontinent. For them, **it was primarily a geographical designation**.

➢ **Indian Renaissance and Nationalism:** The Indian Renaissance played a crucial role in shaping the consciousness that **all the people in the Indian subcontinent constituted a single nation**. Some promoters of this movement sought to find ancient roots for Indian nationalism and believed that using a name given by foreigners was unacceptable.

○ They **preferred the term "Bharat" and its variations in different languages**.

➢ **Name Controversy:** The **Muslim League**, **led by Muhammad Ali Jinnah**, raised concerns over the use of the name "India" for the newly independent nation. They **argued that "India" should be associated with the Hindu-majority regions**, while the **Muslim-majority areas should be recognized as a separate nation, Pakistan**.

○ This name dispute **reflected the deep-seated religious and political divisions during the partition**.

➢ **Syncretic Word - "Hind":** Figures like **Netaji Subhas Chandra Bose** advocated for a syncretic word, "Hind," which **could be acceptable to a wide range of people, including those from different faiths**.

○ "Hind" is still in use today, **and expressions like "Jai Hind" reflect its enduring significance in Indian culture**.

THE MANY NAMES OF INDIA
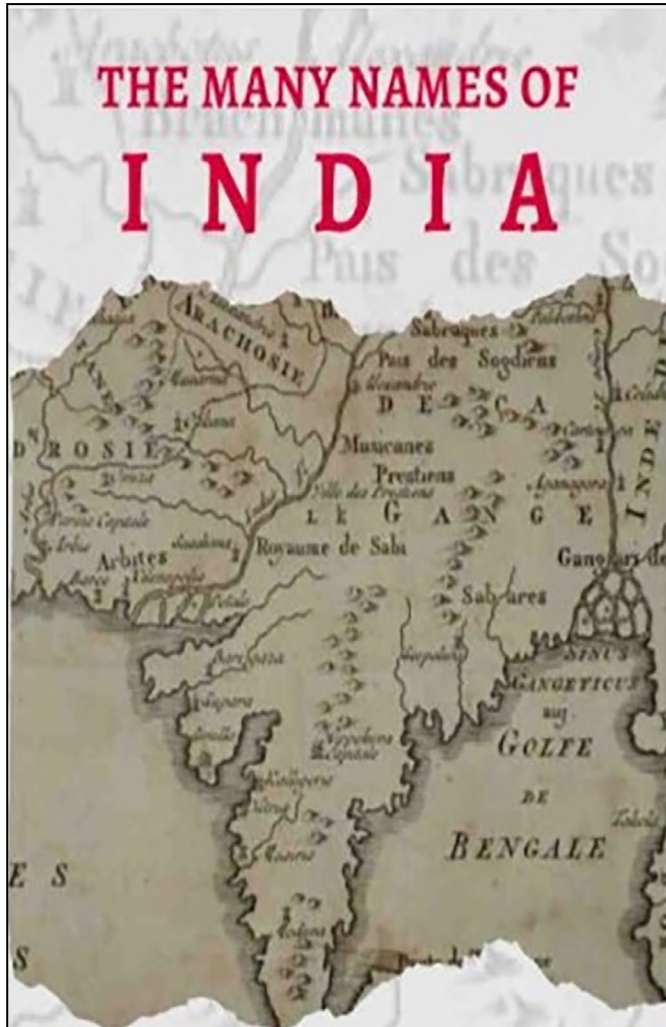
1 MELUHA
Appears in ancient texts of Mesopotamia to refer to the Indus Valley Civilization

2 BHARAT/ BHARATVARSHA
Appears in Puranas as the land between the 'sea in the south and the abode of snow in the north'.

3 ARYAVARTA
Appears in the Manusmriti as the land occupied by the Indo-Aryans

4 JAMBUDVIPA
Appears in Vedic texts and is still used in a few Southeast Asian countries to describe subcontinent

5 HIND/HINDUSTAN
First used by Persians to refer to the land across river Sindhu.

6 INDIA
First used by the Greeks, who transliterated 'Hind' as 'Indus'

How "Bharat" and "India" are Balanced?

➢ **Adoption of the Constitution:** The **Indian Constitution** was **originally adopted by the Constituent Assembly in English**. This underscores the historical and legal importance of the English version as the foundational text of the Constitution.

➢ **Publication of a Hindi Translation:** In addition to the English version, **a Hindi translation of the Constitution was published in 1950**. This translation was signed by the members of the **Constituent Assembly**, and **it was done in accordance with a resolution passed by the Constituent Assembly**.

➢ **Official Status of Both Versions:** The presence of both English and Hindi versions of the Constitution **underscores their official status within the Indian legal framework**.

  ❍ It **highlights the importance of providing access to the Constitution in both of India's official languages**, English and Hindi.

➢ **Constitutional Amendments:** The **58th Amendment** to the Constitution in 1987 likely addressed issues related to the **use of Hindi and English in official documents**, legal proceedings, and government communications.

  ❍ The 58th Amendment **gave the President the power to publish the official text of the Constitution in Hindi**, which could also be used in legal proceedings.

➢ **Article 1(1):** **Article 1(1)** of the Constitution defines the name and character of the country. In the English version, **it states "India, that is Bharat, shall be a Union of States," emphasizing "India" as the primary name**.

  ❍ In the Hindi version, **it reads "Bharat artharth India, rajyon ka sangh hoga," with "Bharat" given prominence**.

➢ **Examples of Names:** Examples such as the **"Gazette of India"** in English and **"Bharat ka Rajpatra"** in Hindi are given to illustrate how this naming convention is applied to various official publications.

  ❍ The **choice of names reflects the dual-language nature of India's official documents and publications**.

Some of the Other Countries that Changed their Name

➤ **Siam to Thailand (1939):**
  ○ The country changed its name to **assert its unity and identity against Western colonial influence in Southeast Asia**. The new name, "Thailand," means **"Land of the Free"** and emphasises the **country's independence and national pride**.
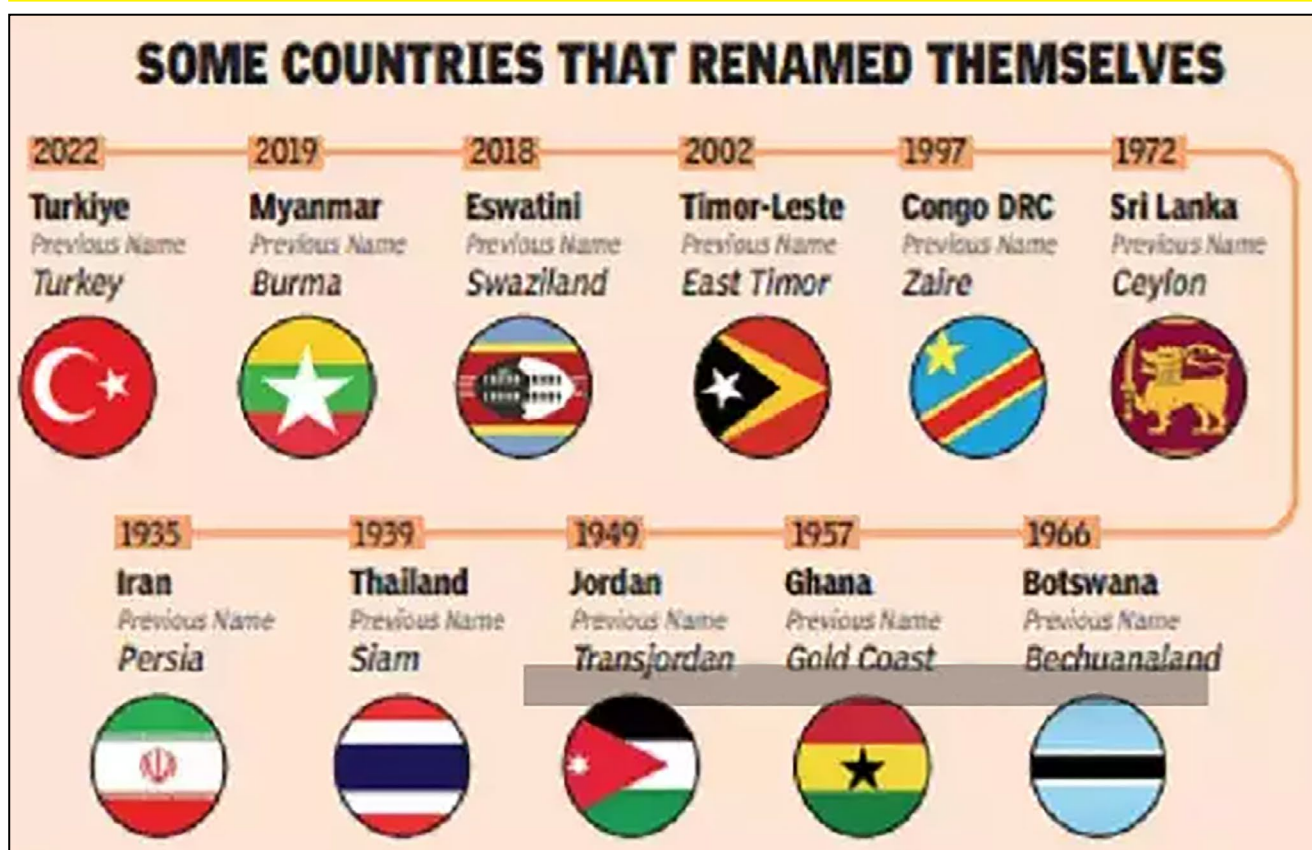
➤ **Zaire to the Democratic Republic of the Congo (1997):**
  ○ The country **changed its name to distance itself from the authoritarian rule** of Mobutu Sese Seko (dictator who ruled for over 3 decades). The new name emphasised the **return to a democratic system of governance**.

➤ **East Pakistan to Bangladesh (1971):**
  ○ In 1971, East Pakistan became independent from West Pakistan after a violent war, forming the new country of Bangladesh. This **marked the end of the Bangladesh Liberation War** and represented the cultural, linguistic, and political distinctions between the two regions.

➤ In 2022, **Turkey changed its name to Türkiye**, as the name signifies the best representation and expression of the Turkish people's culture, civilization and values.

SOME COUNTRIES THAT RENAMED THEMSELVES

2022	**2019**	**2018**	**2002**	**1997**	**1972**
Turkiye	**Myanmar**	**Eswatini**	**Timor-Leste**	**Congo DRC**	**Sri Lanka**
Previous Name	Previous Name	Previous Name	Previous Name	Previous Name	Previous Name
Turkey	Burma	Swaziland	East Timor	Zaire	Ceylon

1935	**1939**	**1949**	**1957**	**1966**
Iran	**Thailand**	**Jordan**	**Ghana**	**Botswana**
Previous Name	Previous Name	Previous Name	Previous Name	Previous Name
Persia	Siam	Transjordan	Gold Coast	Bechuanaland

What is the Current Scenario?

➤ **Use of "India" Internationally:** India has consistently **used the name "India" in all international and multilateral fora**. This signifies that the **country's international identity and recognition are associated with the name "India".**
  ○ This **highlights the practicality and standardisation of using the English name "India"** in global diplomacy and communication.

➤ **Recent Example with Greece:** The reference to the Joint Statement issued during the **Prime Minister's visit to Greece** serves as a contemporary example. The document is titled "India-Greece Joint Statement," **emphasising the use of "India" in official bilateral relations**.

➤ **Dual-Language Approach:** It is noted that India follows a dual-language approach in official documents and diplomatic contexts. Under the **National emblem** in letters of credence given by the President of India to Ambassadors-designate, t**he words "Rashtrapati" and "Bharat Gantantra" are written in Hindi, while the English equivalents, "President" and "Republic of India,"** are used underneath.

❍ This **approach reflects India's commitment to multilingualism and its diverse linguistic heritage**.

➤ **Modern Usage:** The **use of both "Jai Hind" and "Jai Bharat" is noted in contemporary India**, reflecting the coexistence of different cultural and linguistic traditions. For instance, in most of the major speeches, such as the **Independence Day** speech both expressions **are used**, signifying a **recognition of the diverse historical and cultural threads that make up the fabric of the nation**.

Note:

➤ In 2015, the **Centre opposed a name change**, stating that the issue had been extensively deliberated upon during the Constitution's drafting.

❍ The **Supreme Court has twice rejected pleas to rename 'India' to 'Bharat', once in 2016 and then in 2020**, reaffirming that "Bharat" and "India" both find mention in the Constitution.

Conclusion

Such a change could alienate parts of the country that prefer the name "India" to "Bharat." Public sentiment and regional preferences regarding the country's name are diverse and should be considered in any decision. Any departure from this tradition could have cultural and identity implications. The tradition of using "India" in English and "Bharat" in Hindi, reflecting India's linguistic diversity, is considered both wise and constitutionally correct. The question raised is whether changing this tradition to prioritise one term over the other should be a priority at this time when the country is facing other challenges (Unemployment, Environmental Degradation, Poverty, Helathcare, Inequality, Gender Discrimination, etc.).

■■■

Carbon Markets in India: A Catalyst for Green Growth

This editorial is based on the Article STRIKING A GREEN BALANCE which was published in The Indian Express on 15/09/2023. It talks about the development of carbon markets in India and their role in addressing the challenges posed by climate change and carbon emissions.

**Tag:** Biodiversity & Environment, GS Paper - 3, Conservation

As India develops its economy to meet the growing needs of its people, the country will confront serious challenges due to climate change consequences and the allied necessity to curb carbon emissions.

With the impact of **global warming** becoming more severe, there is immense urgency to embrace practices that mitigate **greenhouse gas (GHG) emissions**.

A vibrant carbon trading network is among the numerous solutions that are being adopted or considered to tackle the emergency.

What are Carbon Markets?

➤ **About: Carbon markets** are essentially **a tool for putting a price on carbon emissions**— they establish trading systems where carbon credits or allowances can be bought and sold.

❍ A carbon credit is a kind of **tradable permit that**, per **United Nations** standards, **equals one tonne of carbon dioxide removed**, reduced, or sequestered from the atmosphere.

❍ Carbon allowances or caps, meanwhile, are **determined by countries or governments** according to their emission reduction targets.

❍ Carbon trading started formally in 1997 under the United Nations' **Kyoto Protocol**.

➤ **Types:** There are broadly two types of carbon markets that exist today, viz:

❍ **Voluntary Markets:** Those markets in which emitters buy carbon credits to offset the emission of one tonne of CO_2 or equivalent **greenhouse gasses**.

● Such carbon credits are created by activities which reduce CO_2 from the air, such as afforestation.

● In a voluntary market, a corporation looking to compensate for its unavoidable GHG emissions purchases carbon credits from an entity engaged in projects that reduce, remove, capture, or avoid emissions.

■ For Instance, in the aviation sector, airlines may purchase carbon credits to offset the carbon footprints of the flights they operate.

● In voluntary markets, **credits are verified by private firms as per popular standards**.

❍ **Compliance Markets:** They are **set up by policies at the national, regional, and/or international level and are officially regulated**.

