

7 PM COMPILATION

December, 2022

Features of 7 PM compilation

- ❖ **Comprehensive coverage of a given current topic**
- ❖ **Provide you all the information you need to frame a good answer**
- ❖ **Critical analysis, comparative analysis, legal/constitutional provisions, current issues and challenges and best practices around the world**
- ❖ **Written in lucid language and point format**
- ❖ **Wide use of charts, diagrams and info graphics**
- ❖ **Best-in class coverage, critically acclaimed by aspirants**
- ❖ **Out of the box thinking for value edition**
- ❖ **Best cost-benefit ratio according to successful aspirants**

Rights of Sexual Minorities in India (LGBTQ+ Rights): Status and Challenges – Explained, pointwise

Topic:- Social Justice

Sub topic:- Mechanisms, laws, institutions and Bodies constituted for the protection and betterment of vulnerable sections.

Waste Management in India: Status, Challenges and Solutions – Explained, pointwise

Topic:- Environment and Bio-diversity

Sub topic:- Conservation, environmental pollution and degradation

Persons with Disabilities: Rights, Challenges and Solutions – Explained, pointwise

Topic:- Social Justice

Sub topic:- Mechanisms, laws, institutions and Bodies constituted for the protection and betterment of vulnerable sections.

Regulation of Fintech in India – Explained, pointwise

Topic:- Economic development

Sub topic:- Changes in industrial policy and their effects on industrial growth.

Women's Representation in Judiciary – Explained, pointwise

Topic:- Indian Constitution and Polity

Sub topic:- Structure, organization and functioning of the Executive and the Judiciary

[Kurukshetra December Summary] Bridging the Digital Divide – Explained, pointwise

Topic:- Economic development

Sub topic:- Inclusive growth and issues arising from it.

Slum Redevelopment in India – Explained, pointwise

Topic:- Indian Society

Sub topic:- Urbanization - problems and their remedies

The UN Treaty on Plastic Pollution – Explained, pointwise

Topic:- Environment and Bio-diversity

Sub topic:- Conservation, environmental pollution and degradation

Climate Justice: Meaning, Challenges and Way Forward – Explained, pointwise

Topic:- Environment and Bio-diversity

Sub topic:- Conservation, environmental pollution and degradation

[Yojana November Summary] Coastal Erosion – Explained, pointwise

Topic:- Geophysical Phenomena

Sub topic:- Important Geophysical phenomena

Cooperative Societies: Benefits and Challenges – Explained, pointwise

Topic:- Indian Constitution and Polity

Sub topic:- Devolution of powers and finances up to local levels and challenges therein.

Issue of Undertrials in India – Explained, pointwise

Topic:- Social Justice

Sub topic:- Mechanisms, laws, institutions and Bodies constituted for the protection and betterment of vulnerable sections.

Farm Subsidies in India – Explained, pointwise

Topic:- Economic development

Sub topic:- Issues related to direct and indirect farm subsidies

Karnataka-Maharashtra Border Dispute – Explained, pointwise

Topic:- Indian Constitution and Polity

Sub topic:- Issues and challenges pertaining to the federal structure

[Kurukshetra December Summary] Technology Integration for Quality Education – Explained, pointwise

Topic:- Social Justice

Sub topic:- Issues relating to development and management of Social Sector/Services relating to Education

Solar Energy in India: Status, Challenges and Way Forward – Explained, pointwise

Topic:- Economic development

Sub topic:- Energy

Governance of the Arctic – Explained, pointwise

Topic:- Environment and Bio-diversity

Sub topic:- Conservation, environmental pollution and degradation, environmental impact assessment.

The Issue of Net Neutrality – Explained, pointwise

Topic:- Science and Technology

Sub topic:- Awareness in the fields of IT

COP15 of Convention on Biodiversity – Explained, pointwise

Topic:- Environment and Bio-diversity

Sub topic:- Conservation, environmental pollution and degradation

Gene Therapy: Approaches, Benefits and Concerns – Explained, pointwise

Topic:- Science and Technology

Sub topic:- Developments and their applications and effects in everyday life.

India-China Trade: Status and Concerns – Explained, pointwise

Topic:- International Relations

Sub topic:- India and its neighbourhood- relations

[Kurukshehra December Summary] Citizen Participation and Rural Well-being – Explained, pointwise

Topic:- Governance

Sub topic:- Important aspects of governance, transparency and accountability, citizens charters, transparency & accountability and institutional and other measures.

Bilateral Investment Treaties (BITs): India's Approach and Concerns – Explained, pointwise

Topic:- International Relations

Sub topic:- Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

Nasal Vaccine for COVID-19: Working and Benefits – Explained, pointwise

Topic:- Social Justice

Sub topic:- Issues relating to development and management of Social Sector/Services relating to Health

India's Foreign Trade Agreements (FTAs): Approach and Challenges – Explained, pointwise

Topic:- International Relations

Sub topic:- Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests

[Kurukshehra December Summary] e-Governance in Healthcare Services Delivery – Explained, pointwise

Topic:- Governance

Sub topic:- e-governance applications

Collegium System and the NJAC: The Issue of Judicial Appointments – Explained, pointwise

Topic:- Indian Constitution and Polity

Sub topic:- Structure, organization and functioning of the Executive and the Judiciary

Rights of Sexual Minorities in India (LGBTQ+ Rights): Status and Challenges – Explained, pointwise

Introduction

Two petitions have been filed in the Supreme Court to allow homosexual couples to solemnize their marriage under the Special Marriage Act (SMA), 1954. The Supreme Court has sought the response of the Union Government in this regard. On November 29, 2022, the US Senate passed the landmark Respect for Marriage Act (yet to be passed in the House of Representatives) which would require the States to recognize all legal marriages, including those in other States (although it doesn't create an obligation on all States to legalize same-sex marriage). The US Supreme Court in *Obergefell v Hodges (2015)* had ruled that the fundamental right to marry is guaranteed to same-sex couples by both the Due Process Clause and the Equal Protection Clause of the US Constitution. Despite the progressive developments in recent times, a lot of rights of sexual minorities are still not recognized and they face considerable discrimination on a daily basis. In India, the reforms have been driven primarily by the Judiciary rather than the Parliament. This shows that considerable effort is required to change the perception regarding sexual minorities and ending the discrimination.

What are the various types of sexual orientation?

Sexual minorities are groups of people whose sexual orientation, gender identity, or sexual characteristics are different from the presumed majority of the population, which are heterosexual. Earlier 'Gay' was the broad term used to refer to sexual minorities but the terminology has been expanded to Lesbian, Gay, Bisexual, Trans, Queer, Intersex among others (LGBTQI+).

Gender Identities

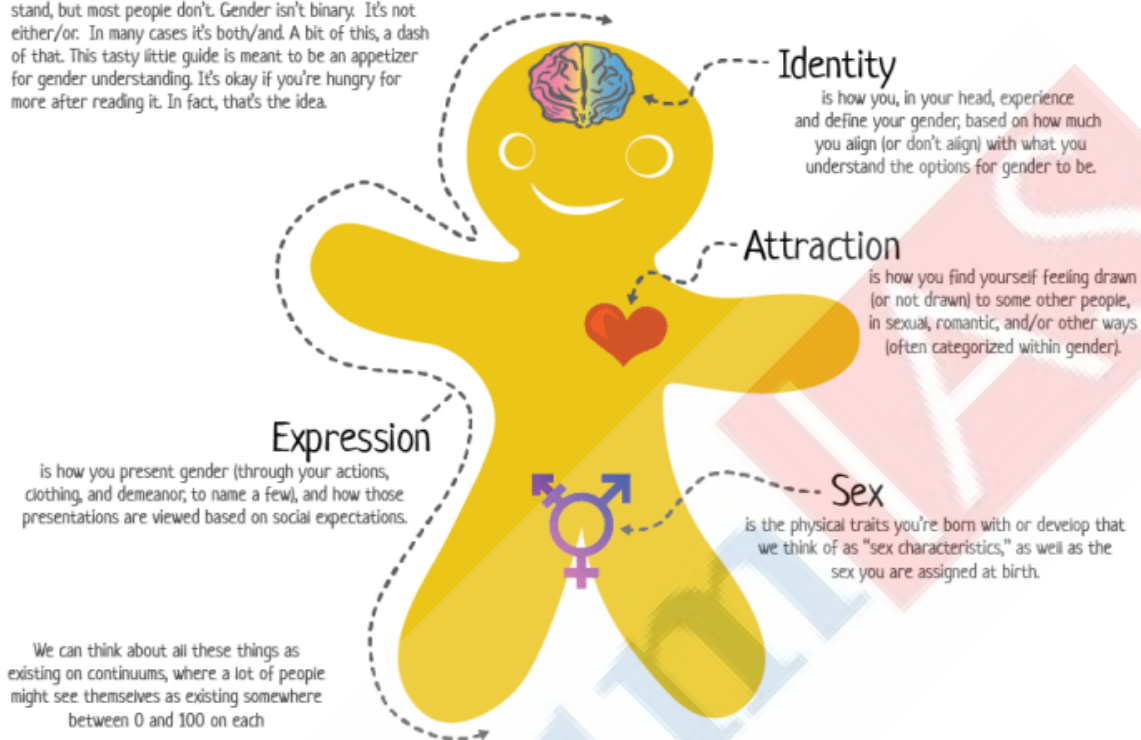
- **Lesbian:** A woman who has a significant attraction to members of the same gender.
- **Gay:** A person who has a significant attraction to members of the same gender. Typically associated with men.
- **Bisexual:** The potential to be attracted to people of more than one gender (not necessarily at the same time or to same degree).
- **Transgender:** Umbrella term for those whose gender expression or identity is not congruent with the sex assigned at birth and/or whose gender is not validated by the dominant culture.
- **Queer:** Slang used by many who reject gender and sexual binaries.
- **Intersex:** A general term used for a variety of bodies in which a person is born with reproductive or sexual anatomy that does not fit into the sex binary.
- **Asexual:** Umbrella term for those who tend not to have a sexual desire towards others;
- **Non-Binary:** Generally used as an umbrella for various gender non-conforming identities, and is most often used by those who do not strictly identify as "male" and "female".
- **Cisgender:** Umbrella term for those whose gender expression and gender identity are congruent with the sex assigned to them at birth, and whose gender is validated by the dominant culture.
- **Biological Sex:** Category assigned at birth based on a variety of physical and biological characteristics and anatomy.
- **Gender Identity:** The internal perception of one's gender, and how they label themselves, based on how much they align or don't align with what they understand their options for gender to be. Common identity labels include man, woman, genderqueer, trans and more. Gender identity is sometimes confused with biological sex, or sex assigned at birth.
- **Sexual Identity:** The way in which one understands one self in regard to one's sexuality.

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The distinctions are based on the differences in the construct of gender, sex and sexuality. An Indian Sociologist Anita Chettiar has noted that, "*Sex is what you are born with, Gender is what you recognize and Sexuality is what you discover.*"

The Genderbread Person

Gender is one of those things everyone thinks they understand, but most people don't. Gender isn't binary. It's not either/or. In many cases it's both/and. A bit of this, a dash of that. This tasty little guide is meant to be an appetizer for gender understanding. It's okay if you're hungry for more after reading it. In fact, that's the idea.



We can think about all these things as existing on continuums, where a lot of people might see themselves as existing somewhere between 0 and 100 on each

⊖ means a lack of what's on the right side

Gender Identity

- ⊖ —————> Woman-ness
- ⊖ —————> Man-ness

personality traits, jobs, hobbies, likes, dislikes, roles, expectations

common GENDER IDENTITY things

Gender Expression

- ⊖ —————> Femininity
- ⊖ —————> Masculinity

style, grooming, clothing, mannerisms, affect, appearance, hair, make-up

common GENDER EXPRESSION things

Anatomical Sex

- ⊖ —————> Female-ness
- ⊖ —————> Male-ness

body hair, chest, hips, shoulders, hormones, penis, vulva, chromosomes, voice pitch

common ANATOMICAL SEX things

Identity ≠ Expression ≠ Sex
Gender ≠ Sexual Orientation

Sex Assigned At Birth

□ Female □ Intersex □ Male

Typically based solely on external genitalia present at birth (ignoring internal anatomy, biology, and change throughout life), Sex Assigned At Birth (SAAB) is key for distinguishing between the terms "cisgender" (when SAAB aligns with gender identity) and "transgender" (when it doesn't).

Source: University of Colorado, Denver

What are the challenges faced by the Sexual Minorities (or the LGBT Community)?

Inequality and Violence: Members of the LGBT community are more vulnerable to intolerance, discrimination, harassment, and even violence because of their sexual orientation. They are denied access to healthcare and retirement benefits, among other forms of social protection, and are subjected to prejudice. In India, the 'Hijra' community members are subjected to regular violence including by the police.

Lack of Social Acceptance: Sexual minorities fail to find acceptance even in their own families. They are often disowned or are isolated from others. They often end up in juvenile detention. Young people coming out as gay or lesbian are often pressurized to get married to 'cure' them. They are also forced to undergo Conversion Therapy to change their orientation.

Read More: [Ban on Conversion Therapy – Explained, pointwise](#)

Health Issues: Rejection and isolation can lead to mental health issues including stress, low self-esteem. This can lead to alcoholism and drug abuse. Lack of knowledge and access to healthcare often expose them to greater risk of sexually transmitted diseases like AIDS e.g., the Centre for Disease Control and Prevention (CDC, US) estimated that gay and bisexual men made up an estimated 2% of the U.S. population in 2013 but 55% of all PLWH (People Living With HIV/AIDS) in the US.

Political Under-Representation: Due to their low proportion, Sexual minorities feature low on the priority list of political parties. They have no political representation as they fail to get even the opportunity to contest due to social prejudice. This leads to absence of their perspective in legislation e.g., the **Assisted Reproductive Technology (Regulation) Act, 2021** allows only heterosexual couples to use ARTs. Similarly Rights of Sexual Minorities are not covered under **Maternity Benefits Act, 2017**.

What are the Constitutional and Legal Safeguards for the Sexual Minorities?

Constitutional Safeguards

The Preamble: The Preamble to the Constitution of India provides for Justice (social, economic, and political) and equality of status.

Fundamental Rights: Article 14 (Right to Equality) provides for equal status before the law and an equal protection of the laws. 'Any Person' means no discrimination on the basis of caste, creed, religion, sex, etc.

Article 15 and **16** (Right against Discrimination and Equality of Opportunity) prohibit discrimination against any citizen on certain enumerated grounds, include 'sex'. Both the Articles prohibit all varieties of gender bias and gender-based discrimination.

Article 21 provides for Rights to Life and Personal Liberty.

Article 23 provides for Right against Exploitation and prohibits various inhuman acts like human trafficking and beggary.

Legal Safeguards

The **Transgender Persons (Protection of Rights) Act, 2019** prohibits any person or organisation from discriminating against transgenders in matters of employment, recruitment, promotion and other related issues.

The **Citizenship Act, 1955** provides for the acquisition and determination of Indian Citizenship. It doesn't, expressly or impliedly, require a determinate sex or gender identity as a pre-condition for acquiring citizenship. For someone to be a voter (elector), the person needs to be a citizen of India. Transgenders persons can also enrol as electors.

The **Registration of Births and Deaths Act, 1969** does not mention anything about "sex"/ "gender" of a person to be registered in case of birth or death. The Act is **gender neutral**.

The **Immoral Traffic Prevention Act (ITPA), 1956** (amended in 1986) is the principal instrument which prevents the trafficking of women and children into prostitution. With the Amendment of 1986, the scope and ambit of the Act became applicable to both male and female sex workers and also to those whose **gender identity was indeterminable**.

The **UGC Anti-Ragging Regulations (2009)** binds both public and private universities to take cognizance of complaints of homosexual assaults. Further, in 2016, UGC has also recognised gender identity and sexual orientation as the grounds for ragging and discrimination.

What are some of the Judgments related to the Rights of Sexual Minorities?

Naz Foundation Govt. v. NCT of Delhi (2009): The High Court of Delhi held that **Section 377 of IPC** (*carnal inter-course against the order of nature*) imposed an unreasonable restriction over two adults engaging in consensual intercourse in private. Thus, it was in direct violation of their basic fundamental rights enshrined under Articles 14, 15, 19 and 21 of the Constitution of India.

Suresh Kumar Koushal vs Naz Foundation (2013): The Supreme Court (2-Judge Bench) overturned the judgment of the Delhi High Court and re-criminalised homosexuality. The Bench held that LGBT+ persons constituted a '**minuscule minority**' and therefore **did not deserve constitutional protection**. It further observed that Section 377 of IPC did not suffer from the vice of unconstitutionality.

National Legal Services Authority v. Union of India (2014): The Judgment legally recognised non-binary gender identities and declared transgender people the 'third gender'. The Judgment affirmed that the fundamental rights granted under the Constitution of India (including Articles 14, 15, 16, 19(1)(a) and 21) will be equally applicable to them, and gave them the right to self-identification of their gender as male, female or third gender. The Court also referred to core international human rights treaties and the **Yogyakarta Principles** to recognise transgender persons' human rights. The judgement also directed Central and State governments to take proactive action in securing transgender persons' rights.

The Yogyakarta Principles (2006) address a broad range of human rights standards and their application to issues of sexual orientation and gender identity. The principles were developed by a panel of human rights experts in the domain of gender and sexuality.

K.S. Puttaswamy v Union of India (2017): The Supreme Court's ruling on the Right to Privacy as an inherent fundamental right under Article 21 also referred to the Rights of Sexual Minorities. The SC noted that sexual orientation is an essential attribute of privacy and that **discrimination based on sexual orientation is deeply offensive to the dignity and self worth of the individual**. The protection of sexual orientation lie at the core of the fundamental rights guaranteed by Arts 14, 15 and 21.

Navtej Singh Johar V. Union of India (2018): A 5-Judge bench of the Supreme Court overruled the Suresh Kumar Koushal Judgment (2013). It unanimously held that **Section 377 of the IPC was unconstitutional** in so far as it criminalized consensual sexual conduct between adults of the same sex. The Court reasoned that discrimination on the basis of sexual orientation violated the right to equality. Criminalising consensual sex between adults in private **violated the Right to Privacy**. Sexual orientation is an intrinsic aspect of self-identity and that rejecting it would violate the **Right to Life**. Fundamental rights cannot be rejected on the grounds that they only affect a small percentage of the population.

Arun Kumar vs Inspector General of Registration (2019): The Madras High Court recognized a marriage solemnized between a male and a transwoman, and called it a valid marriage. The Court stated that transgender persons had the right to decide their self-identified gender, as held by the Supreme Court in *NALSA v Union of India (2014)*. Under the Hindu Marriage Act, 1955 the definition of marriage only includes men and women. This judgement expands the category of women to include transgender people to identify as women to be brides as well.

What more should be done to protect Rights of Sexual Minorities?