● Today, compliance markets mostly operate under a principle called "cap-and-trade", most popular in the **European Union (EU)**.
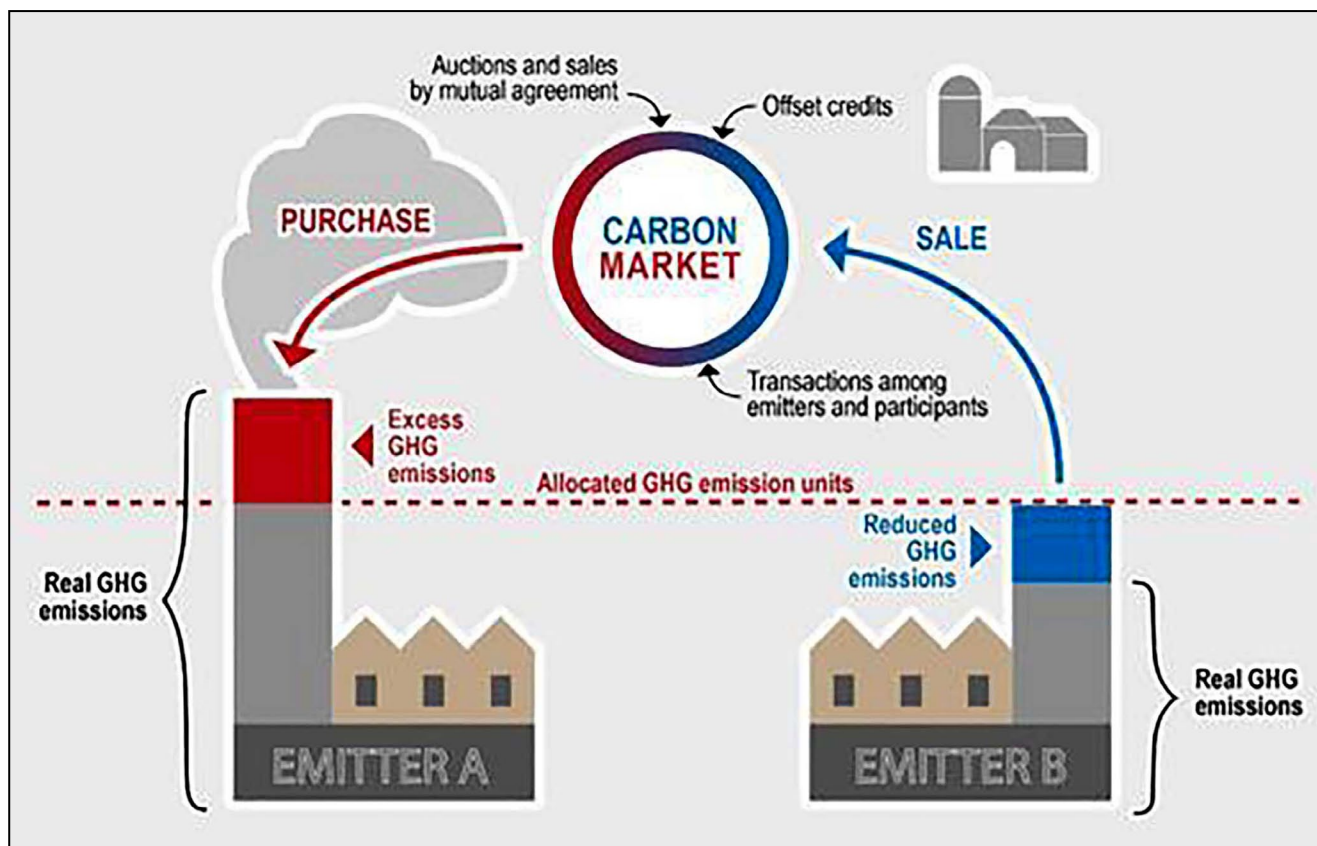
What is the Status of the Carbon Market in India?

➤ In India, the **Centre is planning to set up the Indian Carbon Market (ICM)** by establishing a national framework that will help in decarbonising the domestic economy.

  ○ The draft framework for the Indian Carbon Credit Scheme 2023 was recently notified by the Union government.

  ○ The **Bureau of Energy Efficiency functioning under the Ministry of Power has been tasked to develop the Carbon Trading Scheme** in tandem with the Ministry of Environment, Forest & Climate Change.

➤ **The ICM will have following benefits:**

  ○ It will help India **lower the emissions intensity of its GDP by 45% by 2030** compared to the 2005 levels, thereby meeting its **NDC** target related to its global climate commitments.

    ● ICM would help in decarbonising the commercial and industrial segments (in line with India's **net zero by 2070)**.

  ○ It will give a fillip to energy transition due to its greater scope for covering the country's potential energy segments.

    ● **GHG emissions** intensity targets and benchmarks would then be developed in sync with the domestic emissions trajectory, according to the climate goals.

  ○ Although the ICM would be regulated, it will **offer flexibility to companies in hard-to-abate segments to augment their GHG emission efforts** through carbon market credits. It will also **create more awareness, change and innovation** across hard-to-abate industries.

  ○ It could help **attract finance and technology** for sustainable projects that can generate carbon credits.

What are the Benefits of Carbon Markets?

➤ **Financial Incentives:** Carbon markets establish a **financial incentive system** where entities are allotted emission limits and can trade emission permits. This encourages companies to reduce emissions below their limits and penalizes excess emissions.

➤ **Cost-Effective Reductions:** Carbon markets prioritize **cost-effective emission reductions**. **Companies that can reduce emissions more easily and at a lower cost are incentivized to do so**, leading to overall emission reductions at a lower economic cost.

➤ **Business Flexibility:** Carbon markets provide businesses with **flexibility in choosing how to reduce emissions**. They can invest in cleaner technologies, improve energy efficiency, or purchase carbon credits from emission reduction projects elsewhere, allowing for a diverse range of strategies.

> **Clean Tech Promotion:** These markets **stimulate the development and adoption of cleaner technologies and practices**. Companies are motivated to innovate and invest in technologies that reduce emissions to lower their compliance costs in the carbon market.

> **Support for Sustainability:** Carbon markets **generate funds for sustainable projects that reduce emissions, such as renewable energy, afforestation, reforestation, and energy efficiency projects**. These projects earn carbon credits that can be sold in the market, attracting investments.

> **Climate Goal Alignment:** Carbon markets can be tailored to **align with a country's climate goals and international commitments**, helping nations meet their emission reduction targets, such as those set in the **Paris Agreement**, by creating a mechanism for tracking and reducing emissions.

> **Transparency & Accountability:** Participation in carbon markets requires accurate measurement and reporting of emissions. This **leads to greater transparency and accountability in tracking and reducing greenhouse gas emissions.**

> **Revenue Generation:** Governments can generate revenue through carbon markets by auctioning emission permits or imposing carbon taxes. This revenue can be reinvested in sustainability initiatives or used for other public purposes. Additionally, companies can earn revenue by selling carbon credits.
> ❍ For instance, Tesla, the electric car maker, sold carbon credits to legacy car manufacturers to the tune of USD 518 million in just the first quarter of 2021.

What are the Challenges Before Carbon Markets?

> **Double Counting of Emissions Reductions:** This occurs when the same emission reduction is claimed by more than one entity or under more than one system. This can undermine the environmental integrity and credibility of carbon markets.

> **Quality and Authenticity of Climate Projects:** Ensuring the credibility and genuineness of climate projects poses the challenge of determining their level of additionality, measurability, verifiability, permanence, and the prevention of emissions shifting.

> **Poor Market Transparency:** This relates to the ambiguity about the availability and accessibility of information on the supply and demand of carbon credits or offsets, as well as their prices, transactions, and impacts.

> **Greenwashing:** This is the practice of using carbon credits or offsets to create a false or misleading impression of environmental responsibility, without actually reducing emissions or changing business practices. This can erode public trust and divert resources from more effective climate actions.

> **Regulatory Uncertainty:** This involves the lack of clarity or stability of the policies and regulations that govern carbon markets, both at the national and international levels. This can create risks and barriers for market participants and investors.
> ❍ For instance, in India, there is a question of whether the Ministry of Power is the appropriate Ministry to regulate the **carbon credits trading scheme** or whether it should be the Ministry of Environment.

What Steps can be taken to Overcome the Challenges of Carbon Markets?

> **Developing a common taxonomy and terminology** for carbon credits and offsets, as well as a consistent accounting framework to avoid double counting of emissions reductions.

> **Establishing clear and credible quality criteria** and verification mechanisms for climate projects that generate carbon credits or offsets, based on principles such as additionality, measurability, permanence and avoidance of leakage.

> **Enhancing market transparency and disclosure** by providing reliable and timely data and reporting on the supply and demand of carbon credits or offsets, as well as their prices, transactions and impacts.

> **Preventing and penalizing Greenwashing** by setting clear and enforceable rules and guidelines for making claims and communicating about carbon credits or offsets, as well as ensuring public awareness and scrutiny.

> **Harmonizing and integrating different carbon market systems** at the national, regional and international levels, as well as creating linkages and synergies with other policy instruments and initiatives.

Conclusion

As the country moves steadily towards a **net-zero** world, decarbonising industrial activity will be critical. It is here that industry leaders in carbon management solutions and clean energy transition can play a pivotal role in facilitating the transition towards a net-zero future by helping the nation switch from fossil fuel or legacy technologies to clean energy systems.

As India tries to strike a delicate balance between economic needs and environmental concerns, a vibrant carbon trading mechanism can be crucial in creating a more sustainable future.

■■■

Digital Public Goods: Bridging Gaps in Public Service Delivery

This editorial is based on the Article Era of digital public goods which was published in The Hindu Business line on 14/09/2023. It talks about the challenges faced by Public Service Delivery and the potential of Digital Public Goods to transform public service delivery.

Tag: Governance, GS Paper-2, Government Policies and Interventions

The idea of **Digital Public Infrastructure (DPI)** and **Digital Public Goods (DPG)** is gaining momentum to expedite a country's inclusive economic growth, as exemplified by India's emphasis on DPIs within the **G20 framework**. DPIs can be enabled in largely two ways — either through DPGs or through proprietary solutions.

Digital technologies employed by governments have largely been provided by the private sector that offer a host of advantages, ranging from solutions offered by trusted brands, short term savings, and outsourced development and maintenance — enabling quick fix and returns.

What are Digital Public Goods?

➢ **Digital Public Goods (DPGs)** refer to digital resources and software that are made available for public use, typically with the aim of benefiting a wide range of users and promoting public good.

Digital technologies: electronic tools, systems, devices and resources that generate, store or process data.

Digital   Public Goods

Public Goods: a commodity or service that is provided without profit to all members of a society, either by the government or a private individual or organisation which is to the benefit or well-being of the public.

➢ These resources are often **open-source** and can include various types of digital assets, such as software, data, content, and standards.

➢ DPGs can be used to deliver new and enhanced public services, such as:
  ○ Identity systems
  ○ Healthcare
  ○ Government schemes
  ○ Digital public infrastructure, such as banking and payments

➢ Some examples of DPGs in India include:
  ○ **Aadhar**
  ○ **UPI**
  ○ **National Digital Health Mission**
  ○ **ONDC**

What are the Challenges faced by Public Service Delivery?

➢ **Vendor Lock-In:** Vendor lock-in occurs when an organization becomes heavily dependent on a particular technology provider's products or services. This can limit flexibility and make it difficult to switch to alternative solutions.
  ○ A study by PwC found that vendor lock-in was one of the main barriers to achieving interoperability among different public service delivery systems.
  ○ For example, during the initial stages of its service, Apple restricted consumers to utilizing iTunes. Music purchased via iTunes could only be played within the iTunes application or on an iPod.

➢ **External Dependency:** Relying on external entities, whether they are foreign technology companies or international organizations, can lead to vulnerabilities.

➢ **Lack of Flexibility:** Digitization efforts should be adaptable to changing needs and circumstances.
  ○ For example, during the Covid-19 pandemic, many public institutions had to quickly shift to online service delivery, but faced challenges due to the lack of flexibility of their existing systems.

➢ **Risks of Discontinuation or Unilateral Modifiability:** When external entities control digital systems, there's a risk of these entities discontinuing services or making unilateral changes that may not align with the interests of the local government or organization.
  ○ The **National Digital Literacy Mission (NDLM)** was launched in 2014 by the Government to make India a digitally literate country through a **PPP** model. In 2017, the private sector partner for the NDLM, Tata Consultancy Services (TCS), decided to exit the project. This decision left a huge gap in the implementation of the NDLM and affected its sustainability.

➢ **Interoperability:** Interoperability is crucial for seamless data exchange and collaboration between different systems. Siloed systems that lack interoperability can result in duplication of efforts and fragmentation of data.
  ○ For example, the government's Aadhaar biometric identity program is not integrated with the government's tax system.

➢ **Duplication and Fragmentation:** Duplication of efforts and fragmentation of systems can lead to inefficiencies and increased costs. Coordination and collaboration among different organizations involved in digitization efforts are essential to avoid these issues.

  ❍ For example, the government has multiple programs for providing healthcare and education to the poor.

➢ **Public Service Delivery Costs:** Ultimately, the goal of digitization efforts in public service delivery is to improve efficiency and reduce costs. However, when the challenges mentioned above are not adequately addressed, digitization efforts can lead to increased costs instead.

  ❍ For example, the government spends a significant amount of money on subsidies, but many of these subsidies do not reach their intended beneficiaries.

How can Digital Public Goods be a better Alternative Method of Public Service Delivery?

➢ **Cost-Effective:** DPGs are **typically open source and freely available,** which can significantly reduce costs associated with software licensing, development, and maintenance. This means that governments and organizations can allocate their budgets more efficiently to other essential services.

  ❍ The **Alliance for Affordable Internet (A4AI)** is one such example. It aims to drive down the cost of internet access in low- and middle-income countries.

➢ **Inclusivity:** DPGs are designed to be **non-excludable and non-rivalrous, ensuring that all citizens have equal access to public services**. This inclusivity promotes social equity and ensures that marginalized populations are not left behind.

➢ **Customizability:** DPGs can be **adapted and customized to meet the specific needs of different regions and communities**. Governments can tailor these digital solutions to address local challenges and requirements, leading to more effective service delivery.

➢ **Rapid Deployment:** DPGs, being **open source** and readily available, **can be implemented quickly**. This is especially crucial in emergency situations or when there's a need for rapid response, such as in healthcare emergencies or disaster management.

➢ **Transparency:** Open-source DPGs often have transparent development processes, which can **enhance public trust. Citizens can scrutinize the code and understand how services work, leading to greater transparency** in public service delivery.

➢ **Innovation:** DPGs **encourage innovation as they allow for collaborative development.** This means that a global community of developers can contribute to improving and expanding the functionality of these digital resources, resulting in better services and constant innovation.

➢ **Interoperability:** DPGs can be **designed with interoperability in mind, making it easier for different government agencies and systems to communicate and share data**. This reduces redundancy and streamlines service delivery.

➢ **Reduced Vendor Lock-in:** DPGs can **support digital sovereignty by reducing dependence on foreign platforms and technologies**, and promoting local innovation and ownership.

➢ **Global Best Practices:** DPGs often incorporate best practices and lessons learned from various regions and countries. This can help governments adopt proven solutions and avoid common pitfalls in public service delivery.

What are the Challenges for Digital Public Goods?

➢ **Financing and sustainability**: DPGs often face **difficulties in securing adequate and consistent funding for their development, maintenance and scaling**. They also need to establish viable business models that ensure their long-term viability and impact.

➢ **Technical capability and interoperability**: DPGs **require high levels of technical expertise and capacity to design, implement and manage** them. They also need to adhere to open standards and protocols that enable them to interoperate with other systems and platforms.

➢ **Digital divide and inclusion**: DPGs need to address the **digital divide that exists between and within countries, regions and communities**. They need to ensure that their solutions are accessible, affordable, relevant and user-friendly for all potential beneficiaries, especially the most vulnerable and marginalized groups.

➢ **Data and digital rights**: DPGs need to **respect and protect the data and digital rights of their users, such as privacy, security, consent, ownership and governance**. They need to comply with applicable laws and regulations, as well as ethical principles and best practices.

What are the Solutions for Better implementation of Digital Public Goods?

➢ **Introduce DPGs (Digital Public Goods) and Infrastructure:** As part of a digital transformation strategy, governments can introduce DPGs and digital infrastructure to align the vision and goals of different stakeholders.

○ This can involve the development and deployment of open-source solutions that foster collaboration, efficiency, and coordination among various government agencies and departments.

➢ **Develop Open-Source Policies:** To reduce dependence on proprietary solutions and promote innovation and transparency, governments can institutionalize open-source policies. These policies can encourage the procurement and use of open-source technologies in government projects.

○ By embracing open-source, governments can benefit from a wider community of developers, cost-effective solutions, and greater flexibility in customizing and adapting digital tools to meet specific needs.

➢ **Reform Tendering System:** The tendering system plays a crucial role in the selection and implementation of digital projects. Reforming this system to better acknowledge the needs and capacity of systems integrators as partners is essential.

○ This reform can facilitate the customization and integration of **Digital Public Goods** with existing systems, ensuring their sustainability and scalability.

○ It also encourages collaboration between governments and technology providers.

➢ **Leverage Existing Digital Infrastructure:** Governments should look to leverage existing successful digital public infrastructure when embarking on new projects.

○ For example, India's **CoWIN platform**, which supported its **Covid-19** vaccination drive, built upon previous digital initiatives like eVin and **India Stack**.

○ By building on proven systems, governments can save time, resources, and effort while addressing large-scale challenges efficiently.

➢ **Build an International Leadership Coalition:** Collaboration on a global scale is crucial for advancing digital public goods. Governments can take the initiative to build an international leadership coalition that includes heads of states, high-level executives from the private sector, and other stakeholders.

○ This coalition can facilitate the sharing of best practices, mobilize resources, and create synergies to accelerate the development and adoption of high-impact digital solutions in developing countries.

Conclusion

While the government bears the responsibility of delivering public services, ensuring sustainable development demands a collaborative effort that brings together the private and public sector. This collaboration is essential for the successful implementation of DPGs at a massive scale, reaching millions of individuals. This is precisely where the private sector can play a crucial role in supporting and driving user-centric innovation, thereby encouraging a broader adoption of digital solutions.

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Gender Disparity in Science: Challenges and Paths to Equity

This editorial is based on Shanti Swarup Bhatnagar Prize: Hegemony of old boys' club in science which was published in Indian Express on 18/09/2023. It talks about the gender disparity in the Shanti Swarup Bhatnagar Prize, an Indian science award, and highlights the lack of recognition for women scientists.