Recognition of Fundamental Rights: LGBTQ rights should be recognised as part of human rights. Non Recognition of same-sex marriages, not allowing adoption, guardianship, surrogacy, IVF, not having LGBT+ inclusive schools, colleges and workplaces are all violative of Article 14, 15, 19, 21. Similarly, the Army Act, Air Force Act etc. explicitly prohibit gay men from joining the Armed Forces. However a cautionary approach is advisable before adopting any change in the Armed Forces.

Required Government and Legislative Initiatives: The Government should take concrete steps to eliminate the stigma, discrimination and abuse surrounding the LGBTQIA+ community.

The government should formulate new laws or amend existing laws on marriage, adoption, guardianship, inheritance educational institutions, employment, healthcare services etc for education, social security and health of LGBT+ people with special focus to Transgender persons. Efforts should be directed to make gender-neutral harassment laws.

Legalised same-sex marriage: Knowing the demands of the LGBTQIA+ population, the government must widen marriage to cover all gender and sexual identities.

Anti-discrimination Policies: Both the public and private sector must frame anti-discrimination policies and undertake positive measures to eliminate prejudiced stereotypes rooted in homophobia.

Education and Sensitization: It is very important to educate people about LGBTQ Rights. Efforts must be directed to train school and university staff to provide them with the necessary skills and knowledge to encounter such abuse.

Conclusion

The sexual minorities have faced discrimination for long. Judicial interventions have progressively expanded the rights of sexual minorities. However, in the long term there is a need of sensitization and bring in a change in the social attitudes. Unless the social change happens, the judicial and legislative measures may remain ineffective.

Syllabus: GS II, Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes; Mechanisms, laws, institutions and Bodies constituted for the protection and betterment of these vulnerable sections.

Source: [The Hindu](#), [The Hindu](#), [Law Brigade Publishers](#)

Waste Management in India: Status, Challenges and Solutions – Explained, pointwise

Introduction

India is set to undergo rapid urbanization in the coming decade. One major challenge accompanying the urbanization is rapid rise in waste generation. Waste Management Processes and Systems in India will need to be upgraded to meet this challenge.

What is the status of Solid Waste Generation in India?

Overall Solid Waste Management Status

According to the Central Pollution Control Board (CPCB) the total quantity of Solid waste generated in the country is ~160,000 metric tonnes per day (TPD). ~153,000 TPD of waste is collected at a collection **efficiency of ~96%**. 80,000 TPD (50 %) of **waste is treated** and ~30,000 (18.4%) **TPD is landfilled**. ~50,000 TPD (31.2 %) of the total waste generated **remains unaccounted**.

Per-capita Solid Waste Generation has increased marginally from 118.7 gm/day in 2015-16 to 119.1 gm/day in 2020-21.

Maximum quantity of per capita solid waste is generated in Delhi.

Processing of solid waste has improved significantly from **19% in 2015-16 to ~50% in 2020-21**. In the corresponding period, proportion of solid waste **landfilled has fallen from 54% to 18.4%**.

100% of solid waste is treated in Chhattisgarh, followed by 89% in Daman & Diu and Dadra & Nagar Haveli (DDDNH) and 87% in Goa.

According to a World Bank Report, globally 2.01 billion tonnes of municipal solid waste is generated annually, of which **at least ~33% is not managed in an environmentally safe**

manner. Global per capita waste generation is 740 gm/day (average) but varies from 110 gm/day to 4.54 kg/day across countries. High Income countries contribute 34% to global waste generation despite having only 16% of the population.

What are the challenges in Solid Waste Management in India?

Rising Waste Generation: Economic growth leads to increase in waste generation consequent to rise in consumption. Expansion of digital economy will lead to multifold increase in e-waste generation. In addition, rapidly expanding population will add to waste. A Planning Commission Report (2014) had estimated that India will generate 165 million tonnes by 2030 (~60 million tonnes annual in 2020).

Improper Waste Management: (a) Poor Processing: Only 50% of the waste is processed. ~30% is not accounted and ~20% ends up in landfills which is very poor method of disposal **(b)**

Incorrect and Inadequate Segregation Techniques: There is poor segregation at source, Hazardous waste is not sealed and labeled which leads to their improper disposal. In addition e-waste is not disposed properly; **(c)** Reuse/recycling of waste occurs through scavengers in the informal sector and there is no Government collection of recyclables; **(d)** Often garbage is not placed in designated containers, leading to dirty streets.

Littering and Illegal Dumping: In terms of disposal, almost half of waste is placed in uncontrolled dumps; sanitary landfills with leachate collection and gas recovery are not available. This has detrimental environmental impacts

Lack of Financial Resources: Lack of financial resources with local bodies lead to understaffed and underpaid cleaning and sanitation departments. Collection infrastructure (like vehicles) is poorly maintained. Lack of funds prevents purchase of new equipment and vehicles.

Inconsistent Collection: Understaffing and under-compensation leads to inconsistent collection of waste. Sanitation workers do not serve all areas.

Inappropriate Infrastructure: Vehicles used to waste collection are not designed for this purpose. This often leads to overloading which results in spillage during transportation. Vehicles do not have lifting mechanisms, so loading is done manually which is unhygienic and hazardous.

Lack of Civic Responsibility: Limited environmental awareness combined with low motivation has inhibited innovation and the adoption of new technologies that could transform waste management in India. Public attitudes to waste are also a major barrier to improving SWM in India.

What are the harmful impacts of poor Waste Management?

Health Issues: (a) Improper and unscientific collection and handling leads to several diseases in sanitation workers; **(b)** Municipal waste is often mixed with hazardous and medical wastes, which exacerbates health threats; **(c)** Open burning of waste leads to formation of harmful particles which can cause lung diseases; **(d)** Poor collection leads to garbage dumps which act as breeding ground for rats and mosquitoes etc. Mosquitoes act as carriers of diseases like malaria and dengue.

Environmental Issues: (a) Unscientific dumping in landfill leads to formation of harmful chemicals which permeate into soil and groundwater. This renders groundwater unfit for drinking and cause multiple diseases; **(b)** Waste in landfills leads to formation of harmful gases leading to air pollution. Composition of gases depends upon type of waste but typically methane and carbon dioxide make up 90 to 98% of landfill gases. The remaining 2 to 10% includes nitrogen, oxygen, ammonia, sulfides, hydrogen and various other gases. They contribute to global warming as well; **(c)** A lot of land-based waste eventually ends up in sea leading to marine pollution.

Economic Impacts: (a) Expanding landfills occupy useful land and lead to wasteful utilization of an economic resource; **(b)** Recycling of waste can lead to cost economies and generate revenue

as well. Poor waste management misses this useful opportunity; **(c)** Poor waste collection leads to clogging of drains, which has become a factor in urban flooding leading to economic losses; **(d)** Poor waste management leads to general filth in cities which impacts tourism potential.

What steps have been taken by the Government regarding Waste Management?

Institutional Arrangement: In India, waste management is governed by the Ministry of Environment, Forest and Climate Change (MoEFCC), Central Pollution Control Board (CPCB), Ministry of Urban Development (MoUD), State Pollution Control Boards (SPCBs) and the ULBs (12th Schedule of the Constitution).

Policy and Legal Framework for Waste Management in India: The Government of India (GOI) has formulated various Rules and Regulations regarding solid waste management (SWM). These include Solid Waste Management Rules, e-Waste Management Rules, Plastic Waste Management Rules etc. These rules are updated periodically and have been formulated under the Environment Protection Act, 1986.

Read More: [Plastic Waste Management \(Amendment\) Rules, 2022 – Explained, pointwise](#)

Solid Waste Management Rules, 2016 are applicable beyond municipal areas and include urban agglomerations, census towns, notified industrial townships, areas under the control of Indian Railways, airports, special economic zones, places of pilgrimage, religious and historical importance, and State and Central Government Organizations in their ambit.

Government Initiatives: **(a) Swachha Bharat Mission – Urban (SBM-U):** With the enactment of new rules, door-to-door collection, segregation at source, etc. has been initiated; **(b) Swachha Survekshan:** An annual survey of cleanliness, hygiene and sanitation in cities and towns across India is undertaken. It has been launched as a part of the SBM-U under the Ministry of Housing and Urban Affairs (MoHUA). It gives star ratings to garbage-free cities and towns on several factors and acts as incentives for cities to do better; **(c) Swachhata Hi Sewa Campaign:** It has been launched for ensuring cleanliness through the various stakeholders' engagement in the 'Jan Andolan' (National Movement); **(d) Compost Banao, Compost Apnao Campaign:** It is a multi-media campaign launched by MoHUA on waste-to-compost under SBM-(U). The aim is to encourage people to convert their kitchen waste into compost to be used as fertilizer and to reduce the amount of waste getting to landfill sites; **(e) Promotion of Waste to Energy:** The Ministry of New and Renewable Energy (MNRE) launched Program on Energy from Urban, Industrial, Agricultural waste/residues and Municipal Solid Waste to promote setting up of Waste-to-Energy projects and to provide central financial assistance.

Read More: [Waste to Energy Plants: Benefits and Concerns – Explained, pointwise](#)

What more steps can be taken to improve Waste Management?

Scientific Waste Management: The waste management planning should be based on sound scientific and engineering studies. They should consider waste composition, capital and long-term operating costs, transport distances, and the geographical location of waste processing and disposal facilities. Comprehensive waste characterization studies are needed to obtain accurate data for solid waste management planning.

Waste Collection: To improve collection practices, a number of improvements should be considered, including more regular service by sweepers, daily waste collection (rather than alternate days), use of mechanized vehicles, better coordination between timing of waste generation and collection, and increased accessibility for waste collection vehicles.

Merging the informal and formal waste collection sectors has the potential to streamline the segregation and collection process.