Tag: Social Justice, GS Paper - 2, Gender, Education, Government Policies & Interventions, Issues Related to Women.

Recently, the **Council of Scientific and Industrial Research (CSIR)** announced the list of awardees for the **Shanti Swarup Bhatnagar Prize** for 2022. Notably, there were **no female scientists chosen for the SSB Awards 2022**.

The prize **is renowned for its substantial impact on the scientific career of its recipients** and the prestige it brings to their institutions. However, it has **gained criticism for its persistent lack of recognition of women scientists**. Despite its significance in the scientific community, **the prize has repeatedly failed to acknowledge and honor the contributions of female scientists**.

This **gender disparity** in the prize's history **highlights the ongoing challenges and biases faced by women in science** and underscores the **need for greater efforts to promote gender equality and diversity in scientific recognition**.

What is Shanti Swarup Bhatnagar Prize?

➢ **Institution and History:** The prize **was established in 1958 by the CSIR**, indicating its long-standing history in recognizing scientific excellence.

➢ **Annual Awards:** The prize is **awarded annually to a select group of scientists, under the age of 45 years**, emphasizing the **recognition of young and promising talent in the field of science**.

➢ **Multiple Domains:** The prizes are **distributed across seven distinct domains of science**, which include physical, chemical, biological, medical, engineering, mathematics, and atmospheric sciences.

Drishti IAS

International Day for Women and Girls in Science

ABOUT
- Celebrated every year on February 11 since 2015
- Observed by the United Nation to promote the full and equal access and participation of women in Science, Technology, Engineering and Mathematics (STEM) fields.

THEME 2023
- Innovate. Demonstrate. Elevate. Advance. Sustain (I.D.E.A.S.)

STATUS OF WOMEN PARTICIPATION IN THE SCIENCE SECTOR
- According to the All India Survey on Higher Education 2020-2021, number of science researchers in India has doubled from 30,000 in 2014 to over 60,000 in 2022.
- Women's participation is the highest in biotechnology at 40% and medicine at 35%.

INITIATIVES TAKEN FOR WOMEN IN SCIENCE
- Gender Advancement for Transforming Institutions (GATI):
  - To develop a comprehensive Charter and a framework for assessing Gender Equality in STEM.
- Vigyan Jyoti Scheme:
  - To create a level-playing field for the meritorious girls in high school to pursue STEM in their higher education.
- Indo-US Fellowship for Women in STEMM (WISTEMM) program:
  - Women scientists can work in research labs in the US.
- Consolidation of University Research for Innovation and Excellence in Women Universities (CURIE) Programme:
  - Improving R&D infrastructure and establishing state-of-the-art research facilities in order to create excellence in S&T in women universities.

Women who Shaped India's Scientific History

Anandibai Gopalrao Joshi (1865-1887)
- First Indian female to study and graduate with a degree in western medicines from the United States.
- Believed to be the first women to set foot on American soil from India.

Kadambini Ganguly (1861-1923)
- Becomes India's first female doctor & practitioner of western medicine in the whole South Asia.

Bibha Chowdhary (1913-1991)
- First woman high energy physicist of India and the first woman scientist at the TIFR.
- IAU honoured her by naming a white yellow dwarf star after her name.

Edavaleth Kakkat Janaki Ammal (1897-1984)
- Made significant contributions to genetics, evolution, phytogeography and ethnobotany.
- First director of the Central Botanical laboratory at Allahabad.

Debala Mitra (1925-2003)
- First Indian archaeologist served as Director General of the Archaeological Survey of India.
- Explored and excavated several Buddhist sites.

Kamala Sohonie (1911-1998)
- First Indian woman to receive a PhD in a scientific discipline.
- Discovered the enzyme 'Cytochrome C' (helps in energy synthesis).

Anna Mani (1918-2001)
- First woman to join the Meteorological department.

Kamal Ranadive (1917-2001)
- Established India's first tissue culture research laboratory at the Indian Research Centre in Mumbai.

Sanghamitra Bandyopadhyay
- She has been conferred the Padma Shri in 2022.
- She is the first woman director of the Indian Statistical Institute.

Ms. Sujatha Ramdorai
- She was awarded the Padma shri award in 2023.
- She became the first Indian to win the prestigious ICTP Ramanujan Prize in 2006.
- She was also awarded the Shanti Swarup Bhatnagar Award, the highest honour in scientific fields by the Indian Government in 2004.
- She is also the recipient of the 2020 Krieger-Nelson Prize for her exceptional contributions to mathematics research

What is the Criticism Against SSB Awards?

- **Gender Disparity:** The SSB Prize has a noticeable gender disparity issue, with the latest set of winners in both 2021 and 2022 consisting exclusively of male scientists. This underscores the **persistent underrepresentation of women for this award**.
  - The fact that **women constitute only around 14% of India's working scientists underscores a significant gender dispari**ty in the field of science.
- **Lack of Female Awardees:** Over the past two years, despite recognizing numerous scientists for their outstanding contributions, **the CSIR has failed to identify a single woman scientist deemed to have made a sufficiently noteworthy impact** in the field of science and technology.
- **Inclusivity in the Field:** Only **19 out of nearly 600** SSB prizes have been awarded to women scientists **which indicates a long-standing historical gender imbalance in the award's history**.
  - This persistent lack of recognition for women's contributions in science **raises questions about inclusivity and gender equality** in the scientific community.
- **Lack of Transparency:** The composition of the Advisory Committee responsible for selecting the SSB Award winners has traditionally **been covered in secrecy, making it immune to public accountability and scrutiny.**
  - This lack of transparency can further perpetuate biases and hinder efforts to address gender disparities.
- **Nominations by Predominantly Male Figures:** To be considered for the award, a scientist must be **nominated by individuals in influential positions**, including

vice-chancellors, directors, academy presidents, deans, CSIR governing body members, and former winners.

- ❍ The **observation here is that these nominators are predominantly men, which may result in a bias** against nominating their female colleagues.

What is the Scenario of Other Awards Regarding Women's Participation?

- ➢ **Nobel Prize:** The **Nobel Prizes**, which are globally renowned and prestigious, also suffer from a significant gender disparity.
  - ❍ Out of the **343 science prizes awarded, only 24 have been given to women**, indicating a notable underrepresentation of female laureates.
- ➢ **Encouraging Progress:** Despite the historical gender disparity in Nobel Prizes, there is a somewhat **encouraging trend where 31 out of the 61 prizes awarded to women in all categories have been granted since the year 2000**.
  - ❍ This suggests **a positive shift towards greater recognition of women's achievements**, though still with room for improvement.
- ➢ **Contrast with Bhatnagar Awards:** In contrast to the Nobel Prizes, the SSB prizes **do not appear to demonstrate similar signs of progress in recognizing women scientists**.
  - ❍ The lack of comparably encouraging developments in this prestigious Indian award highlights **the need for more proactive efforts to bridge the gender gap and promote diversity and inclusivity** in scientific recognition.

Are there any Steps Taken by the CSIR to Promote Women's Participation?

- ➢ CSIR is recognised as the largest R&D organisation in India, employing a substantial number of scientists. Given its size and influence, CSIR has a **significant responsibility to address the issue of women's underrepresentation** in science and promote gender diversity.
  - ❍ **Appointment of First Women Chief:** The appointment of N Kalaiselvi as its chief in 2022, making her the first woman to hold this position, **is a notable milestone in promoting women's leadership in science** and research organisations.
  - ❍ **Gender Parity Survey:** The fact that CSIR conducted a gender parity survey in 2022 demonstrates a **commitment to understanding the extent of gender disparities within the organisation**.

What are the Causes of the Underrepresentation of Women in Science?

- ➢ **Societal Stereotypes and Biases:** Deep-rooted stereotypes and biases that are associated with **male-dominated scientific fields can discourage women from pursuing careers in these fields**.
  - ❍ These **stereotypes can manifest in the form of implicit biases** in hiring, promotion, and recognition processes.
- ➢ **Lack of Accountability:** Despite the heightened discourse, there is a notable **absence of individuals or institutions taking accountability** for the challenges and biases that hinder the careers of women scientists.
  - ❍ This **points to a gap between acknowledging the issues and implementing concrete solutions**.
- ➢ **Intersectional Challenges:** Gender disparities in science are often **compounded by other forms of discrimination, including ageism, casteism, and sexism**. These multiple layers of bias can create significant barriers for women scientists.
- ➢ **Workplace Discrimination:** Discrimination, including **harassment and unequal treatment, remains a significant barrier** for women in scientific fields. This hostile environment can deter women from pursuing and staying in the **Science, Technology, Engineering and Mathematics (STEM)** careers.
- ➢ **Unequal Access to Resources:** Women may have **limited access to research funding, laboratory resources, and networking opportunities** compared to their male counterparts, affecting their career progression and recognition.

What Should be the Way Forward?

- ➢ **Importance of Recognition:** Despite the presence of women in scientific roles, the ongoing challenge lies in ensuring that their **contributions are recognised and valued equally**.
  - ❍ This **highlights the need for addressing biases and barriers** that may hinder women's career advancement and recognition in the scientific community.
- ➢ **Networking and Collaboration:** Establish platforms and networks that facilitate collaboration and knowledge sharing among women scientists. **Encourage participation in national and international scientific communities**.
- ➢ **Educational Reform:** Enhance access to quality STEM education for girls and women at all levels, **starting from primary education**.
  - ❍ This includes **implementing programs and scholarships** to encourage girls to pursue science-related subjects.

➤ **Realising Manifold Significance of Higher Representation:** Women's representation in science and technology is essential to design inclusive and sustainable societies.

  ○ Gender **equality is not just an ethical imperative, but also a business priority.** Organisations with greater diversity among their executive teams tend to have higher profits and greater innovation capability.

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The Promises that IMEC Offers

This editorial is based on "IMEC promises a new model of globalisation" which was published in Hindustan Times on 18/09/2023. It talks about the significance of the IMEC project for India, how it offers an alternative to BRI and what role can India play in its success.

Tag: International Relations, GS Paper 2, Global Groupings, Groupings & Agreements Involving India and/or Affecting India's Interests

Launching an alternative model for **inter-continental infrastructure creation** through the proposed **India-Middle East–Europe Corridor (IMEC)** is one of the many major takeaways of the **2023 summit of G20** held in New Delhi.

It would not be wrong to regard **IMEC as the boldest geo-economic initiative** the world has seen since **China unveiled its Belt and Road Initiative (BRI)** in 2013.

In scale, scope and impact, IMEC promises to be a game-changer as it **brings together highly capable partner countries to pool resources** and remake supply chains, production networks and zones of influence to **make globalisation less China-centric.**

What is the India-Middle East-Europe Economic (IMEC) Corridor?

➤ **About:**

  ○ The India-Middle East-Europe Economic Corridor (IMEC) Project was signed at the G20 Summit in New Delhi and holds significant geopolitical and economic implications for India.

  ○ Its 8 signatories are: **India, the US, Saudi Arabia, UAE, the EU, Italy, France,** and **Germany.**

➤ **Components:**

  ○ It will consist of **Railroad, Ship-to-Rail networks and Road transport routes** extending across two corridors - **East (connecting India to Arabian Gulf)** and **North (connecting the Gulf to Europe).**

  ○ Apart from rail and shipping options, IMEC would also **offer electricity and energy (gas and hydrogen) pipeline connectivity** options.

Corridor trajectory

The map shows the multiple routes being considered for the India-Middle East-EU Corridor. Indian ports on the west coast of India could be connected to five shortlisted ports in West Asia

Existing line
Under construction line
Missing line
Place name
Ports
Sea links
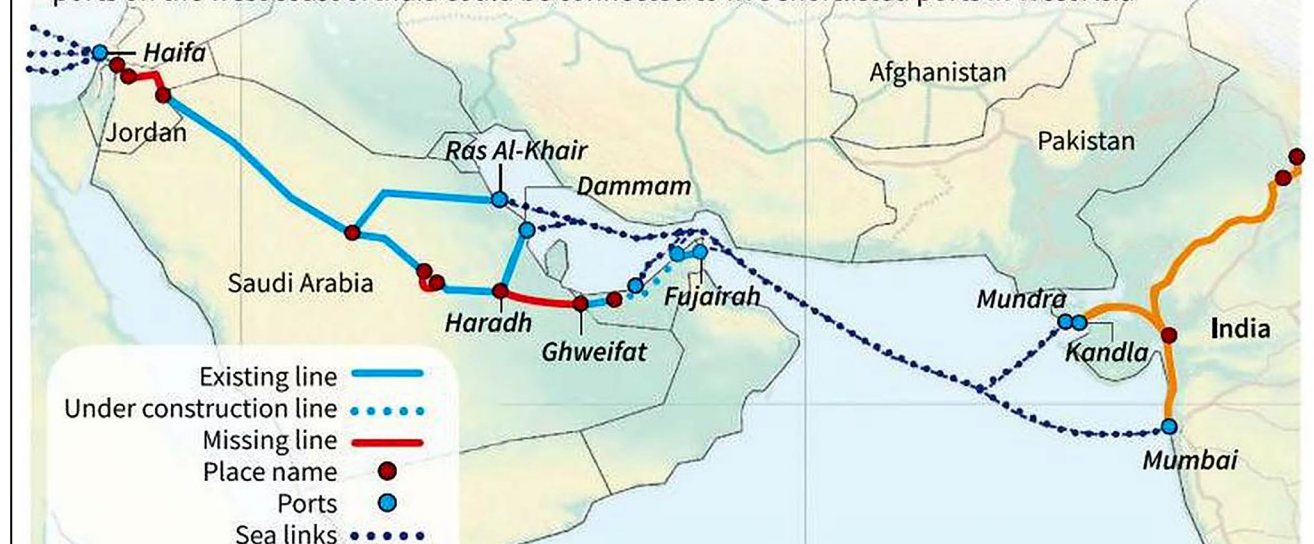
What is the Significance of IMEC for India?

➤ **Overall Economic Growth:** For India, IMEC presents a means for **faster trade, transport and infrastructural growth** and for building a regional architecture with strategically aligned nations.

○ India's exports of engineering goods, **green hydrogen and green ammonia** could emerge as key gainers under IMEC.

➢ **Strengthen Trade with EU:** Through its multimodal design of linking distant ports, connecting several countries via ship, undersea cables, rail and road, **IMEC can cut the time for economic exchanges between India and Europe by 40%.**

   ○ Since the **EU is India's 2nd-largest trading partner,** this agreement can boost India's trade with the EU.

   ○ If **India's free trade agreements** with the **Gulf Cooperation Council (GCC)** and the EU come through, IMEC will be a **massive institutional catalyst for the economic fortunes** of all three of these partners.

➢ **Increase Influence in Middle-East:** For India, the project holds economic promise through its large **diaspora in the Middle-East**, contributing to energy security and serving as a market for Indian goods.

   ○ It positions India strategically, fostering influence over the Indian Ocean and **expanding reach into Mediterranean, Atlantic regions.**

➢ **Reduced Trade Time:** This project would confer various strategic and economic advantages in terms of **reduced transit time between India, the Middle East, and Europe,** and most importantly, it would help India bypass the troubled trade routes of Pakistan and Afghanistan and **revive the age-old spice route.**

   ○ At present, the **only route** through which goods are transported to Europe is the **Suez Canal**.

➢ **Reducing BRI's Influence:** Another Keypoint is that China, who often tends to take centre stage, set the rules and standards and dominate economic flows wherever it is present, be it the BRI or the **RCEP**, **has been excluded from IMEC.**

   ○ Though some IMEC members remain part of BRI, **IMEC's success can reduce BRI's ever-expanding influence.**

How is IMEC different from China's BRI?

➢ The I**MEC is envisaged to respect the sovereignty of nations**; unlike the BRI which is centrally designed, the IMEC is based on consultations with all concerned.

➢ The BRI is designed to serve China's interests, while the **IMEC is for the common benefit of all in the region.**

➢ While the BRI aims at generating employment only for the Chinese companies, the **IMEC is to focus on generating employment for the local population.**

➢ While the BRI grants loans at exorbitant rates, the **IMEC proposes to follow the best international debt practices** thus offering a **better alternative to China's debt trap diplomacy.**

What can be the Challenges in the Success of IMEC?

➢ **Implementation Challenges:**

   ○ The first and foremost challenge is to create a firm plan to establish the corridor. An ambitious project of this scale can face **challenges in having sufficient investments and speedy creation of infrastructure.**

➢ **Challenges in Coordination:**

   ○ **Laying a network of railway lines, roads and port connectivity** across countries requires a high-level of coordination and planning.

➢ **Countries' Own Geopolitical Challenges:**

   ○ The corridor also passes through **Jordan and Israel,** which are now for a long time going through geopolitical challenges and would **require a fine balance of economic and diplomatic manoeuvring.**

➢ **Rivalry with BRI:**

   ○ The IMEC is undoubtedly being seen as a counter to the Chinese BRI. **Competition between the two is inevitable** as both the initiatives have similar objectives.