Improved Practices: **(a) Decentralized Solid Waste Management:** It is an approach in which the informal sector provides **source-segregated waste collection and treatment at the local**

level, avoiding transport to a centralized waste facility in order to reduce costs. Decentralized approaches may also promote more citizen and local stakeholder involvement in planning and decision-making; **(b) Recycling**: It has great potential to expand in India. Policies and regulations to support recycling are needed; **(c) Processing**: For treating organic waste processes like composting, vermi-composting and bio-methanation should be considered to reduce the amount of organic waste that goes to open dumps or landfills. Initiatives like Compost Apnao need to be scaled-up; **(d) Sanitary Landfills**: The conversion of existing dumps to sanitary landfills is a critical need. To accomplish this, the enforcement of rules, regulations, and bylaws, along with proper funding, are required. Technical expertise and financial feasibility are key barriers which must be addressed; **(e) Smart Waste Management System**: In the long term, technology like (Internet of Things) can be integrated into waste management e.g., RFID-Enabled Door-to-door waste collection monitoring can enhance collection efficiency and GPS based vehicle tracking can help in real time monitoring.

Waste-to-energy: Bio-methanation (anaerobic digestion) uses micro-organisms to convert the organic waste into methane, which can be used as fuel. Bio-methanation plants should be scaled up.

Strict Implementation of Rules: Waste Management Rules have incorporated have incorporated 'Polluter Pays Principle'. The rules need to be stringently implemented to penalize non-compliance.

Public Awareness: Self- help groups, residents' welfare associations, and community-based organizations should be encouraged to educate and acquaint people with beneficial waste management strategies, including separation, recycling modes, and drop off centers for recyclables, as well as composting.

Conclusion

As India undergoes rapid urbanization, multifold increase in waste generation will provide a new governance challenge. The Government must scale up its existing efforts to improve waste management. At the same time, public participation is vital and without their contribution, Government efforts might remain ineffective. The refore, it is desired to place more emphasis on information, planning, funding, unified waste management along with community education. The 4 R's philosophy of Reducing, Reusing, Recycling, and Recovering Resources should be actively encouraged.

Syllabus: GS III, Conservation, Environment Pollution and Degradation.

Source: [The Hindu](#), [CPCB](#), [WB](#)

Persons with Disabilities: Rights, Challenges and Solutions – Explained, pointwise

Introduction

In a recent Judgment related to compensation for a person rendered disabled by an accident, the Supreme Court made certain remarks regarding disability and persons with disabilities. The Court said, "...in the era of competition, the appellant cannot compete with 'normal men'...". The Court also noted that, "a person must be physically fit...to complete professional commitments". The SC remarks are facing criticism from disability rights activists as being out of touch with the current thinking on disability rights. There have been lot of progressive developments regarding rights of persons with disabilities. Yet they continue to face considerable challenges including social apathy.

Who are the Persons with Disabilities?

The **United Nations Convention on the Rights of Persons with Disabilities** (UN CRPD) defines “Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others”.

The **World Report on Disability 2011** sums up the various definitions of disability by stating that “Disability is complex, dynamic, multidimensional, and contested”.

The **Rights of Persons with Disabilities Act, 2016**, uses the same definition as the UN CRPD. It further defines “Person with Benchmark Disability” as “A person with not less than 40% of a specified disability”.

The 2016 had expanded the types of disabilities from 7 (under the Person with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995) to 21. Further, the Union Government will have the power to add more types of disabilities.

Types of Disabilities

Physical Disability

- **Locomotor Disability**

- (i) Leprosy cured person; (ii) Cerebral Palsy; (iii) Dwarfism; (iv) Muscular Dystrophy; (v) Acid Attack Victims.

- **Visual Impairment**

- (i) Blindness; (ii) Low Vision.

- **Hearing Impairment**

- (i) Deaf; (ii) Hard of Hearing.

- **Speech and Language Disability.**

Intellectual Disability

- (i) Specific Learning Disabilities; (ii) Autism Spectrum Disorder.

Mental Illness

Chronic Neurological Conditions

- (i) Multiple Sclerosis; (ii) Parkinson's Disease

Blood Disorders

- (i) Haemophilia; (ii) Thalassemia; (iii) Sickle Cell Disease.

Multiple Disabilities including Deaf-Blindness

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What is the current status regarding Persons with Disabilities?

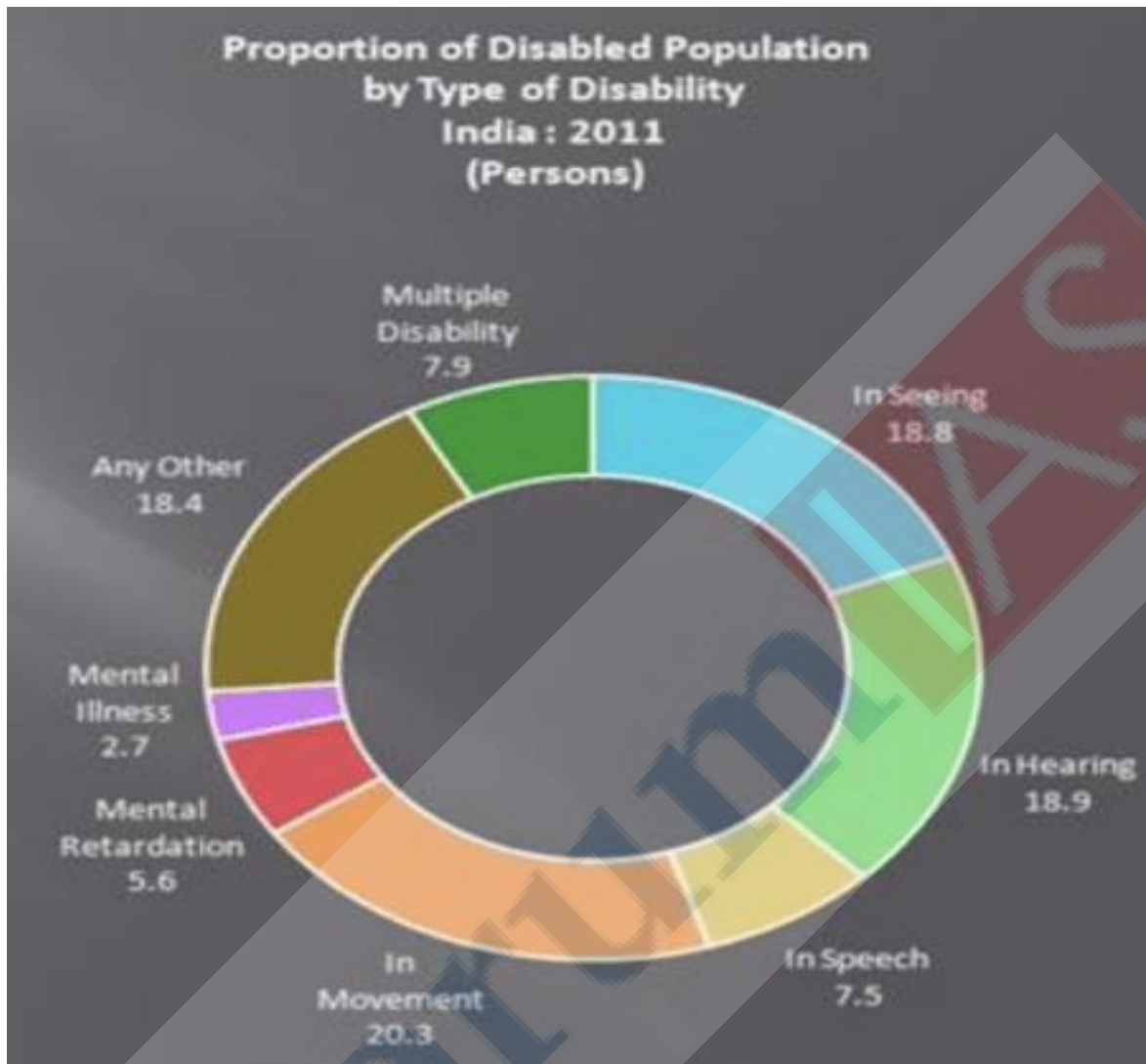
In India, there were around 26.8 million persons with disabilities, constituting 2.21% of India's total population (2011 Census).

There were 14.9 million men (2.41% of men) and 11.9 million women (2.01% of women) with disabilities. 69% (18 million) of persons with disabilities reside in rural areas.

20% of persons with disabilities in India have a disability in movement, 19% have visual impairment, 19% have a hearing impairment and 8% have multiple disabilities.

Disabilities are highest in the age group 10-19 years (46.2 lakh people).

At an all India level, **34% of the total disabled population is reported as 'workers'**. The proportion is highest in Nagaland (~52%) followed by Sikkim (49%) and Arunachal Pradesh (~45%).



Source: Census of India, 2011

The Disability rights activists and academicians working on disability issues, however, say that these numbers in the census are a very small percentage of the actual numbers. World Bank data on the total number of persons with disabilities in India suggests the number is between 40 and 80 million.

What provisions have been made for the Persons with Disabilities in India?

Constitutional Provisions

Preamble: The Preamble seeks to secure social (as also economic and political) justice to all citizens along with equality of status and of opportunity.

Fundamental Rights: **Dignity of the individual** is the **fundamental notion** behind all the fundamental rights guaranteed under the Constitution. All fundamental rights are available to the persons with disabilities.

Directive Principles: Article 41 exhorts the State to make effective provisions for securing the right to work, education and to public assistance in case of unemployment, old age, sickness and disability.

According to Article 46, State shall promote educational and economic interests of the weaker sections of the people and protect them social injustice and all forms of exploitation.