What Measures Can be Taken to Strengthen the IMEC Project?

➢ **Leveraging Diplomatic Ties with US:**

   ○ Geographically, the **US is beyond the ambit of the IMEC**'s area of operation. But diplomatically, it is a crucial driver of IMEC by **knitting together a range of its formal allies** and strategic partners across Europe, Middle East and South Asia.

      • In the present context, steering of IMEC by the US is valuable because that is how transit countries like Jordan and Israel can be integrated with the rest.

   ○ The **India-Israel-UAE-US (I2U2) grouping** and the US's strategic goal of getting Saudi Arabia to formally recognise Israel are also, in some way, tied to the IMEC idea.

➢ **Expanding Global Outreach:**

   ○ Like its success in bringing Russia and the US to a consensus at G20, India may also **help IMEC connect with the International North-South Transport Corridor (INSTC)**.

      • It would help facilitate trade in the vast region between the **Caspian sea** and the **Mediterranean sea**.

○ Most critically, IMEC can also open **new connectivity options to debt-ridden Africa** without much extra cost and ensure better utilisation of assets already built.

➢ **Land-Bridging Requirements:**

○ Mega infra projects for augmenting capacities are at various stages of development.

● The focus needs to be on the land bridging requirements; **constructing the missing rail links, terminals, and inland container depots (ICDs)** at all major Gulf and Mediterranean ports is crucial.

○ No mega transport corridor can be viable by depending only on the end-to-end traffic.

● Therefore, **IMEC must consider connecting hinterlands** by developing the **feeder rail routes which could merge on the main corridor.** This will have a multiplier effect on all stakeholders.

➢ **India's Role:**

○ It is a **historic moment for India as a regional leader** that can bring up an entire regional economy through the combination of its technical leadership and outward-looking approach.

○ India should **advocate for a mix of public and private financing** as some projects may not be financially viable without public subsidies or grants. India can **support the rail projects of GCC, Jordan, and Israel through its PSUs.**

○ India should also consider a proposal of **laying a dedicated gas pipeline from the Middle-East to India** to support the needs of its household consumption.

○ Besides all this, India must continue to **remain neutral but vigilant** in evolving geo-politics keeping its national interests and remain committed and **engaged with other transport and energy corridors;** INSTC, **Suez Canal, Arctic Route via Vladivostok.**

Conclusion

The beauty of IMEC is that it **contains something attractive in it for all eight parties** that have signed the founding MoU. Undoubtedly, a multilateral cross-border and cross-oceanic connectivity endeavour requires diplomatic coordination and consensus management.

Compared to China's unilateral BRI, the IMEC may be slower as it is a relatively large-group but the fact that India and its strategic partners are now present as a force on the geo-economic map through IMEC is a **positive start.**

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India and Canada Ties at a Downturn

This editorial is based on *Serious allegations: On Canadian Prime Minister Justin Trudeau's charges against India* **which was published in The Hindu on 20/09/2023. It talks about the recent diplomatic challenges in Indo-Canadian relations.**

Tag: International Relations, GS Paper-2, Global Groupings, Groupings & Agreements Involving India and/or Affecting India's Interests

Recently, the **Canadian government expelled a senior Indian diplomat** accusing India for playing a role in the assassination of a prominent Sikh Canadian leader, Hardeep Singh Nijjar in Canada. In the aftermath, India swiftly retaliated by **issuing a statement that denied any involvement in the issue** and expelled a senior Canadian diplomat.

With these changes happening, let's dive into the **significance of Indo-Canadian relations and what difficulties they need to work on together to make their bilateral relationship** stronger and lasting.

What are the Significant Pillars of India Canada Relationship?

➢ **Political Relations:**

○ India established **diplomatic relations with Canada in 1947**.

○ India and Canada **have a long standing bilateral relationship based on shared principles** such as democracy, **human rights**, rule of law, and pluralism.

➢ **Economic Cooperation:**

○ Until recently,bilateral trade between India and Canada amounted to **$6 billion** annually, and Indian investment in Canada was valued at over **$4 billion**.

○ According to Invest India, **Canada is the 18th largest foreign investor in India** with an overall investment of about $3,306 million from April 2000 to March 2023.

○ Over **600 Canadian companies** have a presence in **India** and over **1,000 Canadian** companies are actively pursuing business in the **Indian market**.

○ Both countries are engaged in technical negotiations for a **Comprehensive Economic Partnership Agreement (CEPA)** including trade in goods, services, investment, and trade facilitation.

➢ **Diaspora Connections**:

○ Canada **hosts one of the largest Indian diasporas in the world**, numbering 16 lakh people of Indian

origin, accounting for more than **3 %** of the total Canadian population and 700,000 **Non Residential Indians (NRIs)**.

➢ **Education and Innovation**:
  ○ Indian students studying in Canada now comprise **approximately 40% of the entire population** of international students in Canada.
  ○ Canada's Intellectual Property Office and India's **Department of Industrial Policy and Promotion (DIPP)** agreed to strengthen cooperation in the area of **Intellectual Property Rights (IPR)**.

➢ **Strategic Importance:**
  ○ To diversify the Canadian economy, India is a critical partner under its **Indo-Pacific** strategy, given the country's growing economic and demographic importance in the region.

➢ **Science and Technology:**
  ○ Department of Biotechnology **under IC-IMPACTS program implements joint research projects in health care, agri-biotech and waste management.**
    ● IC-IMPACTS (the India-Canada Centre for Innovative Multidisciplinary Partnerships to Accelerate Community Transformation and Sustainability) is the first, and only, **Canada-India Research Centre of Excellence.**
  ○ The Department of Earth Science and Polar Canada have started **a programme for exchange of knowledge and scientific research on Cold Climate (Arctic) Studies.**

➢ **Space:**
  ○ **ISRO and Canadian Space Agency (CSA) have signed MOUs** in the field of exploration and utilization of outer space.
  ○ -**ANTRIX**, the Commercial arm of **ISRO**, has launched several nanosatellites from Canada.
  ○ ISRO in its 100th Satellite **PSLV (Polar Satellite Launch Vehicle)** launched in 2018, also flew Canadian first LEO (Low earth Orbit) satellite, from Indian spaceport Sriharikota.

What are the Challenges of the India Canada Relationship?

➢ **Cultural Sensitivities:**
  ○ India's leadership has expressed concerns about certain fringe groups within this community that continue to sympathize with the idea of an independent Sikh state, known as **Khalistan,** separate from India.
  ○ Canada permitted a parade that depicted the 1984 assassination of the Indian Prime Minister Indira Gandhi by her bodyguards. This portrayal was seen as glorifying violence by Sikh separatist.

  ○ **Michael Kugelman,** director of the South Asia Institute at the Wilson Center think-tank, says the combination of increasing Sikh activism in Canada, growing Indian pressure on Ottawa, and Ottawa's unwillingness to address Indian concerns has "plunged bilateral relations into a deep crisis today."

➢ **Visa and Immigration Policies**:
  ○ In recent years, there have been reports of Indian students facing difficulties obtaining **visas** to study in Canada, which has caused dissatisfaction and raised concerns in India.

➢ **Differing Stances on International Issues**:
  ○ Recently, during the **G20** meeting in New Delhi, Canada and India did not have bilateral talks, but instead met on the sidelines
  ○ Differing opinions on issues such as the political situation in Kashmir have strained diplomatic ties.

➢ **Agricultural Trade Disputes:**
  ○ Indian dairy and poultry producers have expressed **trade related concerns** over **Canadian exports** of products such as pulses and canola oil.

What Should be the Way Forward?

➢ **Addressing Khalistan Issue:**
  ○ Encourage **open and inclusive dialogue between all stakeholders** including members of the Sikh community, Indian government representatives and Canadian officials.
  ○ Both countries should take **legal measures to address any political extremism**.

➢ **Economic Diversification:**
  ○ Expanding trade beyond traditional sectors to include emerging technologies, **renewable energy**, and healthcare can open new avenues for cooperation and economic growth.

➢ **Cultural Exchange:**
  ○ Promoting cultural exchange programs, art exhibitions, and film festivals can foster a deeper understanding of each other's cultures and traditions.

➢ **Environmental Cooperation:**
  ○ Given the shared commitment to combat **climate change**, India and Canada can work together on green technologies, sustainable development, and renewable energy initiatives.

➢ **Diplomatic Engagement:**
  ○ Regular high-level diplomatic dialogues and exchanges can help align their positions on global issues and promote mutual understanding.

➤ **Security Cooperation:**
  ○ Robust cooperation on counter terrorism issues particularly through the framework of the JWG on Counter Terrorism

Conclusion

Both India and Canada must endeavor to transcend politically contentious issues and focus on areas of mutual cooperation and collaboration.The future holds great promise for this dynamic partnership, and both nations must seize the opportunities it presents.

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Three years of the Abraham Accords

This editorial is based on *Three years of the Abraham Accords* which was published in The Hindu on 21/09/2023. It talks about the achievements,obstacles and prospective trajectories associated with Abraham Accord while placing a particular emphasis on their relevance in Indian Context.

> **Tag:** International Relations, GS Paper-2, Global Groupings, Groupings & Agreements Involving India and/or Affecting India's Interests.

Three years ago, in September 2020, the United States mediated the **Abraham Accord** between the **United Arab Emirates**, **Bahrain** and **Israel**, promising to normalize ties between these **Arab Gulf states** and **Israel.**

Abraham Accord heralded greater political, economic and security integration not only in the Middle East but has also brought better opportunities for India.

What are Abraham Accords?

➤ **About:**
  ○ The **Abraham Accords** are a series of agreements signed in **2020** between Israel and several Arab states, marking a historic shift in diplomatic relations in the Middle East.
  ○ The Accords were named 'Abraham Accords' in reference to the supposed common ancestor of the Jews and the Arabs, the biblical Abraham, and as an expression of brotherhood.
➤ T**he primary countries involved in the Abraham Accords include:**
  ○ **Israel:** As a key party to the Accords, Israel agreed to normalize diplomatic relations with the participating Arab nations, marking a significant departure from the historically hostile relationships it had with many Arab states.

  ○ **United Arab Emirates (UAE):** The UAE was the first Arab country to formally announce its normalization of relations with Israel under the Abraham Accords. This historic agreement includes the establishment of full diplomatic relations, as well as economic, technological, and cultural exchanges.
  ○ **Bahrain**: Bahrain followed the UAE's lead by signing a similar agreement with Israel. The Bahrain-Israel Peace Agreement also encompasses diplomatic relations and cooperation in various sectors.
  ○ **Sudan:** Sudan joined the Abraham Accords by agreeing to normalize relations with Israel. This marked a major shift in Sudan's foreign policy and led to the removal of Sudan from the U.S. list of state sponsors of terrorism.
  ○ **Morocco**: Morocco, another Arab nation, joined the Accords with a commitment to normalize relations with Israel. This agreement included the United States' recognition of Morocco's sovereignty over Western Sahara in exchange for Morocco's engagement with Israel.

What is the Significance of the Accord?

➤ The agreement shows how the **Arab countries** are gradually **decoupling themselves from the Palestine question.**
➤ **Full diplomatic ties** will be established between **Israel**, the **United Arab Emirates** and **Bahrain** which will have a positive impact on the entire region.
➤ The deal buys **UAE** a lot of **goodwill in the US,** where its image has been tarnished by its involvement in the **Yemen war.**
➤ **In South Asia, it will put Pakistan in a bind,** whether to follow UAE's steps (will be seen as giving up Islamic cause of Palestine) or not to follow the UAE (since it is already in feud with the Saudis over not taking up the Kashmir case, Pakistan cannot afford another hostile Islamic Country).

What are the Advancements since the Abraham Accords?

➤ The Israeli embassy opened in Abu Dhabi in June 2021, UAE also opened its embassy in Tel Aviv.
➤ The **trade** between the UAE and Israel amounted to 900 million USD. There was also an agreement signed for a free trade area concerning government procurement and Intellectual property rights(IPR) endorsed in April 2022
➤ A **three-way trade water accord** signed between **Israel**, **UAE** and **Jordan**. Israel would either build a new desalination plant or deliver water to member countries.

➢ When it comes to **tourism**, after direct flights were established, UAE hosted more than 67,000 Israeli tourists during the first month after the Accords.

➢ For many Israelis unhappy with the economic woes of their country, the **UAE** became a destination for job seekers".

➢ **Prosperity Green & Blue agreement** between Israel, the UAE, and Jordan determined that a solar field to supply 600 megawatts of electricity to Israel.

What are the shortcomings of the Abraham Accord?

➢ Despite the initial goal of Arab organizers, cooperation among **Israel** and its **Arab partners** has failed to produce tangible improvements in the I**sraeli-Palestine** calculus

➢ Major players in the **Middle East** are still out of the agreement such as **Saudi Arabia** has held its firm commitment to the pre-existing **Arab Peace Initiative**.

➢ **Oman** and **Qatar** declined to formalize their ties within this framework.

How are Abraham Accords linked with Indian Interests?

➢ **Diplomatic Ties:**
  ○ The **Abraham Accords** provides the atmosphere for India to foster stronger ties with **Arabs** countries as well as Israel.
  ○ Formation of **I2U2** observed as an offspring of abraham accords. It was also unofficially described as the "**West Asian Quad**" and the "**Indo-Abrahamic construct.**

➢ **Investment opportunities:**
  ○ The grouping encourages joint investments in six mutually identified sectors which includes **food security**, **health**, **transportation**, **space**, **water** and **energy**
  ○ Recently, the International Federation of **Indo-Israel Chamber of Commerce (IFIICC)** was established in Dubai.

➢ **Technological Cooperation:**
  ○ India's t**echnological capabilities**, finances from the UAE and Israel's innovative capabilities could lead to further cooperation among the three nations.
  ○ In the first of these ventures, an **Emirati project** for a **robotic solar panel** was endorsed by **Eccopia**, an Israeli company, which has a manufacturing base in India.

➢ **Diaspora Relations**:
  ○ The vibrant **Indian diaspora** in the Gulf now has the convenience of direct flights between the UAE and Israel, as well as between Israel and Bahrain.

○ **Indian students** are enjoying increased ease of travel, gaining improved access to our universities and the opportunity to explore international study programmes.

What are the Challenges of the Abraham Accords?

➢ **Palestinian Issue** :
  ○ Challenges concerning the **Palestinian future** and the opposition to these Accords from **Iran** and **Qatar.** 86% of Palestinians believe the normalization agreement with the UAE serves only Israel's interests and not their own

➢ **Lack of regional support:**
  ○ **Bahrain**, a small country that seeks protection and takes political cues from Saudi Arabia, has become a topic of concern for those hoping to normalize relations with Israel

➢ **Cultural Conflicts :**
  ○ **Shia-Sunni** rifts in the region may get wide and violent.Saudi Arabia (Sunni) and Iran (representing Shia) have a long history of enmity. .

➢ **Multilateral Power Struggle**:
  ○ The **US** may be a pre-eminent power in the Middle East, but Russia has made a space for itself, spending a lot less money. In recent years, China has indicated its willingness to play a larger role in this region, and is close to both UAE and Israel and, increasingly, Saudi Arabia

➢ **Funding Constraints:**
  ○ **Abraham Fund** was set up as a part of the Accord and it delegated approximately 3 **billion USD** to development initiatives in the Middle East.Change in administration in the US which has seemingly diluted the potential of the Accord.

What is the Way Forward ?

➢ **Open Dialogue:**
  ○ Addressing the **Palestinian** issue by open and inclusive dialogue among all signatory parties including Israel and the participating states.
  ○ Encourage **diplomatic solution**s for regional conflicts in Middle east particularly in Yemen,Syria and Libya

➢ **Counter Extremism:**
  ○ Avoid using land and resources for **separatist movemen**ts and interfering into internal affairs of neighboring countries.
  ○ Share intelligence and cooperate to counter extremist ideologies,

- ➢ **Multilateral Diplomacy:**
  - ○ Continue to engage with **multilateral diplomacy** through United Nations, Arab League and others
- ➢ **Balancing Regional Relations:**
  - ○ A balance between **Shia and Sunni**, between Persian and Arab, is key to sustainable peace.
- ➢ **Regional cooperation**:
  - ○ Encourage collaborative efforts on economic development,technology, energy security ,food security, health and cultural exchanges.

Conclusion

While it is clear that a good beginning has been made for closer Israel-Arab ties with the Abraham Accords, their success and extension to other countries will depend on a range of factors that are currently impacting the geopolitical environment, including the US-China rivalry and West Asia politics of alignments and realignment.