Relief of the Disabled is a State Subject (Entry 9 in List II) under the Seventh Schedule.

Welfare of the Disabled and mentally retarded is listed as item 26 in the **Eleventh Schedule** and item 09 in the **Twelfth Schedule**.

Legal Provisions

The Mental Health Act, 2017: It replaced the Mental Health Act, 1987. It has been passed with the objective to provide for mental healthcare and related services for persons with mental illness and to protect, promote and fulfill their rights.

The Rights of Persons with Disabilities (RPwD) Act, 2016: It came into force in April 2017. It replaced the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995. It fulfils the obligations to the United National Convention on the Rights of Persons with Disabilities (UNCRPD). The Act has several provisions for benefit of persons with disabilities like it has **increased the magnitude of reservation** for Persons with Disabilities from 3% to 4% in government jobs and from 3% to 5% in higher education institutes. It stresses to **ensure accessibility** in public buildings in a prescribed time frame.

The Rehabilitation Council of India Act, 1992: It provided statutory status to the Rehabilitation Council of India (RCI, established in 1986). The mandate given to RCI is to **regulate and monitor services given to persons with disability**, to standardise syllabi and to maintain a Central Rehabilitation Register of all qualified professionals and personnel working in the field of Rehabilitation and Special Education.

The National Trust for the Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities Act, 1999: It has enacted with the objective to provide for the constitution of a body at the National level for the Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities. The trust aims to provide total care to persons with mental retardation and cerebral palsy and also manage the properties bequeathed to the Trust. The Trust strives to enable persons with disability to live independently by: **(a)** Promoting measures for their protection in case of death of their parents; **(b)** Evolving procedures for appointment of their guardians and trustees; **(c)** Facilitating equal opportunities in society.

Welfare Programmes

Accessible India Campaign: It aims for creation of Accessible Environment for PwDs. It was launched in December 2015. The campaign is based on the principles of the **Social Model of Disability**, which means disability is caused by the way society is organised and not by the person's limitations and impairments. The aim of the Campaign is to make a **barrier free and conducive environment for Persons with Disabilities** all over the country. The campaign targets three separate verticals for achieving universal accessibility **(a)** Built up environment; **(b)** Transportation ecosystem; **(c)** Information & Communication Technology (ICT) ecosystem.

Deendayal Disabled Rehabilitation Scheme (DDRS) aims to create an enabling environment to ensure equal opportunities, equity, social justice and empowerment of persons with disabilities. Under DDRS, NGOs are provided with financial assistance for running their projects for the rehabilitation of persons with disability. Projects include Special school, pre-school and early intervention, Halfway Homes and Community Based Rehabilitation etc.

Assistance to Disabled Persons for Purchase/Fitting of Aids and Appliances (ADIP): Its aim is to assist the needy disabled persons in procuring durable and scientifically manufactured appliances. It helps promote their physical, social, and psychological rehabilitation by reducing the effects of disabilities and enhancing their economic potential. It is implemented by NGOs, National Institutes under the Ministry of Social Justice & Empowerment, and ALIMCO (a PSU that manufactures artificial limbs).

Read More: [Access to Assistive Technology: Challenges and Solutions – Explained, pointwise](#)

Indian Sign Language Research and Training Centre: It promotes the use of sign language and also to develop human resources in the field.

National Institute of Mental Health Rehabilitation (NIMHR): It aims to work towards capacity building in the field of mental health rehabilitation. It also aims to develop community-based rehabilitation protocols for mainstreaming persons with mental illness who have been successfully cured.

What are the challenges faced by Persons with Disabilities?

Social Challenges: (a) **Discrimination and Inequality:** They face several types of discrimination e.g., often there is reluctance to hire PwDs for employment; (b) **Loss of Social Status:** Lack of opportunities results in lack of employment, money etc.; (c) **Inhuman Treatment:** People suffering from mental illness or mental retardation are subject to social exclusion; (d) **Loss of Identity:** The identity of PwDs becomes linked with their disability and become a subject of pity.

Access to Education: Persons with visual impairment lack education materials for their studies. Children with learning disabilities are shunned and not admitted to schools. There is lack of special schools and trained teachers for children with learning disabilities.

Unemployment: They have lower employment rates. Private sector is reluctant to hire PwDs due to stereotypes and stigma. It impacts their ability to be financially independent and be self-sufficient.

Accessibility: Lack of appropriate disabled-friendly physical infrastructure creates accessibility issues e.g., PwDs find it difficult to commute in public transportation, or access buildings.

Improper Execution of Policies: Disability inclusion efforts are hampered by poor execution of policies and programmes.

Barriers to Healthcare

According to WHO, people with disability encounter a range of barriers in accessing health care

✓ Attitudinal Barriers

- Prejudice, stigma, discrimination by health service providers.
- Service providers lack knowledge about needs of the disabled.
- Women with disability face barriers to sexual, reproductive health services and information.

✓ Communication Barriers

- Limited availability of written material or sign language interpreters at health services for persons with hearing impairment.
- Lack of information and prescription in accessible formats, like Braille or large print for persons with vision impairment.

Source: WHO

✓ Physical Barriers

- Lack of appropriate infrastructure to access healthcare facilities like ramps to access passages, doorways, toilets on wheelchairs.
- Fixed-height furniture, including examination beds and chairs, can be difficult for people with disability to use.
- Lack of healthcare facilities in remote areas.

✓ Financial Barriers

- Over half of all people with disability in low-income countries cannot afford proper health care.
- Inability to afford the costs associated with travelling to a health service and paying for medicine.

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What should be done going ahead?

Accommodation and Inclusion: There is a need to identify opportunities to better accommodate people with disabilities in Society – like providing better education, equal opportunity in job, and initiating them to take active part in social and political decision.

Sensitisation: Overcoming stigma is necessary in order to facilitate better integration of Persons with Disabilities into the mainstream. The Prime Minister coined the term “*Divyangjan*” to address persons with disabilities. The rationale is to change the social attitude towards them and recognise their potential. This attitude should be widely adopted. People need to be educated and be sensitized about the challenges faced by PwDs.

Preventive Measures: The **Comprehensive Newborn Screening** (CNS) programme under the *Rashtriya Bal Swasthya Karyakram* has been launched for early detection and prevention of disabilities. Under this, a comprehensive clinical examination is to be performed on all babies, usually within the first 48 hours of life. It must be scaled up in all States.

Interventions in Public Policy: A larger portion of the budget should be allocated to the welfare of disabled people. There ought to be budgeting for people with disabilities in line with the gender budget. It is important to make sure that plans are carried out correctly. There ought to be appropriate systems for the monitoring, as well as accountability, of public monies.

Conclusion

The Government has undertaken commendable initiatives for the welfare of the disabled and make them independent. However, they still face social exclusion driven by stigma and stereotypes about disability. There is a need to integrate Government's effort with initiatives towards bringing a social change. Simultaneously Government should focus on better implementation of its initiatives. Indian Paralympic Athletes won 19 medals including 5 Gold medals in the Tokyo 2020 Paralympics which shows that with proper support, they can excel in any field. With social change and Government support, they can be mainstreamed into the society and their potential can be utilized in all fields of human endeavour.

Syllabus: GS II, Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes; Mechanisms, laws, institutions and Bodies constituted for the protection and betterment of these vulnerable sections.

Source: [Indian Express](#), [NSO](#), [Vikaspedia](#)

Regulation of Fintech in India – Explained, pointwise**Introduction**

The RBI had come out with guidelines on Digital Lending in September 2022. The guidelines were welcomed as they have been aimed at protecting customers from unethical business practices, such as mis-selling, breach of data privacy, unfair business conduct, charging of exorbitant interest rates, adopted by digital lenders. According to the findings of an RBI Working Group, released in November 2021, as many as 600 out of 1100 lending apps available across 80 application stores were illegal apps. Even though RBI has issued guidelines, hundreds of illegal lending apps, which are not under the RBI ambit, are yet to be reined in by the State Governments. With the advent of Digital economy, a lot of digital financial service providers have come up in India and the landscape has only become complex with proliferation of numerous service providers and apps. This has necessitated regulation of the Fintech in India.

What is the meaning of Fintech?

The term “FinTech” is a contraction of the words “Finance” and “Technology”. It refers to the technology start-ups that are emerging to automate and enhance financial services and

processes. These fintech firms are challenging traditional banking and financial players and **cover a wide array of services**, from crowd funding platforms and mobile payment solutions to online portfolio management tools and international money transfers.

According to Financial Stability Board (FSB), of the BIS, "*FinTech is technologically enabled financial innovation that could result in new business models, applications, processes, or products with an associated material effect on financial markets and institutions and the provision of financial services".*

In India, Financial sector undertakings, including fintech businesses, are usually regulated by the RBI, SEBI, the Insurance Regulatory and Development Authority of India (IRDAI), and the Pension Fund Regulatory and Development Authority (PFRDA).

What are the benefits of the Fintech Sector?

Financial Inclusion: Innovation driven by Fintech has widened the access to financial services e.g., UPI has been adopted and proved to be beneficial to the small vendors.

Read More: [UPI and Digital Payments in India – Explained, pointwise](#)

Closed gender and access gaps in Financial Services: Fintech has assisted in overcoming obstacles caused by limits on the in-person mobility of women and the loss of job during a period of financial hardship due to COVID-19 pandemic. Fintech services have made it simple to sign up for accounts, complete transactions, and obtain credit. This is one of the many reasons why women made up a significant portion of the customer base.

Extensive Coverage: Fintech has allowed underserved and unbanked areas to be reached, which brick-and-mortar banks were unable to do. The majority of public and private sector banks have established their own fintech incubation centres. Banks have begun to see Fintech as a valuable partner in increasing their reach and connecting with consumers.

Simplified Processes: Fintech has reduced the layers to deliver financial services and have simplified the procedures e.g., many Fintech provide insurance services that are completely online in addition to offering wide range of insurance products.

Social Change: Fintech firms have brought a major change in the Global South by focusing on the social needs. People in developing nations have now been able to access microfinance and digital lending platforms. Regions in Africa, Asia and India, areas with large numbers of people who were disadvantaged by traditional banks, are now enabled to use payment services.

Crowdfunding: Many Fintech Platforms have enabled small businesses, entrepreneurs, charities and artists to receive support without raising money from conventional investors.

What is the need to regulate Fintech Sector?

Data Privacy: The rapid pace of digitization coupled with the decentralized nature of Fintech has posed unique challenges to the regulators. With the proliferation of fintech apps there are concerns related to misuse of consumer data. In addition, some firms have been accused of collecting sensitive user data without informing the consent or

Unethical Practices: A lot of apps have indulged in unethical practices including mis-selling of products, opaque lending practices, brutal collection methods and customer harassment etc. Predatory lending is regulated by the Usurious Loan Act (1918), however, many lending apps have remained under the radar.

Money Laundering: There are also possibilities of criminals indulging in money-laundering and other illegal practices through payments and transfers facilitated by fintech apps. Fintech companies must be required to comply with anti-money laundering (AML) regulations including undertaking measures to prevent and detect money laundering.

Cyberattacks: Fintech companies hold large amounts of data. This makes them attractive targets for cybercriminals. Also, fintech firms may be less prepared to defend against cyberattacks than traditional financial firms.

What guidelines have been issued by the RBI so far for Regulation of Fintech?

The RBI has issued several guidelines like the Guidelines for Licensing of Payments Banks (2014), the Master Directions on Prepaid Payment Instruments (MD-PPIs, August 2021), Circular on Tokenisation – Card transactions (September 2022), Guidelines on Regulation of Payment Aggregators and Payment Gateways (August 2022) among others.

In 2019, the RBI came up with an **Enabling Framework for Regulatory Sandbox**. According to RBI, Regulatory Sandbox refers to live testing of new products or services in a controlled/test regulatory environment for which regulators may (or may not) permit **certain regulatory relaxations for the limited purpose of the testing**. The purpose is to foster innovation in developing new financial products and services. So far, multiple cohorts (phases) have been released dealing with multiple themes like **'Retail Payments'**, **'Cross-border Payments'**, **'MSME Lending'** and **'Prevention and Mitigation of Financial Frauds'** etc.

Benefits of sandbox to the regulators



Benefits of sandbox to FinTech players



Source: PwC. Benefits of Regulatory Sandbox.

In 2020, the RBI also announced the setting up of the **Reserve Bank Innovation Hub (RBIH)** to promote innovation across the financial sector, by leveraging technology and creating an environment that would facilitate and foster innovation.

The RBI issued **Guidelines on Digital Lending** (guidelines) in September 2022 that, among other aspects, create a comprehensive framework to protect consumers' data. The guidelines bring unregulated digital lending players within the RBI's ambit by requiring that regulated players (like Banks and Non-Banking Financial Institutions (NBFCs/NBFIs)), ensure that unregulated players with which they partner, such as Lending Service Providers and companies offering Digital Lending Apps, comply with them.

Read More: [Digital Lending and its Regulation – Explained, pointwise](#)

What are the Issues associated with Regulation of Fintech?

Pace of Innovation: The field of Fintech is evolving at a quick pace with rapid advancements in technology. It becomes difficult to regulate the evolving technology in advance.

Lack of Comprehensive Approach: RBI's approach to Fintech Regulation has been criticized as being reactive rather than proactive e.g., the RBI issued guidelines regarding Digital Lending only after several incidents of fraud and coercive practices surfaced. RBI has been slow to respond to industry's concerns e.g., Banks, NBFCs and fintech players are still awaiting clarity on many aspects of Digital Lending Guidelines, including the First Loss Default Guarantee (FLDG) system.

Arbitrary: Some Fintech players accuse RBI regulations as arbitrary e.g., RBI guidelines on Payment Aggregators (PA) require all companies applying for a PA licence from the RBI to have a minimum net-worth of INR 15 crore. Some start-ups call this clause arbitrary and violate Article 14 and Article 19 (1) (g), which guarantees the 'freedom to trade'.

Data Localisation: The RBI has mandated data localization requirements which mandate storage of data only in India. Many international payment companies store their data on global servers. India based companies (including start-ups) also outsource technical support and data storage/cloud services. Localization requirement will prohibit these start-ups from opting for cost-effective cloud service providers abroad and forced to choose localized alternatives, which ends in high operational costs.

What steps can be taken ahead regarding Regulation of Fintech?

First, the RBI must adopt a **comprehensive approach to Fintech Regulation**. Fragmented and reactionary approach to regulation stifles development of innovation. RBI should consult all stakeholders while anticipating technology evolution to formulate supportive regulation.

Second, RBI should ensure that the regulatory framework does not end up stifling the innovation ecosystem. RBI should also be mindful of **creating a level-playing field** for small start-ups against established large banks. New players/Start-ups bring positive competition in the market along with the financial innovation that benefits the end consumer. **Stability of the financial system** should also be a top priority.

Third, The regulatory framework should take into consideration all concerns like cyber-security, data protection, anti-money laundering regulations etc.

Fourth, there is a need to bring-in more transparency like sharing key fact statements with customers, allowing them to make informed decision.

Fifth, Fintech players also need to be more prudent in their lending practices, minimize adverse outcomes and focus on customer experience. They should be aware of the risk, cultivate a culture of compliance and invest in regulatory technology.

Conclusion

The fintech ecosystem in India is rapidly evolving. Fintech has huge potential to facilitate financial inclusion and usher in a new era of digital economy in India. The regulation of Fintech

sector is equally important in order to protect the consumers and their interests. The RBI must undertake a comprehensive review of the existing regulations and formulate a new comprehensive framework for Fintech Regulation after extensive consultations with all stakeholders.

Syllabus: GS III, Indian Economy

Source: [Indian Express](#), [Mint](#), [The Hindu BusinessLine](#), [PwC](#), [Invest India](#)

Women's Representation in Judiciary – Explained, pointwise

Introduction

The Supreme Court has constituted an all-women bench to hear petitions involving matrimonial disputes and bail matters. This is only the third occasion in the history of the Supreme Court that an all-women bench has been constituted. The earlier two occasions were in 2013 and in 2018. The Supreme Court hasn't had a Woman Chief Justice since its inception. Justice B V Nagarathna is expected to become the first Women Chief Justice in 2027. At present, of the 27 Judges (against sanctioned 34) of the Supreme Court, only 3 are women. This indicates the skewed representation of women in Judiciary. The disparity is not limited to Supreme Court, but is pervasive at all levels of the Judiciary. There are several institutional and structural factors that has limited women's representation in Judiciary. Addressing this disparity is essential to ensure equitable access to justice.

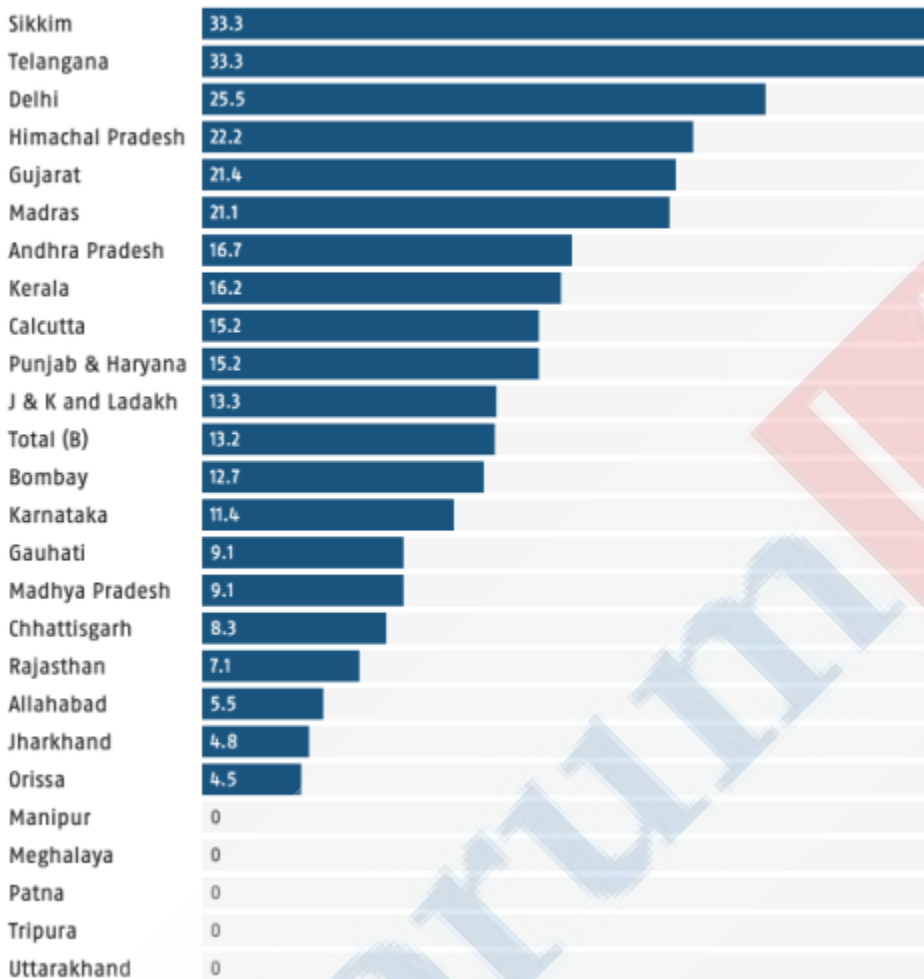
What is the Status of Representation of Women in Judiciary?