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Women's Reservation Bill for Gender Equality

This editorial is based on *the article Lok Sabha passes historic women's reservation Bill* **which was published in The Hindu on 21/09/2023. It talks about the greater participation of women in the political process.**

Tag: Indian Polity, GS Paper 2, Parliament,Issues Related to Women, Executive, State Legislature,Government Policies & Interventions, Indian Constitution, Gender.

The Constitution (One Hundred and Twenty-Eighth Amendment) Bill, 2023 has been unanimously passed from Lok Sabha and Rajya Sabha. The Bill seeks to reserve one-third of the total number of seats in Lok Sabha and state legislative assemblies for women.

What are the Key features of the Bill?

- ➢ **Reservation for Women**: The Bill reserves, as nearly as may be, one-third of all seats for women in Lok Sabha, state legislative assemblies, and the Legislative Assembly of the **National Capital Territory of Delhi**. This will also apply to the seats reserved for SCs and STs in Lok Sabha and state legislatures.
- ➢ **Commencement of reservation**: The reservation will be effective after the **census** conducted after the commencement of this Bill has been published. Based on the census, **delimitation** will be undertaken to reserve seats for women. The reservation will be provided for a period of 15 years. However, it shall

continue till such date as determined by a law made by Parliament.

- ➢ **Rotation of seats:** Seats reserved for women will be rotated after each delimitation, as determined by a law made by Parliament.

What are the Key features of the Bill?

- ➢ **Reservation for Women in Lower House:** The Bill provided for **inserting Article 330A** to the constitution, which borrows from the provisions of Article 330, which provides for reservation of seats to SCs/STs in the Lok Sabha.
  - ○ The Bill provided that reserved seats for women may be allotted by rotation to different constituencies in states or Union Territories.
  - ○ In the seats reserved for SCs/STs, the Bill sought to provide one-third of the seats to be reserved for women on rotational basis.
- ➢ **Reservation for Women in State Legislative Assemblies:** The Bill **introduces Article 332A,** which mandates the reservation of seats for women in every state Legislative Assembly. Additionally, one-third of the seats reserved for SCs and STs must be allocated for women, and one-third of the total seats filled through direct elections to the Legislative Assemblies shall also be reserved for women.
- ➢ **Reservation for Women in NCT of Delhi (New clause in 239AA):** Article 239AA to the constitution grants special status to the Union Territory of Delhi as national capital with regards to its administrative and legislative functioning.
  - ○ **Article 239AA(2)(b)** was amended by the bill accordingly to add that the laws framed by parliament shall apply to the National Capital territory of Delhi.
- ➢ **Commencement of Reservation (New article - 334A):** The reservation will be effective **after the census conducted** after the commencement of this Bill has been published. Based on the census, **delimitation will be undertaken** to reserve seats for women.
  - ○ The reservation will be provided for a **period of 15 years.** However, it shall continue till such date as determined by a law made by Parliament.
- ➢ **Rotation of Seats:** Seats reserved for women will be rotated after each delimitation, as determined by a law made by Parliament.

What is the Background of the Reservation for Women in Politics in India?

- ➢ The issue of reservation for women in politics **can be traced back to the Indian national movement.**

In 1931, in their letter to the British Prime Minister, submitting the **official memorandum jointly issued on the status of women** in the new Constitution by three women's bodies, leaders Begum Shah Nawaz and **Sarojini Naidu.**

➢ The **National Perspective Plan for Women** recommended in 1988 that reservation be provided to women right from the level of the **panchayat to that of Parliament**

➢ These recommendations paved the way for the historic enactment of the **73rd and 74th amendments to the Constitution** which mandate all State governments to reserve **one-third of the seats for women** in Panchayati Raj Institutions and one-third of the offices of the chairperson at all levels of the Panchayati Raj Institutions, and in urban local bodies, respectively. Within these seats, **one-third are reserved** for **Scheduled Caste/Scheduled Tribe** women.

➢ The National Policy for the Empowerment of Women (2001) had stated that reservation will be considered in higher legislative bodies.

➢ In May 2013, the **Ministry of Women and Child Development** constituted a **committee on the status of women**, which recommended ensuring at least **50% reservation of seats for women in the Local bodies,** State Legislative Assemblies, Parliament, Ministerial levels and all decision-making bodies of the government.

➢ In 2015, the **Report on the Status of Women** in India noted that the representation of women in state assemblies and Parliament continues to be dismal. It recommended reserving at least **50% seats for women** in local bodies, state legislative assemblies, Parliament, ministerial levels, and all decision-making bodies of the government.

What are the Arguments for the Bill?

➢ **Gender Equality:**
   ○ Women representation in politics is a vital step towards gender equality
   ○ However, according to **Global Gender Gap Report 2022,** India ranks 48th out of 146 in Political Empowerment.
   ○ Notwithstanding its rank, its **score is quite low at 0.267.** Some of the best-ranking countries in this category score much better. For instance, **Iceland is ranked 1 with a score of 0.874** and **Bangladesh is ranked 9 with a score of 0.546.**

➢ **Historical Underrepresentation:**
   ○ The number of women MPs has increased from 5% in the first Lok Sabha to 15% in the 17th Lok Sabha; but the number continues to be quite low

   ○ A 2003 study about the effect of reservation for women in panchayats showed that women elected under the reservation policy invest more in the public goods closely linked to women's concerns.
   ○ The Standing Committee on Personnel, Public Grievances, Law and Justice (2009) had noted that reservation of seats for women in local bodies has enabled them to make meaningful contributions.

➢ **Women's right to Self-representation and Self-determination :**
   ○ If a group is not represented proportionally in the political system, its ability to influence policy-making is limited. The **Convention on the Elimination of All Forms of Discrimination Against Women** provides that discrimination against women must be eliminated in political and public life
   ○ The various surveys do indicate that **women representatives from Panchayati Raj have worked commendable in the development and overall well-being of society** in villages and many of them would definitely want to work on the larger scale, however, they face various challenges in the political structure prevalent in

➢ **Diverse Perspectives:**
   ○ A more diverse legislature that includes a significant number of women can bring a broader range of perspectives to the decision-making process. This diversity can lead to better policy formulation and governance.

➢ **Empowerment of Women:**
   ○ Women's reservation in politics empowers women at various levels. It not only encourages more women to participate in politics but also inspires women to take on leadership roles in other sectors.

➢ **Promotion of Women's Issues**:
   ○ Women in politics often prioritize and advocate for issues that directly affect women, such as gender-based violence, women's health, education, and economic empowerment. Their presence can lead to the prioritization of these issues in policy discussions.

➢ **Role Models**:
   ○ Women leaders in politics can serve as role models for young girls, encouraging them to aspire to leadership positions in various fields. Representation in politics can break stereotypes and inspire future generations.
   ○ **Indira Gandhi** served as the **first and only women Prime Minister of India** from **1966 to 1977**
   ○ **Sushma Swaraj** was the **second woman external affairs minister of India after Indira Gandhi.**

What are Arguments against the Bill?

➢ Women are not a homogeneous community like, say like, a caste group. Therefore, the same arguments made for caste-based reservations cannot be made for women.

➢ Reserving seats for women is opposed by some who claim that doing so violates the Constitution's guarantee of equality. If there is a reserve, they claim, women won't be competing on merit, which could decrease their status in society.

What are the Challenges regarding Implementation of this Bill?

➢ **Issues related to Delimitation:**
   ○ The reservation shall come into effect only after delimitation is undertaken and delimitation will be undertaken only after the relevant figures of the next census are published.
   ○ The date of the next census is entirely undetermined. So the delimitation is doubly indeterminate.

➢ **OBC Issue with the bill:**
   ○ The women's reservation bill, which reserves 33% of seats for women in the Lok Sabha and state assemblies, does not include a quota for women from the OBCs.
   ○ Geeta Mukherjee Committee (1996) recommended extending women reservation to OBCs.

How can Women's Representation be Effectively put into practice?

➢ **Strengthen Independent Decision Making:**
   ○ Establish an independent monitoring system or committees that explicitly prohibits family members from influencing the decision making process of women representatives.
   ○ It can be implemented by reducing the influence of patriarchal mindset.

➢ **Increasing Awareness and Education:**
   ○ Creating awareness among women about their rights and the importance of their participation in politics is essential. **Educational programs and awareness campaigns** can help to increase women's political participation.

➢ **Addressing Gender-based Violence and Harassment:**
   ○ Gender-based violence and harassment are major obstacles to women's participation in politics. Addressing these issues through policy and legal measures can create a safer and more supportive environment for women in politics.

➢ **Reforms in the Electoral Process:**
   ○ Reforms such as introducing proportional representation and preferential voting systems can help to increase women's representation in politics by ensuring that more women get elected.
   ○ These are only a few approaches to increase the number of women in Indian politics. To effect long-lasting change, a multifaceted strategy addressing multiple challenges is required.

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Creative Economy: Opportunities and Challenges

This editorial is based on the Article Creative industries can boost economies which was published in The Hindustan Times on 23/09/2023. It talks about the significance and impact of creative industries in India.

Tag: Economy, S GS Paper - 3, Growth & Development, GS Paper-2, Government Policies & Interventions

The arts, music, film, theater, festivals, literature, crafts and the stories they hold aren't just forms of entertainment; they represent our identities and lived experiences, drive employment and build understanding and empathy between people. The Prime Minister in his opening address to the **G20 Culture Ministers' summit** in Varanasi spoke of the value artists and craft workers contribute to the economic success of creative industries. And the **G20 Leaders Declaration** emphasizes how culture is a key driver of the **SDGs**.

What is meant by the Creative Industries?

➢ The creative industries are a **group of economic activities that are based on original ideas**. They include businesses that are centered around creativity, such as:
   ○ Design, Music, Publishing, Architecture, Film and video, Crafts, Visual arts, Fashion, TV and radio, Yoga, Literature, Computer games, etc.

➢ The creative industries are **also known as the cultural industries or the creative economy**.
   ○ It is also called the **Orange Economy**.

What is the Significance of Creative Industries?

➢ Creative industries are a significant source of commercial and cultural value in India.

➢ They contribute to **3.1% of global GDP** and are **estimated to contribute about 8% of India's employment.**

➢ Estimates suggest that India's creative economy accounts for an **overall market size of about $36.2 billion**.
  ○ In 2019, India's creative economy accounted for **121 billion of exports**.

➢ In the pre-Covid period, India's creative industries **contributed 2.5% to India's GDP**.

➢ India is also among the top 10 countries stimulating global trade in creative goods and services, and is the world's largest producer of films (2022).

➢ Creative industries can help with:
  ○ Job creation
  ○ Economic growth
  ○ Tourism
  ○ Exports
  ○ Overall societal development
  ○ Sustainable human development

What are the Benefits of Creative Industries?

➢ **Job Creation and Income Generation:** The creative industries are a significant source of jobs and income, particularly for young and talented individuals. According to a 2023 report by the **Asian Development Bank**, the creative industries contribute nearly 8% of India's employment.

➢ **Spillover Effects on the Wider Economy:** The creative industries generate important spillovers to various sectors of the economy, including innovation, tourism, education, and urban development. These industries drive innovation by promoting creativity, experimentation, and collaboration across different sectors and disciplines.

➢ **Tourism Boost:** The creative industries attract tourists and visitors who engage in cultural experiences, spending on cultural goods and services, accommodations, transportation, and other related activities. This influx of tourists contributes significantly to India's tourism industry and the broader economy.

➢ **Education and Skills Development:** Creative industries play a pivotal role in education and skills development. They provide learning opportunities and enhance cultural awareness and diversity. Creative educational programs nurture talent and offer pathways for skill development in various artistic and technical fields.

➢ **Urban Development:** Creative industries can revitalize urban areas by creating vibrant and attractive spaces for cultural and social interaction. Cultural hubs, theaters, galleries, and entertainment districts contribute to the overall livability of cities and can spur economic development in these areas.

➢ **Promotion of India's Heritage and Resources:** Creative industries serve as a platform to showcase India's rich and diverse culture, history, and traditions, both domestically and internationally. They also leverage India's abundant natural and human resources, such as biodiversity, craftsmanship, and entrepreneurship.

➢ **Global Branding and Soft Power:** By exporting creative goods and services, India can increase its brand value and influence consumer choices in the global market. The creative industries enhance India's soft power by facilitating cross-cultural exchange and knowledge sharing with other countries, strengthening diplomatic and cultural ties.

What are the Challenges before Creative Industries?

➢ **Policy Neglect:** Creative industries often remain on the sidelines of national and state policies, lacking priority status. Poor coordination among relevant ministries exacerbates the issue.

➢ **Infrastructure Deficiencies:** Inadequate infrastructure, encompassing transportation, digital networks, and basic amenities, disrupts creative goods and services' production, distribution, and mobility for workers and consumers.

➢ **Data Deficiency:** A shortage of reliable data regarding the size, impact, and contribution of India's creative industries hampers sector development, policymaking, and recognition.

➢ **Funding Struggles:** Securing financial support is a challenge for creative industries, with limited, irregular public funding and risk-averse private investment. Innovative financing mechanisms like crowdfunding and venture capital are underutilized.

➢ **Intellectual Property Vulnerability:** The creative sector faces threats from piracy, counterfeiting, and **IP rights** infringement, both online and offline. Outdated legal frameworks and a lack of awareness hinder the protection and enforcement of creative rights.

What are Some initiatives taken to Promote Creative Industries?

➢ The **National Film Development Corporation (NFDC)** is a **public sector enterprise under the Ministry of Information and Broadcasting** that aims to plan, promote, and organize an integrated and efficient development of the Indian film industry.

➢ The **National Institute of Design (NID)** is an **autonomous institution under the Ministry of Commerce and Industry** that offers education, research, consultancy, and outreach services in various domains of design.

> The **Scheme for Promotion of Culture of Science (SPoCS)** is a scheme **under the Ministry of Culture** that aims to foster a culture of science, technology, and innovation among the masses, especially the youth, through various activities such as science festivals, exhibitions, competitions, workshops, and camps.

> The **Scheme for Promotion of Indian Classical Music and Dance (SPIC MACAY)** is a **voluntary movement that organizes programmes of classical music and dance, folk arts, crafts, yoga, meditation, and cinema in schools, colleges, and institutions across the country** to enrich the quality of formal education and increase awareness of the rich and diverse cultural heritage of India.

> The **International Cooperation (IC) Scheme** is a scheme **under the Ministry of Micro, Small and Medium Enterprises (MSME) that aims to enhance the competitiveness of MSMEs** by providing financial assistance for participating in international exhibitions, trade fairs, buyer-seller meets, and other promotional events.

> The **UNESCO's Creative City Network** is a program that helps cities **to share** best practices and **develop partnerships** involving public and private sectors as well as civil society **to strengthen the creation, production, and distribution** of cultural activities.
>   ❍ Under this program, **Mumbai** has been designated as **Creative City of Films** and **Hyderabad as a Creative City of Gastronomy**.
>   ● Earlier, Indian cities like **Chennai and Varanasi** have been included in **UNESCO Cities of Music** while **Jaipur** has been included in the City of **Crafts and Folk Arts**.

What should be done to Promote Creative Industries?

> **Leveraging the diversity and richness of India's cultural heritage** and traditions to create unique and authentic products and services that appeal to both domestic and global markets.
>   ❍ For example, developing new forms of storytelling, music, dance, art, design, and crafts that reflect the pluralism and dynamism of India's society and history.

> **Promoting the use of digital technologies and platforms** to enhance the accessibility, quality, and innovation of creative outputs.
>   ❍ For example, using animation, visual effects, gaming, and immersive media to create engaging and interactive experiences for various audiences and sectors.

> **Fostering a culture of collaboration and co-creation** among different stakeholders in the creative economy, such as artists, entrepreneurs, researchers, educators, policymakers, and consumers.
>   ❍ For example, establishing networks, hubs, and clusters that facilitate knowledge exchange, skill development, and resource sharing among creative practitioners and industries.

> **Addressing the challenges and gaps in the creative economy**, such as the lack of data, policy support, intellectual property protection, and financing.
>   ❍ For example, conducting more research on the creative industries, developing more conducive policies, strengthening the enforcement and awareness of **IP rights**, and providing more access to funding and investment opportunities.

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G-20 Diplomacy and a Shifting World Order

This editorial is based on the Article G-20 diplomacy and a shifting world order which was published in The Hindu on 26/09/2023. It talks about the Changing World Order and Challenges because of China's perception about India's G20 presidency.

Tag: International Relations, GS Paper - 2, Bilateral Groupings & Agreements, Groupings & Agreements Involving India and/or Affecting India's Interests, Non-aligned Movement (NAM).

India scripted amazing success at the **G-20** meeting in Delhi and, despite the odds, succeeded in producing a consensus Declaration worthy of an event of this magnitude. Securing an agreement on almost a hundred issues on the agenda, apart from that on the **Russia-Ukraine war**, was no mean achievement. All told, the **G-20 outcomes** seemed to mirror the hopes and the wishes of the wider global community.

From condemnation of terrorism to climate issues, from trebling of **renewable energy** capacity to matters such as lifestyle for **sustainable development** and reform of **multilateral development banks**, apart from highlighting India's contributions such as **digital public infrastructure** and **Unified Payments Interface**, the Declaration seemed to echo the prevailing mood in the G-20 of favoring compromise over conflict and fully endorsing Prime Minister Narendra's dictum of "One Earth, One Family, One Future".

What are the Key Outcomes of the G20 Summit?

> **African Union** joined the G20 Organization and became a member from this year.

➢ **New Delhi Leaders Declaration** has been signed by the country heads as per which Inclusive Growth will be emphasized.

➢ **India-Middle East-Europe Economic Corridor** has been proposed and passed by the leaders of these countries.

➢ **Global Biofuel Alliance** has been created by the member countries which will emphasize the maximum use of Biofuel.

➢ Launch of One Future Alliance and Creation of a **Global Digital Public Infrastructure Repository**.

➢ The G20 leaders agreed to pursue **tripling renewable energy capacity globally by 2030** and accepted the need to phase-down unabated coal power.

Why India needs to be cautious about Chinese Perception?

➢ **Geo-Political and Security Issues:** China's apprehension about the G-20's focus solely on economic cooperation and not on addressing geo-political and security concerns raises concerns for India. China's reservations suggest that it may interpret India's presidency and initiatives as attempts to sideline or challenge its influence in these areas. This could lead to friction in bilateral relations.

➢ **Geo-Political Tool:** China's implicit warning against the **India-Middle East-Europe Economic Corridor** Plan becoming a "geo-political tool" indicates its suspicion that India's economic initiatives could be used to counter its regional interests. This implies that India must tread carefully to avoid escalating tensions.

➢ **Western Perceptions:** China perceives the G-20 as a Western tool to impose its world view, which could lead to China viewing India's leadership in the G-20 with suspicion. India should be cautious not to be perceived as aligning too closely with Western interests to prevent further strain in Sino-Indian relations.

➢ **Hegemonic Ambitions:** China's status as a regional hegemon in Asia and its continued efforts to expand its influence pose a potential threat to India's security and interests. India must be cautious because it is a prime target in China's strategic calculations, and any misstep could escalate tensions.

➢ **Quad Membership:** India's membership in the **Quad**, a grouping seen as anti-China, adds another layer of complexity to Sino-Indian relations. China is likely to closely monitor India's actions within this alliance, and any provocative moves could lead to a deterioration in bilateral ties.

➢ **Global Uncertainties:** The global context is marked by multiple crises, including geopolitical competition, inflation, and conflicts like the one in Ukraine. India needs to be cautious because these uncertainties can spill over into its own neighborhood and affect its security and stability.

What is the Current Status of the World Order?

➢ **Emerging Blocs:** There are two emerging blocs in the world order. One is led by Western countries, while the other is led by China and Russia. These two blocs are often referred to as "enduring rivals" and are engaged in a battle for global supremacy. This rivalry suggests a shift in the balance of power on the global stage.

➢ **Challenges to the Rules-Based Order:** The concept of a **"rules-based world order"** has been challenged, and it is no longer a universally accepted framework. Instead, the world is experiencing what some describe as an "emerging world disorder." This disorder is characterized by the resurgence of antagonistic blocs and a diminishing role for non-aligned nations.

➢ **NATO's Role:** The stalemate in the Ukraine conflict and concerns about Russian expansionism have prompted the U.S. to strengthen and expand **NATO**. This has led to the prospect of a U.S.-equipped territorial force in Ukraine and the inclusion of non-NATO allies in a U.S.-led alliance aimed at countering authoritarianism, primarily represented by Russia and China.

➢ **Evolution of G-20:** The role of the G-20 has evolved over the years. Initially, during the 2008-09 economic crisis, it played a crucial role in addressing economic issues and preventing a global economic downturn. However, in recent years, the G-20's focus has shifted more towards addressing global political conflicts rather than economic concerns.

➢ **Russia-China Strategic Alignment:** Russia and China have been deepening their strategic alignment, forming a closer partnership in various areas, including diplomacy and trade. This alignment has implications for global power dynamics and poses challenges to Western influence.

➢ **Global Influence:** China is actively challenging U.S. naval power in the Pacific Ocean, and Russia is seeking to expand its influence in Africa by supplying food grains at subsidized prices to African states. This reflects a broader trend of major powers extending their reach and influence beyond their traditional spheres of control.

Has the NAM Policy lost its Relevance?

➢ **Challenges to Non-Alignment:** The concept of **non-alignment**, which was historically associated with countries not aligning with major power blocs during the **Cold War**, is facing significant challenges.

○ New alignments and alliances are making it increasingly difficult for countries to maintain their non-aligned status.

○ These new alliances, such as **BRICS**, are themselves becoming more involved in global politics and security matters, which complicates the idea of non-alignment.

➢ **Shrinking Space for Non-Alignment:** The proliferation of security agreements and the emergence of multiple international relationships have significantly reduced the space for countries to pursue a truly non-aligned foreign policy.

○ With the strengthening of rival camps, there are limited opportunities for nations to maintain neutrality and independence in global affairs.

➢ **Diminished Influence:** In the face of new alignments and power dynamics, countries like India may find it challenging to exert significant influence on global events.

○ Despite participating in international forums like the G-20 and emphasizing the importance of the **Global South**, their ability to shape the course of world events may be limited.

○ This implies a diminishing role for traditionally non-aligned nations in the international arena.

What should India do in Such a Situation?

➢ **Diversify Alliances and Partnerships:** India can pursue a strategy of diversification by expanding its alliances and partnerships with a wide range of countries. This includes strengthening ties with both traditional allies and emerging powers. India has already taken steps in this direction by deepening relationships with countries like the United States, Russia, Japan, and countries in the **European Union**.

➢ **Active Diplomacy:** India can play an active role in international diplomacy, mediating conflicts, and contributing to global governance. Being a proactive participant in regional and international forums such as the **United Nations**, **G-20,** and **BRICS** can help India assert its influence on critical global issues.

➢ **Economic Integration:** Promote economic integration and trade alliances with multiple countries. India should focus on boosting economic ties with key partners in regions like Southeast Asia, Africa, and Latin America. Expanding trade networks can enhance India's economic influence and geopolitical standing.

➢ **Maintain Strategic Autonomy:** While diversifying alliances, India should also maintain strategic autonomy and ensure that its decisions align with its national interests. Avoiding over-dependence on any single power or bloc is crucial to retaining flexibility in foreign policy.

➢ **Invest in Defense and Security:** Given the evolving security challenges in the region, India should continue to invest in its defense capabilities to safeguard its sovereignty and territorial integrity. Strengthening its military partnerships with like-minded nations can enhance its security posture.

➢ **Engage in Multilateralism:** Actively engage in multilateral institutions and forums to shape global norms and policies. India can advocate for reforms in institutions like the **United Nations Security Council** to ensure a more equitable representation of emerging powers.

➢ **Focus on Development and Connectivity:** India can pursue a development-centric foreign policy approach by investing in infrastructure projects, connectivity initiatives, and capacity-building programs in neighboring and strategically important regions. This can foster goodwill and strengthen regional influence.

➢ **Adaptability and Pragmatism:** India should remain adaptable and pragmatic in its foreign policy decisions, ready to respond to changing circumstances and opportunities as they arise.

○ The external affairs minister has clearly said,"This is a time for us to engage America, manage China, cultivate Europe, reassure Russia, bring Japan into play, draw neighbors in, extend the neighborhood and expand traditional constituencies of support."

■■■

Mediation Act, 2023: Easing Judiciary Workload

This editorial is based on *the article A clear message to industry on dispute resolution* **which was published in The Hindu on 23/09/2023. It talks about the Mediation Act, 2023 that aims to foster a link between the mediation and the arbitration of commercial disputes, thus reducing the burden on Indian courts.**

Tag: Indian Polity, GS Paper 2, Dispute Redressal Mechanisms, ADR, Parliament, Government Policies & Interventions, Indian Constitution.

In the recent monsoon session of Parliament, both Houses passed the **Mediation Bill, 2023,** and upon receiving the assent of the President of India, is referred to as the **Mediation Act, 2023**. This Act seeks to promote mediation, particularly institutional mediation, and provide a mechanism for enforcing mediated settlement agreements.

What is Mediation?

➢ Mediation is a **voluntary, binding process** in which an impartial and neutral mediator facilitates disputing parties in reaching a settlement.

➢ A mediator **does not impose a solution** but creates a conducive environment in which disputing parties can resolve all their disputes.

➢ Mediation is a **tried and tested alternative method of dispute resolution.** It has proved to be a great success in the cities of Delhi, Ranchi, Jamshedpur, Nagpur, Chandigarh and Aurangabad.

➢ Mediation is a **structured process where a neutral person** uses specialized communication and negotiation techniques. Litigants participating in the mediation process have unequivocally endorsed it.

➢ Other than mediation there are some other dispute resolution methods such as **Arbitration**, **Negotiation and Conciliation**.

FIVE TYPES OF ADR

CONCILIATION — NEUTRAL THIRD PARTY TO COMMUNICATE WITH THE PARTIES IN THE EXCHANGE OF INFORMATION AND SETTLEMENT OPTIONS

NEGOTIATION — TRADITIONALLY OCCURS DIRECTLY BETWEEN THE PARTIES AND THEIR COUNSEL AND DOES NOT INVOLVE A NEUTRAL THIRD PARTY

MEDIATION — A VERY FLEXIBLE PROCESS THAT CAN BE EFFECTIVELY USED AT ANY TIME DURING THE COURSE OF THE DISPUTE

ARBITRATION — A NEUTRAL ARBITRATOR RENDERS A DECISION, CALLED AN AWARD, AFTER THERE HAS BEEN A PRESENTATION OF EVIDENCE

COLLABORATIVE LAW — BOTH PARTIES ARE REPRESENTED BY A COLLABORATIVE ATTORNEY AND BOTH PARTIES AGREE NOT TO LITIGATE

What are the Key Features of the Act?

➢ **Pre-litigation Mediation**:
  ○ Parties must attempt to settle civil or commercial disputes by mediation before approaching any court or certain tribunals.
  ○ Even if they fail to reach a settlement through pre-litigation mediation, the court or tribunal may at any stage refer the parties to mediation.

➢ **Disputes not Fit for Mediation**:
  ○ The Act contains a list of disputes which are not fit for mediation. These include disputes:
    ● relating to claims against minors or persons of unsound mind,
    ● involving criminal prosecution, and
    ● affecting the rights of third parties.
  ○ The central government may amend this list.

➢ **Applicability**:

- ○ The Act will apply to mediations conducted in India:
  - involving only domestic parties,
  - involving at least one foreign party and relating to a commercial dispute,
  - if the mediation agreement states that mediation will be as per this Act.

➢ **Mediation Process**:

- ○ Mediation proceedings will be confidential, and must be completed within 180 days (may be extended by 180 days by the parties).
- ○ A party may withdraw from mediation after two sessions.

➢ **Mediators**:

- ○ Mediators may be appointed by:
  - the parties by agreement, or
  - a mediation service provider.
- ○ Mediators must disclose any conflict of interest that may raise doubts on their independence.

➢ **Mediation Council of India**:

- ○ The central government will establish the Mediation Council of India.
- ○ The Council will consist of
  - a chairperson,
  - two full-time members (with experience in mediation or ADR),
  - three ex-officio members (including the Law Secretary, and the Expenditure Secretary), and
  - a part-time member from an industry body.
- ○ Functions of the Council include: (i) registration of mediators, and (ii) recognising mediation service providers and mediation institutes.

➢ **Mediated Settlement Agreement**:

- ○ Agreements resulting from mediation (other than community mediation) will be final, binding, and enforceable in the same manner as court judgments.
- ○ They may be challenged on grounds of:
  - fraud
  - corruption
  - impersonation
  - relating to disputes not fit for mediation.

➢ **Community Mediation:**

- ○ Community mediation may be attempted to resolve disputes likely to affect the peace and harmony amongst residents of a locality.
- ○ It will be conducted by a panel of three mediators.

Why does India Need to Promote Mediation?

➢ **To Tackle Case Pendency:**

- ○ As of May 2022, over 4.7 crore cases are pending in courts across different levels of the judiciary. Of them, 87.4% are pending in subordinate courts, 12.4% in High Courts.
- ○ Thus to reduce the case pendency,the **Mediation and Conciliation Project Committee** of the Supreme Court of India describes mediation as a tried and tested alternative for conflict resolution

➢ **Absence of Standalone Laws on Mediation:**

- ○ There are several statutes containing mediation provisions, such as
  - the Code of Civil Procedure, 1908,
  - the **Arbitration and Conciliation Act, 1996,**
  - the **Companies Act, 2013,** the Commercial Courts Act, 2015, and
  - the **Consumer Protection Act, 2019**
- ○ Despite the presence of above statutes, there is no dedicated standalone mediation legislation In India.
- ○ Various countries including Australia, Singapore, and Italy already have standalone laws on mediation.

➢ **Mediation as Tool for True Justice and Social Change :**

- ○ Mediation simplifies the delivery of justice through plain language and proves to be a cost-effective alternative to traditional methods.
- ○ The resolution arrived during mediation secures true justice for individuals where social norms are brought in consonance with Constitutional values through the exchange of ideas and flow of information.

➢ **Aspirations to Become an International Mediation Hub:**

- ○ The **Singapore Convention on Mediation** is a uniform and efficient framework for international settlement agreements resulting from mediation.
- ○ As India is a signatory to the **Singapore Convention on Mediation** (since 2019), it is appropriate to enact a law governing domestic and international mediation.
- ○ It will boost India's credential to become an International Mediation Hub.

What are the Key Issues and Concerns with the Act?

➢ **Mandating Pre-litigation Mediation**:

- ○ According to the Act, pre-litigation mediation is mandatory for both parties before filing any suit or proceeding in a court, whether or not there is a mediation agreement between them.

- However, as per Article 21 of the Constitution, access to justice is a fundamental right which cannot be fettered or restricted.

➢ **Limited Relevant Experience of Mediators:**
  - While the full-time members of the Council must possess knowledge or experience pertaining to mediation or ADR laws and mechanisms, they may not necessarily be practicing mediators with significant experience.
  - For instance, the Act would permit an arbitrator to be appointed as a full-time member of the Council. An arbitrator may not be best suited to perform functions such as prescribing standards of professional conduct of mediators.

➢ **Requiring Central Government Approval before issuing Regulations:**
  - Under the Act, the Council will discharge its major functions by issuing regulations. It must take approval from the central government before issuing such regulations.
  - Thus, Council's effectiveness could be limited if it requires central government approval for its core functions. Similar organizations don't require prior approval before issuing regulations. e.g. **National Medical Commission** and the **Bar Council of India**.

➢ **Challenges in Enforcing International Settlements:**
  - The Act considers international mediation to be domestic when it is conducted in India with the settlement being recognised as a judgment or decree of a court.
  - The **Singapore Convention** does not apply to settlements that already have the status of judgments or decrees. As a result, conducting cross-border mediation in India will exclude the tremendous benefits of worldwide enforceability.

➢ **Multiple registration needed for Mediators:**
  - Mediators must be registered registered/ empanelled at all four places:
    - Mediation Council of India,
    - Empanelled by a court annexed mediation center,
    - A recognised mediation service provider, *and*
    - A Legal Services Authority.
  - It is unclear why satisfying any one of these conditions is not sufficient for such mediators.

➢ **Undefined Terminology**:
  - Clause 8 of the Act entitles a party to move the Court, before the commencement or during mediation, for interim relief, only in "**exceptional circumstances**".
  - The term "exceptional circumstances" is undefined in the Act.

➢ **Issues with Online Mediation:**
  - A recent **NITI Aayog** report reveals that only 55%of India have access to the internet and only 27 % possess compatible devices.
  - This poses an accessibility problem for a significant portion of the population.

➢ **Issues with Community Mediation :**
  - As for community mediation, the Act makes it mandatory to have a panel of three mediators.
    - Community Mediation is a powerful tool that offers an opportunity for people to resolve disputes through managed communication.
  - This requirement seems unnecessary and impinges on the flexibility that mediation brings.

What are the Steps Ahead ?

➢ **Phased Introduction of Mandatory Pre-litigation :**
  - Rolling out mandatory pre-litigation mediation in a phased manner, first for certain categories of disputes and then eventually to cover a wide range of disputes.

➢ **Reduce Time Frame:**
  - The **Parliamentary Standing Committee Report on Mediation Bill, 2021** recommended reduction in the time for concluding a mediation from 180 to 90 days.