Supreme Court: There are 3 Women Judges out of [27 Judges](#) (including the CJI) at present. The proportion is 11%. There have been only 11 women Judges in the history of Supreme Court so far. Of them, 6 have been appointed since 2014 and 5 since 2018.

High Courts: Collectively for all High Courts, Women Judges constitute only 13.2% of the Judges. However, there are considerable variations among High Courts (HCs). 5 HCs have not a single women Judge. Another 7 HCs have < 10% Women Judges. Sikkim and Telangana HCs have highest representation at 33.3%.

Five HCs did not have a single woman judge

(women, % of total working strength of judges in High Courts)



Source: Business Standard

Lower Judiciary: Women Judges constitute ~35% of the Judges in the lower courts. Here the proportion varies from 19.5% in Gujarat to 70% in Goa. 17 of the 36 States and UTs had a smaller proportion of women in the lower judiciary than the national average.

Representation of Women in Judiciary		
Court	Number of Women Judges	% of Women Judges
Supreme Court	3	11.11%
High Court	96	13.20%
Lower Subordinate Courts	6765	35.10%

Based on Government's reply in the Lok Sabha in July 2022.

Out of 1.7 million advocates in the country only 15% are women. Only 2% elected representatives in the State Bar Councils are women.

What are the reasons for Low Representation of Women in Judiciary?

Judicial Rules: Article 233 puts the condition of 7 years of practice as an advocate to be eligible for appointment as District Judge. The Judiciary has interpreted this as 7 years of continuous practice. Most States' Judicial rules dictate a minimum age of 35 years for entry as a district

judge through direct recruitment. No one below the age of 55 years can be appointed as a judge in the Supreme Court. Marriage and Family responsibilities in this age group reduces the ability of women to compete for roles in the Judiciary.

'Leaking Pipeline' Syndrome: The leaking pipeline syndrome is often used as a metaphor for the way **women disappear as they move from lower to higher levels**. The phenomenon of the leaking pipeline is witnessed across a spectrum of careers including the Judiciary (~35% Judges in Lower Courts to ~11% in the SC). Family responsibilities, personal choices, long working hours and work-life conflict, working conditions, lack of access to employment opportunities, barriers to advancement, inadequate support from family results in women frequently dropping out mid-career. This 'voluntary withdrawal' masks the tacit consent given to patriarchally prescribed gender roles.

Opaque Recruitment Process (Collegium System): There are comparatively more women in the lower tiers of Judiciary due to the **presence of formal qualifications and examinations**. Such arrangement is more rational and transparent. Appointments to Higher Judiciary are undertaken through opaque Collegium System where the eligibility and selection criteria are not known. Critics of collegium system say appointment depends upon favourable evaluations and professional/personal networks.

Uncomfortable Environment: The environment is hostile and sexist making it difficult for female litigators to grow as professionals. According to a Research Paper 'Structural and Discretionary Bias: Appointment of Women Judges in India' 13 Judges out of 19 interviewed acknowledged the gender bias that exists in the appointment procedure of Judges to the Supreme Court and the High Courts.

Lack of Supportive Infrastructure: The dearth of supportive provisions and infrastructure, from toilets to maternity leave, also contribute to a high attrition rate amongst women lawyers. In 6,000 courts across the country, 22% of them do not have separate toilets for women. Many women law graduates prefer to join corporate sector.

Lack of Enabling Provisions: While quotas for women have been implemented in the lower courts of many states, these policies are yet to be implemented in the Higher Judiciary. States like Assam, Rajasthan, Andhra Pradesh, Telangana, Odisha have these enabling provisions and have > 40% Women Judges.

What are the impacts of Low representation of Women in Judiciary?

Prejudice in Judgements: Critics argue that lack of gender perspective leads to prejudiced Judgments e.g., In August 2020, the High Court of Madhya Pradesh granted bail to a molester on the condition that he will get a rakhi tied by the victim. Sometimes Judgments tend to uphold the "behavioural ethics" of Indian women (i.e., how ideal women should behave) e.g., in June 2020, while granting bail to a rape accused, the Karnataka High Court observed that the "*after-rape behaviour of the victim is not how a rape victim 'ideally behaves'*". The basis of such judgements is limited to the ideal dignity of a woman, and not on the criminal nature of the act itself.

Deficiencies in Legal Reasoning: The ability of the legal system to understand and respond to different social circumstances and experiences is enriched by more judicial diversity. If there is not adequate women's representation, the justice system will not be able to meet the needs of women and other underserved communities.

Trust Deficit: The lack of women representatives in courts give rise to questions about the courts' legitimacy as representatives of the societies they serve.

What should be the approach going ahead?

Gender Sensitisation: Certain issues need personalization by the Judges. They must see themselves in the shoes of the victim while dealing with cases of sexual violence. The CJI Justice

Chandrachud recently remarked that Feminist approach should be imbibed while dealing with law. All India Bar Examination should contain questions or sections relating to gender sensitisation.

Gender Bias Task Forces: Similar to the Gender Bias Task Forces in the US, which look at how gender affects court systems, India needs a committee that works to make the judiciary more open to everyone (International Association of Women Judges, 2019).

Mentorship System: The [Geneva Forum on Women in the Judiciary](#) (2013) had suggested a mentorship system where senior women judges and lawyers can help and guide their younger peers. Regular, informal meetings of women judges and lawyers can be a great way for them to talk about the challenges they faced and figure out what kind of help they need. Such arrangements will prompt more young women to join the judiciary.

Moulding the Rules: The Court have to be cognizant of the societal and familial pressures women face and have to mould their rules accordingly so that more women take up or to continue court practice even after marriage. Lowering the minimum age requirement for the appointment of a district judge can stop female advocates from opting out of practice and working in the corporate sector. Conducive environments and adequate opportunities should be created for women to flourish as advocates and Judges.

Enabling Provisions: Former CJI Justice Ramanna had exhorted women lawyers to strongly raise their demand for 50% reservation in the judiciary. The Supreme Court should ponder on gradually improving the ratio of women Judges in higher Judiciary. Presence of Women Judges can have a revolutionary impact on jurisprudence e.g., Justice Sujata Manohar (2nd Women Judge to be appointed to the Supreme Court) was responsible for writing up the *Vishakha guidelines*.

Conclusion

The representation of women in the Judiciary has seen a gradual uptick. However, despite recent improvements, women continue to face bias in the judicial field. Both institutional mechanisms and social change are necessary to overcome the bias and make the Judiciary truly representative.

Syllabus: GS I, Social Empowerment; GS II, Structure, organization and functioning of the Executive and the Judiciary.

Source: [The Hindu](#), [Business Standard](#), [Business Standard](#), [The Georgetown Journal of Gender and the Law](#)

[Kurukshehra December Summary] Bridging the Digital Divide – Explained, pointwise

Introduction

Implementing e-governance to empower the population and promote economic growth is a big challenge in large and diversified country like India. The integration of technology-enabled communication and data driven governance along with internet and mobile technology has laid the foundation of efficient governance. e-Governance improves transparency of all operational processes. While e-governance can make governance more accountable and efficient, addressing digital divide and inequality remain a big concern.

Digital Divide

Digital Divide is caused by **different levels of access, use, and application efficiency of digital resources**. The benefits of internet technology aren't evenly spread, and gaps between the haves and have not's are rising. More connected and more competent people have benefited disproportionately from the digital technologies. **Globally, three billion people lack Internet**

connectivity, with the majority living in emerging and least-developed countries. Just 15% of people worldwide can afford to use broadband internet (World Bank 2016). Because of poor infrastructure, Internet connections can be slow and expensive, putting it out of reach for many people. In addition to **financial, gender and racial disparities**, rural-urban and disability divides are widening. A lot of people, especially women, say they don't use the internet because they **don't have the right skills**.

Digital Gender Divide

According to the **UNICEF Gender and Innovation Brief**, there are 3 major reasons for Digital Gender Divide

ACCESS

- Women have lesser access to **digital devices, data and networks** compared to men.
- **Social norms and gender inequality** underpin the digital gender gap.
- Mobile phones are viewed as a **risk to women's reputation** and as an **interruption to caregiving responsibilities**.
- Women's online activity is often governed by male relatives.
- In India, families exhibited **preference to sons** in providing access to digital devices/data for online education during COVID-19 pandemic.

DIGITAL LITERACY

- Due to Gender inequality women have lower levels of education and **less practice in using or creating digital content**.
- A UNICEF Study found that African and Asian women with secondary education are **6 times more likely to be online** than women with only primary education or less.
- It is also related to a lack of digital products and services **designed for women**.
- **Digital illiteracy is reinforced by lack of access to digital technologies**. Access is necessary to develop digital literacy.

ONLINE SAFETY

- Risks associated with digital technologies include **online harassment, cyberstalking, unsolicited sexual messages, child sexual exploitation** etc.
- According to UNICEF, 52% of women globally have experienced some form of digital harm.
- 90% of child sexual abuse images are of girls.
- 25% of women who are harassed online do nothing, citing reasons like **'it's not worth reporting'** and **'authorities don't care'**.
- Limitations in digital literacy make **women more vulnerable** to online risks than men.

Lack of access results in lack of digital literacy, which increases susceptibility to online abuse.