➢ **Capacity Building :**
  - **NITI Aayog** noted that a framework for mandatory pre-litigation mediation in India must be planned keeping in mind the number of mediators available and the ecosystem's ability to provide a large number of mediators.
  - The **Mediation and Conciliation Project Committee,** Supreme Court of India, has recommended steps to lay down model mediation codes, facilitate training of mediators across the country and regulate the process across all districts.

➢ **Scaling Accessibility:**
  - For online mediation to be a success, we will have to scale our bandwidth accessibility to remote parts of the country.
  - Setting up legal aid or access to justice clinics with adequate IT infrastructure could address this issue.

➢ **Use of Disruptive Technologies :**
  - International Arbitration (IA) and Artificial Intelligence (AI) are leading alternatives to conventional practices. IA replaces conventional dispute resolution methods, while AI replaces traditional performance approaches.

❍ Artificial Intelligence could provide immense benefits for the arbitration process and its users. By augmenting human cognitive abilities, AI powered services could assist lawyers in drafting, identification of better authorities, reviewing of documents, etc.

Conclusion:

The future of mediation in India lies in its ability to impact social change in a manner that law does not. The Act should be implemented more in spirit than in form as a famous jurist rightly held that, "it is the spirit and not the form which keeps justice alive."

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Climate Change and Infectious Diseases

This editorial is based on the Article With climate change, tackling new disease scenarios which was published in The Hindu on 27/09/2023. It talks about the link between climate change and the occurrence of infectious diseases.

Tag: Biodiversity & Environment, GS Paper - 3, GS Paper - 2, Health

In its latest report released in March 2023, the **Intergovernmental Panel on Climate Change (IPCC)** delivers a stark warning: **climate change** heightens the global risk of infectious diseases. The close relationship between climate and disease is being demonstrated every year. For instance, the periodicity of mosquito-borne disease outbreaks no longer follows expected patterns.

Dengue manifests in two to three peaks throughout the year. Variability in temperature, precipitation, and humidity disrupt disease transmission cycles. These also alter the distribution of the vectors and animal reservoirs that host the parasite. Heat has been proven to interfere with the genomic structure of pathogens, changing their infectivity and virulence.
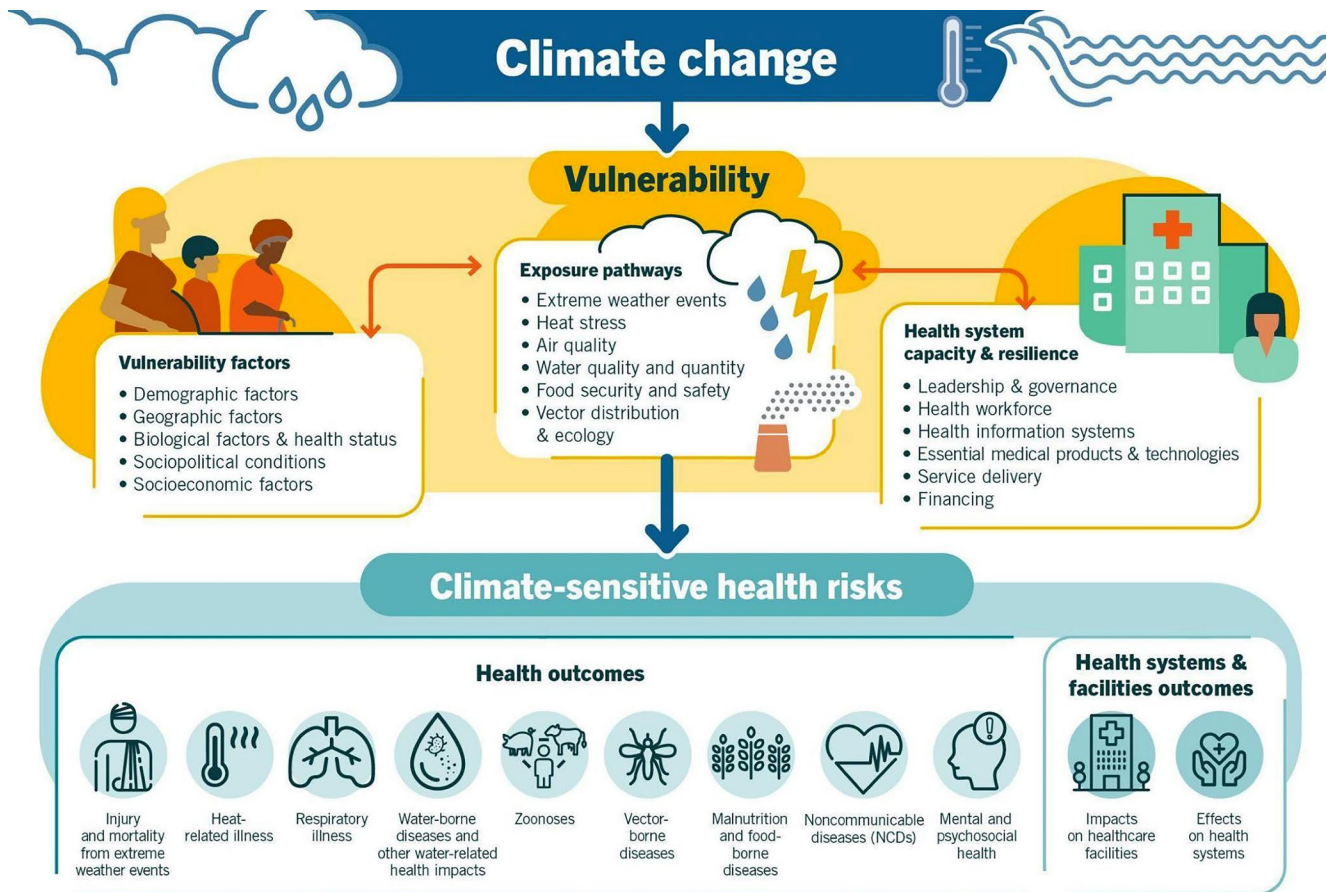
The direct damage costs to health (i.e. excluding costs in health-determining sectors such as agriculture and water and sanitation), is estimated to be between USD 2-4 billion/year by 2030.

How is Climate change linked to the Occurrence of Diseases?

➢ **Habitat Loss and Zoonotic Diseases:** As climate change alters ecosystems, habitat loss becomes more prevalent. This forces disease-carrying animals to encroach upon human territories as they search for suitable habitats and resources. This **increased interaction between humans and wildlife raises the risk of zoonotic diseases**, where pathogens transfer from animals to humans.

❍ **Nipah virus**, a prime example, has caused outbreaks in Kerala due to such spillover events.

➢ **Temperature and Disease Transmission:** Rising temperatures can affect the distribution and behavior of disease vectors, such as mosquitoes and ticks. These vectors play a crucial role in transmitting diseases like **malaria**, **dengue fever**, and Lyme disease.

❍ Warmer temperatures can expand the geographic range of these vectors, allowing them to thrive in areas that were previously too cold for them.

➢ **Changing Patterns of Precipitation:** Climate change can alter patterns of precipitation, leading to more intense and prolonged rainfall in some regions and droughts in others. These changes can create suitable breeding environments for disease vectors.

❍ Increased flooding can contaminate water sources with sewage and pathogens, leading to outbreaks of waterborne diseases like **cholera** and **dysentery**.

❍ Heavy rainfall can create stagnant water pools, which are ideal breeding sites for mosquitoes that transmit diseases like **malaria** and **Zika virus**.

➢ **Altered Vector Behavior:** Climate change can influence the behavior of disease vectors.

❍ Warmer temperatures can accelerate the development of pathogens within the vectors, allowing for a shorter incubation period and more rapid transmission of diseases.

➢ **Food Security:** Climate change can disrupt agricultural systems, leading to changes in food production and distribution. **These disruptions can contribute to malnutrition and weaken immune systems**, making populations more susceptible to diseases.

➢ **Extreme Weather Events:** Climate change is associated with an increase in the frequency and intensity of extreme weather events, such as **cyclones**, **heatwaves**, and **wildfires**. These events can lead to injuries, displacement, and disruptions in healthcare systems, creating conditions conducive to disease outbreaks.

➢ **Changing Disease Landscape:** Climate change has broadened the spectrum of infectious agents threatening humans. Over half of all known infectious diseases that affect humans worsen with changing climate patterns.

❍ These diseases often discover new transmission routes, including environmental sources, medical tourism, and contaminated food and water.

Climate change

Vulnerability

Exposure pathways
- Extreme weather events
- Heat stress
- Air quality
- Water quality and quantity
- Food security and safety
- Vector distribution & ecology

Vulnerability factors
- Demographic factors
- Geographic factors
- Biological factors & health status
- Sociopolitical conditions
- Socioeconomic factors

Health system capacity & resilience
- Leadership & governance
- Health workforce
- Health information systems
- Essential medical products & technologies
- Service delivery
- Financing

Climate-sensitive health risks

Health outcomes

| Injury and mortality from extreme weather events | Heat-related illness | Respiratory illness | Water-borne diseases and other water-related health impacts | Zoonoses | Vector-borne diseases | Malnutrition and food-borne diseases | Noncommunicable diseases (NCDs) | Mental and psychosocial health |

Health systems & facilities outcomes

| Impacts on healthcare facilities | Effects on health systems |

What are Some of the Initiatives taken by the Government?

➤ **National Guidelines for Infection Prevention and Control in Healthcare Facilities**: provide a comprehensive framework for the patient safety and the capacity of health workers to prevent and control infections. These guidelines aim to prevent current and future threats from infectious diseases such as **Nipah**, **Ebola**, and to combat **antimicrobial resistance (AMR)** and improve the overall quality of health services.

➤ **National Health Mission:** It is an initiative undertaken by the government of India to address the health needs of under-served rural and urban areas. It aims to prevent and control communicable and non-communicable diseases, including locally endemic diseases.

➤ **Universal Immunization programme**: It provides free vaccines to protect children and pregnant women from 12 vaccine-preventable diseases such as polio, measles, tetanus, and others. The programme also launched an ambitious initiative called **Mission Indradhanush**, which aims to accelerate full immunization coverage and to reach the unreached populations.

What measures should be taken to address this issue?

➤ **Mitigating Climate Change:**
- ○ Reducing greenhouse gas emissions from various sources, such as fossil fuels, agriculture, industry, and waste, by using cleaner and more efficient technologies, switching to renewable energy sources, improving energy efficiency, and promoting low-carbon lifestyles.
  - **National Biofuel Policy**, **Vehicle Scrappage Policy**, **E20 Fuel Policy**, **National Green Hydrogen Mission** are the some steps taken by the government in this regard.
- ○ Enhancing the sinks of greenhouse gases, such as forests, soils, and oceans, by protecting and restoring natural ecosystems, increasing carbon sequestration and storage, and avoiding land degradation and deforestation.
  - **National Afforestation Programme (NAP)**, **The Compensatory Afforestation Fund Management and Planning Authority (CAMPA Funds)**, **The National Action Programme to Combat Desertification** are some steps taken by the government.

- ➤ **Strengthening Disease Surveillance Systems:**
  - ○ Enhance Surveillance Technology: Invest in advanced surveillance technologies and systems that enable real-time tracking of emerging disease outbreaks. Promote the use of web-enabled platforms for disease reporting.
    - **Integrated Health Information Platform (IHIP):** IHIP was introduced in 2018 in seven states. IHIP was designed to be a web-enabled, near-real-time electronic information system capable of reporting on a broad range of disease conditions and providing disaggregated data.
    - However, IHIP is grappling with several challenges such as IHIP has not met expectations in terms of real-time tracking of emerging disease outbreaks. Despite technological advancements, there may be implementation or operational challenges which need to be addressed.
  - ○ **One Health Approach:** Adopt a **One Health approach** that integrates monitoring of human, animal, plant, and environmental health. This approach recognizes the interconnectedness of these factors and is crucial in preventing outbreaks, especially those originating from animals.
    - To effectively implement the One Health approach, India should establish greater synergies between the central government and states, as well as specialized agencies.
    - Departments responsible for animal husbandry, forest and wildlife, municipal corporations, and public health need to collaborate and create robust surveillance systems.
    - Building trust, data sharing, and defining lines of responsibility are critical components of this approach.
- ➤ **Capacity Building and Resource Allocation:**
  - ○ Invest in training and capacity building for healthcare workers, environmental scientists, and other relevant professionals to effectively monitor and respond to disease outbreaks.
  - ○ Allocate adequate resources, including funding and personnel, to support disease surveillance and response efforts.
- ➤ **Public Awareness and Education:**
  - ○ Educate the public about the risks associated with climate change-induced diseases and the importance of early reporting of symptoms. Encourage communities to participate in disease surveillance efforts.
    - Awareness programs like Delhi government's anti-dengue campaign need to be intensified.

- ➤ **International Collaboration:**
  - ○ The Office of the Principal Scientific Adviser to the Prime Minister has played a leading role in this initiative. However, with new funding sources like the World Bank, there is a need for greater coordination and management to ensure the success of **One Health** and infectious disease control programs.
- ➤ **Program Evaluation and Adaptation:**
  - ○ Regularly evaluate the effectiveness of disease surveillance and control programs and adapt strategies based on evolving disease patterns and climate change impacts.

Conclusion

- ➤ Climate change is not limited to infectious diseases. It also exacerbates injuries and deaths from extreme weather events, **respiratory and cardiovascular diseases**, and mental health issues.
- ➤ The re-emergence of **Nipah** in Kerala is a wake-up call, that mere biomedical response to diseases is inadequate. In the face of a changing climate and the growing threat of infectious diseases, protecting ecosystems, fostering collaboration, and embracing the **One Health** paradigm are our best defenses.
- ➤ The road ahead demands concerted efforts, not just to adapt but also to proactively safeguard our planet and its inhabitants.

■■■

Safeguarding Children in the Age of AI

This editorial is based on *the article* *Children, a key yet missed demographic in AI regulation* **which was published in The Hindu on 26/09/2023. It talks about the nature of digital services with particular emphasis on cutting-edge AI deployments which are not designed specifically for children even though they are accessed by them.**

Tag: science and technology, Artificial Intelligence, E-Governance, IT & Computers, Role of Media & Social Networking Sites in Internal Security Challenges, Cyber Security, Achievements of Indians in Science & Technology. Gs paper 3.

India is gearing up to host global AI summits, highlighting the strategic importance of AI for the Indian Economy. India is scheduled to host two significant meetings focused on **Artificial Intelligence (AI)** in the later months of the year 2023. The first of these gatherings is set to take place in October 2023, marking the world's inaugural **global AI summit**. Following this, in December 2023, India will assume the leadership of the **Global Partnership on Artificial Intelligence (GPAI)**.

But with this technological advancement comes the pressing need for robust regulation. Children and adolescents, in particular, are vulnerable to various risks associated with AI, and India's existing data protection laws may fall short in addressing these challenges.

What is AI Regulation?

AI regulation refers to the rules, laws, and guidelines established by governments and regulatory bodies to govern the development, deployment, and use of artificial intelligence technologies.

The primary aim of AI regulation is to ensure that AI systems are developed and used in ways that are safe, ethical, and beneficial to society while mitigating potential risks and harms. AI regulation can cover a wide range of aspects, including:

- **Safety and Reliability**: Regulations may require AI developers to adhere to safety standards to prevent accidents or malfunctions caused by AI systems. This is particularly important in critical domains like autonomous vehicles or medical diagnostics.

- **Ethical Considerations**: Some AI applications, especially in critical areas like healthcare or finance, may be required to have human oversight to ensure that AI decisions are in line with human values and ethics.

- **Data Privacy**: Many AI systems rely on large amounts of data. Regulations like the European Union's **General Data Protection Regulation (GDPR)** set standards for how personal data should be handled and protected in AI applications.

- **Transparency and Accountability**: Some regulations may require AI developers to provide transparency into their algorithms, making it easier to understand how AI systems make decisions..

- **Export Controls**: Governments may regulate the export of AI technologies to prevent sensitive AI capabilities from falling into the wrong hands.

- **Compliance and Certification**: AI developers may need to comply with specific certification requirements to ensure their AI systems meet regulatory standards.

- **International Cooperation:** Given the global nature of AI, there is also a growing need for international cooperation on AI regulation to avoid conflicts and ensure consistent standards.

What are AI Regulatory Laws Around the World ?

- **European Union (EU)**: The EU is working on the draft **Artificial Intelligence Act**, aiming to regulate AI comprehensively. This legislation is expected to address various aspects of AI, including risk classification, data subject rights, governance, liability, and sanctions.

- **Brazil**: Brazil is in the process of developing its first AI regulation. The proposed regulation focuses on guaranteeing the rights of individuals affected by AI systems, classifying the level of risk, and implementing governance measures for AI operators. It has parallels with the EU's draft AI Act.

- **China**: China has been actively regulating AI, with specific provisions for algorithmic recommendation systems and deep synthesis technologies. China's Cyberspace Administration is also considering measures to ensure the safety and accuracy of AI-generated content.

- **Japan**: Japan has adopted a set of social principles and guidelines for AI developers and companies. While these measures are not legally binding, they reflect the government's commitment to responsible AI development.

- **Canada**: Canada has introduced the Digital Charter Implementation Act 2022, which includes the **Artificial Intelligence and Data Act (AIDA)**. AIDA aims to regulate the trade in AI systems and address potential harms and biases associated with high-performance AI.

- **United States**: The U.S. has released non-binding guidelines and recommendations for AI risk management. The White House has also published a Blueprint for the Development, Use, and Deployment of Automated Systems.

- **India**: India is considering the establishment of a supervisory authority for AI regulation. Working papers suggest the government's intention to introduce principles for responsible AI and coordination across various AI sectors.

  - Given the sheer volume of data that **India** can generate, it has an opportunity to set a policy example for the **Global South**. Observers and practitioners will track India's approach to regulation and how it balances AI's developmental potential against its collateral risks.

  - One area where India can assume leadership is how regulators address **children** and **adolescents** who are a critical (yet less understood) demographic in this context.

Why is there a Need for Robust AI Regulation for Child Safety ?

- **Regulating AI for overall Safety**:
  - Regulations should focus on aligning incentives to tackle addiction, mental health issues, and overall safety concerns.
  - There are risks of data-hungry AI services deploying deceptive practices to exploit impressionable youth.

- ➢ **Body Image and Cyber Threats:**
  - ○ AI-driven distortions of physical appearance can lead to body image issues among young people.
  - ○ AI's role in spreading misinformation, radicalization, cyberbullying and sexual harassment is potentially significant.
- ➢ **Impact of Family's Online Activity:**
  - ○ Parents sharing their children's photos online can expose adolescents to risks.
- ➢ **Deep Fake Vulnerabilities:**
  - ○ AI-powered **deep fakes** can target young individuals, including morphed explicit content distribution.
- ➢ **Intersectional Identities and Bias:**
  - ○ There is a diverse landscape of gender, caste, tribal identity, religion, and linguistic heritage in India.
  - ○ There could be potential transposition of real-world biases into digital spaces, impacting marginalized communities.
- ➢ **Reevaluating Data Protection Laws:**
  - ○ The current data protection framework in India lacks effectiveness in protecting children's interests.
  - ○ The ban on tracking children's data by default can limit the benefits of personalization.

What can India do to Protect Young Citizens while preserving the Benefits of AI?

- ➢ **Drawing from UNICEF's Guidance**:
  - ○ **UNICEF**'s guidance, based on the **UN Convention on the Rights of the Child**, emphasizes nine requirements for child-centric AI.
  - ○ This guidance can be used to create a digital environment that promotes children's well-being, fairness, safety, transparency, and accountability.
- ➢ **Embracing Best Practices:**
  - ○ The **Californian Act** serves as a template, advocating for transparency in default privacy settings and assessing potential harm to children from algorithms and data collection.
  - ○ Establishment of institutions like **Australia's Online Safety Youth Advisory Council** can be considered**.**
- ➢ **Age-Appropriate Design Code for AI**:
  - ○ Indian authorities should encourage research to collect evidence regarding the impact of AI on Indian children and adolescents.
  - ○ Gathered evidence can be set as a foundation for developing an Indian **Age-Appropriate Design Code for AI.**
- ➢ **Role of the Digital India Act (DIA)**:
  - ○ The upcoming **Digital India Act (DIA)** should enhance protection for children interacting with AI.

- ○ It should promote safer platform operations and user interface designs.
- ➢ **Child-Friendly AI Products and Services** :
  - ○ AI-driven platforms should ensure to offer age-appropriate content and services that enhance education, entertainment, and overall well-being.
  - ○ Robust parental control features that allow parents to monitor and limit their children's online activities should be implemented.
- ➢ **Digital Feedback Channels:**
  - ○ Child-friendly online feedback channels where children can share their AI-related experiences and concerns should be developed.
  - ○ Interactive tools like surveys and forums should be used to gather inputs.
- ➢ **Spreading the Message:**
  - ○ Public awareness campaigns should highlight the importance of children's participation in shaping AI's future.
  - ○ Influencers and role models may be involved to amplify the message.

Conclusion:

In the era of rapidly advancing AI, Indian regulation must prioritize the interests and safety of its young citizens. Incorporating global best practices, fostering dialogue with children, and developing adaptable regulations are essential steps toward ensuring a secure and beneficial digital environment for India's youth.

■■■

Green Revolution and Beyond

This editorial is based on the Article Man of Science & Humanity which was published in The Indian Express on 29/09/2023. It talks about MS Swaminathan, the father of the Green Revolution in India, and his contributions towards transforming Indian Agriculture.

Tag: Agriculture, GS Paper-3, Cropping Patterns, GS Paper-1, Food Security

M S Swaminathan is no more. But his legacy remains with every student and scientist of agriculture. He is most widely known for working with Norman Borlaug to usher in the **Green Revolution** in India in the mid-1960s when India was facing back-to-back droughts. Millions would have died of starvation if the country had not experienced the Green Revolution. **India was already termed as a "ship to mouth" economy**, as the country was importing 10 million tonnes from the US under **P.L.480 scheme**. And India had no foreign exchange to pay for it. The

situation was so grave that the then Prime Minister **Lal Bahadur Shastri** had given a call to the nation to "skip a meal in a week", and wheat products, including wheat chapatis, would not be served at wedding parties.

Why did India need the Green Revolution?

➢ India was facing a **severe food crisis in the 1960s** due to rapid population growth, low agricultural productivity, frequent droughts, and dependence on food imports.

➢ India was **vulnerable to external pressures and political interference** from the food exporting countries, especially the United States, which used food aid as a tool of diplomacy and leverage.

➢ India wanted to **achieve self-reliance and food security** for its people, and reduce poverty and malnutrition.

➢ India wanted to **modernize its agriculture and make it more efficient**, profitable, and competitive in the global market.

What was the Green Revolution?

➢ **The Revolution:**

   ○ The Green Revolution was a major initiative that aimed to increase the production and quality of food crops, especially wheat and rice, in India, by introducing new technologies, such as high-yielding varieties of seeds, fertilizers, pesticides, irrigation, and mechanization.

➢ **Objectives:**

   ○ To **achieve self-reliance and food security** for the population and reduce dependence on food imports.

   ○ To **improve the income and living standards** of millions of farmers and rural people, and reduce poverty and hunger

   ○ To **modernize the agriculture sector** and make it more efficient, profitable, and competitive in the global market.

➢ **Key features:**

   ○ Using **High-Yield Variety (HYV) seeds to increase food production**. These seeds were developed by agricultural scientists like M. S. Swaminathan, who is widely regarded as the Father of the Green Revolution in India.

   ○ **Incorporating various irrigation methods, such as tube wells**, canals, dams, and sprinklers, to reduce the dependence on rainfall and ensure regular water supply for the crops.

   ○ **Mechanization of major agricultural practices**, such as ploughing, sowing, harvesting, and threshing, using tractors, harvesters, and drills, to reduce labor costs and increase efficiency.

   ○ **Use of chemical fertilizers and pesticides to enhance soil fertility** and protect the crops from pests and diseases.

   ○ **Double cropping in the existing farmland**, which means growing two crops in the same field in one year, to increase the cropping intensity and yield.

   ○ **Expansion of the farming area, by bringing more land under cultivation,** especially in the semi-arid and arid regions, using irrigation and HYV seeds.

What were the Impacts of the Green Revolution?

➢ **Increased Food Production:** The Green Revolution led to a significant increase in agricultural productivity. New high-yielding crop varieties, such as **dwarf wheat** and rice, produced higher yields per hectare of land, helping to meet the growing global demand for food.

   ○ For example, in 1978–1979, a tremendous increase in crop production led to a grain output of 131 million tones, making India one of the largest agricultural producers in the world.

➢ **Reduced food-grain imports:** India is a net exporter of wheat, rice and other food grains such as rye, **maize**, **sorghum**, **buckwheat**, **bajra**, **ragi** and their import is negligible.

   ○ In 2020-21, India exported **18.5 million tonnes** of rice, which was the highest ever in a year. India also exported **2.1 million tonnes** of wheat in 2020-21, which was the highest in six years.

➢ **Poverty Alleviation:** Higher agricultural productivity often translates into higher incomes for farmers. The Green Revolution helped lift many small-scale farmers out of poverty by increasing their crop yields and income levels.

   ○ For example, the poverty ratio in rural India declined from 50.1% in 1993-94 to 25.7% in 2011-12, partly due to the impact of the Green Revolution.

➢ **Technological Advancements:** The Green Revolution introduced farmers to new agricultural technologies, including improved seeds, fertilizers, and pesticides. These technological advancements continue to benefit agriculture today, contributing to sustainable practices and greater efficiency.

   ○ For instance, the use of improved seeds has increased the genetic diversity of crops, making them more resilient to pests, diseases, and climate change.

○ The use of mechanized farm tools, such as tractors, harvesters, and irrigation systems, has reduced labor costs and increased farm productivity.

➤ **Rural Development**: Increased agricultural productivity can stimulate rural development. **As farmers earn more income, they can invest in their communities, leading to improved infrastructure, education, and healthcare in rural areas.**

○ For example, in India, the Green Revolution led to the expansion of rural roads, electrification, irrigation, and communication networks, which improved the accessibility and connectivity of rural areas.

➤ **Reduction in Land Conversion:** By increasing crop yields, the Green Revolution helped reduce the need to convert forests and other natural habitats into agricultural land. This has had positive environmental impacts by preserving biodiversity and reducing deforestation.

➤ **Economic Growth:** The increased agricultural productivity resulting from the Green Revolution has been linked to overall economic growth in many countries. Agriculture is a key driver of economic development in many regions, and higher yields can boost the overall economy.

What are the Challenges brought by the Green Revolution?

➤ **It caused environmental degradation** due to the use of synthetic fertilizers and pesticides, and soil erosion and water pollution. For example, the reliance on modern agricultural technologies has made some countries and communities dependent on external inputs, which can be expensive and subject to market fluctuations.

➤ **It led to the loss of biodiversity and genetic diversity of crops**, as well as the displacement of indigenous crops and traditional farming practices. For example, the production of wheat and rice doubled after the Green Revolution, while that of other food crops, such as indigenous rice types and **millets**, decreased.

➤ **It created social and economic inequalities** and conflicts among farmers, regions, and countries. For example, the Green Revolution has been linked to farmer suicides, rural indebtedness, and droughts in India.

➤ **It increased the vulnerability of crops** to pests, diseases, and climate change. For example, the monoculture of rice and wheat made them more susceptible to outbreaks of pests and diseases, such as the brown plant hopper and the wheat rust.

Is Green Revolution 2.0 a Solution to the Green Revolution?

➤ **Green Revolution 2.0 is seen as a way to make agriculture more adaptive and resilient** to the changing climate and socio-economic conditions, and to ensure food and nutrition security for the present and future generations.

➤ **Some of the features of Green Revolution 2.0 are:**

○ **Biotechnology and Genetic Engineering:** Green Revolution 2.0 places a strong emphasis on biotechnology and genetic engineering to develop crops that are more resilient to climate change, pests, and diseases. **Genetically modified (GM) crops**, if adopted responsibly, can contribute to increased productivity and reduced environmental impact.

○ **Precision Agriculture:** This approach involves the **use of advanced technologies like GPS-guided tractors and drones to optimize the use of resources such as water, fertilizers, and pesticides**. Precision agriculture can increase efficiency and reduce the environmental footprint of farming.

○ **Sustainability:** Green Revolution 2.0 prioritizes **sustainability by promoting practices that conserve soil health, reduce chemical inputs, and minimize the environmental impact of agriculture**. This includes organic farming, agroecology, and integrated pest management.

○ **Diversification:** Unlike the first Green Revolution, which primarily focused on a few staple crops like wheat and rice, **Green Revolution 2.0 promotes crop diversification. Encouraging the cultivation of a wider variety of crops** can enhance nutrition, reduce risks associated with mono-cropping, and preserve biodiversity.

○ **Holistic Approach**: Green Revolution 2.0 takes a holistic view of agriculture, recognizing that **it's not just about crop production but also includes aspects like soil health, food processing, marketing, and value addition**. Integrated approaches address the entire food supply chain.

○ **Environmental Considerations:** Efforts are made to mitigate the negative environmental impacts associated with modern agriculture, such as soil erosion, water pollution, and greenhouse gas emissions. Sustainable practices aim to minimize these effects.

○ **Adaptation to Climate Change:** As climate change poses new challenges to agriculture, Green Revolution 2.0 seeks to develop climate-resilient crop varieties and practices that can adapt to changing weather patterns and extremes.

Drishti Mains Questions

1. Air pollution has emerged as a critical environmental challenge. Analyze the major causes of air pollution. Suggest measures that could effectively mitigate air pollution and ensure a cleaner and healthier environment for future generations.

2. India's fertilizer subsidy regime needs to be reformed. How recently launched PM-PRANAM (PM Programme for Restoration, Awareness, Nourishment and Amelioration of Mother Earth) Scheme can help in this? Discuss.

3. Food security is a pressing global issue, with millions of people around the world facing hunger and malnutrition. In this context, discuss the role that India could play in addressing the global food security challenge.

4. Critically analyze the concept of One Nation, One Election, highlighting the benefits and challenges associated with the idea. Also, suggest some measures to make it feasible.

5. The world is currently witnessing the emergence of a new multilateral world order. Discuss the reasons behind the decline of the old World Order and how India can contribute to this transition.

6. Experience has taught us that simple things may not always be easy, but are often the most effective solutions. In this light, counseling people on eating and feeding practices along with monitoring their progress can prove to be a game-changer in tackling malnutrition. Comment.

7. Discuss the evolving role of BRICS and its expansion in shaping international relations and its strategies to challenge the existing global order.

8. What are the main factors contributing to water scarcity in India, and what strategies can be implemented to address this critical issue?

9. Analyze the role and significance of the G20 as a forum for global governance and development. Discuss the achievements and challenges of India's G20 Presidency in 2022-23, with special reference to its engagement with Africa.

10. Q. Discuss the scientific, ethical, and legal implications of creating and using synthetic human embryos for research and therapy.

11. The voter turnout in India has been consistently low, despite the efforts of the Election Commission to increase it. What are the factors that affect voter turnout? Suggest some measures to improve voter participation in elections.

12. India's Fiscal Federalism needs to be reformed to ensure better resource allocation and fiscal autonomy for states. In this light, discuss the terms of reference for the sixteenth Finance Commission to bring about those reforms.

13. In light of recent debates and legal decisions, critically evaluate the significance and implications of maintaining the dual-language approach to naming the country. Provide insights into the challenges and considerations associated with any potential change in this tradition.

14. The Indian government is in the process of establishing the Indian Carbon Market (ICM) as a key component of its climate action strategy. In this context, discuss the benefits and challenges associated with carbon markets. How can the ICM contribute to India's climate goals?

15. Discuss the challenges faced by public service delivery in contemporary times, and elaborate on how Digital Public Goods can provide a more effective and efficient alternative method for enhancing public service delivery.

Drishti Mains Questions

16. Critically analyse the argument that 'there aren't enough women' as an excuse for the persistent underrepresentation of women scientists in institutions.

17. "The India-Middle East–Europe Corridor (IMEC) has incredible potential to integrate India, West Asia, and Europe on a collective path to growth at an unprecedented scale." Discuss.

18. How is the Khalistan Issue impacting the bilateral relationship between India and Canada? Discuss how both nations can enhance their strategic partnership for future.

19. Critically examine the success of Abraham Accords. Discuss the economic,cultural and strategic importance of Abraham Accords for India.

20. Examine the reasons for under representation of women in the Indian Political System. How far the Women Representation Bill, 2023 will close the gender gap in Indian politics.

21. Discuss the challenges and opportunities associated with the growth of creative industries in the context of India. Also, suggest measures to harness the full potential of creative industries for national development.

22. In light of India's recent successes at the G20 Summit and the evolving global geopolitical landscape, discuss the challenges for India's foreign policy. Outline a comprehensive strategy that India should adopt to effectively safeguard its national interests.

23. Despite having numerous advantages of mediation as a mechanism for dispute resolution, it remains unutilized in India. Analyze this statement while placing special reference to the Mediation Act, 2023.

24. Discuss the various ways in which climate change impacts the occurrence and transmission of infectious diseases. Elaborate on the strategies that should be adopted to mitigate these risks.

25. While artificial intelligence holds immense potential for the Indian economy, it is not without its challenges. Emphasize the importance of strong AI regulation to ensure child safety and propose measures to address this need.

26. How does Green Revolution 2.0 aim to address contemporary challenges and ensure food security while mitigating environmental impacts?