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To close the digital divide, technological, infrastructure, and social-economic solutions that **address accessibility, affordability, and digital literacy** are required. Existing technology can be used to create high-quality, dependable, and secure internet connections, allowing for unlimited involvement in the digital economy. The digital world has expanded and flourished mostly as a result of technological advancement; current pillars of the information society include e-learning, e-libraries, e-health, and e-governance.

Achieving an Affordable, Inclusive Internet for All

There is a need to **build communications and IT infrastructure** to bridge the digital divide and give economical, all-inclusive access to all. The crucial internet access infrastructure has been the focus of policies during the last ten years. While there is still much work to be done, there have been many notable successes. Currently, a mobile internet signal may be found within range of 70% of the world's population (Internet Society 2016). To help establish an inclusive and inexpensive internet that increase prospects for innovation, empowerment, and development, policymakers urgently need to broaden their horizons.

The following parameters are significant in the way of achieving an affordable, inclusive internet for all.

Importance of Infrastructure: Governments and the business sector must collaborate to encourage network sharing and the installation of fiber optic cables to construct other types of infrastructure, such as roads and power lines. To facilitate access, promote innovation, and advance development, **Governments and regulators must create rules that stimulate competition and boost network investment.**

Pricing: Lack of affordability can have a disproportionately negative impact on women because they typically earn less money and have less influence over their purchasing. Policymakers must ensure inexpensive and widespread access to internet at a fair price. A facilitative regulatory environment can enable finance and expedite infrastructure development. Specific packages, referred to as “**zero-rated content,**” **permit unlimited access to certain content or services.** While some contend that zero-rated content can increase internet accessibility, others (including the Indian Telecommunications Regulator and TRAI) have expressed concerns about the potential impact on competition.

Digital Inclusion and Building Human Capacity: Language is a barrier to access. English makes up more than half of web content. Poor knowledge of English reduces propensity to own computer or use the internet (Quast 2016). People are less likely to go online if there is no helpful content available in a language they can understand.

Measuring Access: For Policymakers to make informed decisions to bridge digital divide, they must have access to information about the existing level of disparities. For this, National Statistical Organisations should systematically gather data on Internet access by gender. To create uniform measures, governments should allocate more funds and collaborate with the relevant parties. **e-Government Development Index (EGDI)** serves as a benchmarking and development tool for countries to learn from each other, identify area of strength and challenges in e-government and shape their policy and strategies in this area. (India was ranked 105 out of 193 in 2022 as per the United Nations e-government Survey).

Government Initiatives to Bridge Digital Divide

The Government of India is implementing ‘**Digital India**’ programme to transform India into a knowledge-based society and economy. The programme was launched with to ensure digital access, digital inclusion and empowerment, and bridging the digital divide. The initiative has reduced the distance between the citizens and the Government. Some initiatives under Digital India include:

Common Services Centres (CSCs): Through Village Level Entrepreneurs, CSCs provide digital government and commercial services to rural communities. The CSCs provide more than 400 digital services. 5.31 lakh CSCs are currently operational nationwide (in urban and rural areas), 4.20 lakh of which are at the Gram Panchayat level.

Unified Mobile Application for New-age Governance (UMANG): It provides access to government services to the citizens via mobile. Over 1,570 Government services can be accessed.

e-District Mission Mode Project (MMP): The e-District project has been implemented at district and sub-district levels of all States/UTs. It has benefitted citizens by **delivering various e-Services** such as Certificates (Birth, Caste, Death, Income, and Local Resident), Pension (Old Age, Disability and Widow), Electoral, Consumer Court, Revenue Court, Land Record and services of various departments such as Commercial Tax, Agriculture, Labour, Employment Training and Skill Development etc. Presently 4,671 e-services have been launched in 709 districts across India.

DigiLocker: It is facilitating the paperless availability of public documents. DG locker has more than 11.7 crore users. More than 532 crore documents are made available through Digilocker from 2167 issuer organisations.

Unified Payment Interface (UPI): It is the leading digital payment platform. It is integrated with 330 banks and facilitated over 586 crore monthly transaction worth over RS 10 lakh crore has been facilitated for the month of June 2022.

Read More: [UPI and Digital Payments in India – Explained, pointwise](#)

CO-WIN: It is an open platform for the management of registration, appointment scheduling & managing vaccination certificates for COVID-19. More than 203 crore vaccination doses and 110 crore registrations have been facilitated by CO-WIN.

MyGov: It is a citizen engagement platform that has been developed to facilitate participatory governance. More than 2.48 crore users are actively using MyGov.

Meri Pehchaan: National **Single Sign-on platform** called *Meri Pehchaan* has been launched in July 2022 to facilitate/provide citizens ease of access to government portals.

MyScheme: This platform has been launched in July 2022 to facilitate citizens to avail of eligibility-based services.

Direct Benefit Transfers (DBT): 315 Schemes across 53 Ministries are offering Aadhaar-enabled direct benefit transfers to citizens. So far INR 24.3 lakh crore has been disbursed through the DBT platform.

Read More: [Direct Benefit Transfer \(DBT\): Advantages and Way Forward – Explained, pointwise](#)

Diksha: It is a national-level educational platform that helps students and teachers to participate, contribute and leverage a common platform to achieve learning goals at scale for the country. As of July 2022, 7,633 courses are available and more than 15 crore enrolments have been done.

e-Kranti: *e-Kranti* **Electronic delivery of services** envisages the provisioning of various e-Governance services in the country. The goal of e-Kranti is to revolutionize e-Government services by growing the portfolio of Mission Mode Projects (MMPs) in e-Government under various government departments, implementing Government Process Reengineering (GPR), automating workflows, introducing cutting-edge technologies including Cloud and mobile platforms, and emphasising the integration of services.

The government has made the following moves in the direction of data governance for the nation's socioeconomic development:

Open Government Data: It is a platform for open government data has been created in order to facilitate data exchange and encourage innovation with regard to non-personal data. Over 5.65 lakh datasets are released over more than 12,800 catalogs. The platform has made 93.5 lakh downloads possible.

API Setu: It has been created to make data interchange across systems easier. More than 2100 APIs and 1000+ user organizations are available on the platform.

National Data Governance Framework Policy: The National Data Governance Framework Policy has been proposed by MeitY with the intention of realizing the full potential of India's vision for its digital government, enhancing the effectiveness of data-led governance & public service delivery, and fostering data-based research and innovation. The proposed policy is still being refined. In May 2022, MeitY made the Draft National Data Governance Framework Policy available for public comments.

According to a PIB press release, Digital India has also helped deliver substantial services directly to the beneficiary in a transparent and corruption-free manner. India has become one of the pre-eminent nations of the world to use technology to transform the lives of citizens.

Way Forward

First, E-governance in **regional languages** is important for multilingual countries like India. Governments and other stakeholders must support the ability of stakeholders especially women to produce locally relevant content.

Second, Education and digital literacy programs are essential to equip tomorrow's software developers and local content creators with the abilities they need to contribute to and profit from the information society as creators rather than just consumers.

Third, Governments and businesses should collaborate on R&D, especially to **solve the broadband connectivity gap**, to have a big societal impact when adopting new technologies.

Conclusion

e-Governance must reform all levels of government, but local governments should receive special attention because they are the closest to the people and serve as the primary point of contact for many. Better internet connectivity should be accompanied by improved digital infrastructure, particularly in rural areas. To transform the world and attain the 2030 Sustainable Development Goals, a paradigm shift in how societies run themselves will be required. It will entail rethinking how a government handles a country's public affairs and responds to its inhabitants' needs, as well as how it interacts with civil society and the corporate sector. While e-government focuses on developing online services, the future will focus on how digital government may improve governance by leveraging societal innovation and resilience to advance the SDGs.

Syllabus: GS II, Important aspects of governance, transparency and accountability, e-governance applications, models, successes, limitations, and potential.

Source: Kurukshetra December 2022

Slum Redevelopment in India – Explained, pointwise

Introduction

The Government of Maharashtra has given a go-ahead for the Dharavi Slum Redevelopment Project in Mumbai. Dharavi has often been referred to as the 'largest slum' in Asia. Slums seem to be an integral part of India's urban landscape. Slums are symptomatic of several deficiencies like lack of urban planning, lack of capacity of local bodies, uncontrolled urbanization, unchecked migration etc. Slums suffer from several issues like lack of basic amenities, low human development, and often been criticized as breeding ground of crime. India is set to undergo rapid urbanization in the coming decade. Hence it necessary to ensure that the process of urbanization be sustainable circumscribing further expansion of slums and undertaking redevelopment of existing slums.

Definition of Slum

- The word 'slum' is often used to describe **informal settlements** within cities that have **inadequate housing** and squalid, miserable living conditions. They are often **overcrowded**, with many people crammed into very small living spaces.
- **UN-HABITAT** defines a slum household as a group of individuals living under the same roof in an urban area who lack one or more of the following:
 - Durable housing of a permanent nature that protects against extreme climate.
 - Sufficient living space, which means not more than three people sharing the same room.
 - Easy access to safe water in sufficient amounts at an affordable price.
 - Access to adequate sanitation in the form of a private or public toilet shared by a reasonable number of people.
 - Security of tenure that prevents forced evictions.

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What are the reasons for the growth of slums in India?

First, Uneven development in different parts of the country leads to **migration to few urban centres** causing **pressure of population** on their infrastructure.

Second, Rapid **growth of population and poverty** force poor people to live in slums leading to their expansion. **Scarcity of land** amidst rising population and demand forcing people to live in congested communities.

Third, **High prices of land and high rent** in urban areas creates dearth of affordable housing forcing people to move to slums. Moreover **prevalence of black money in the real estate** sector inflates prices and rents.

Fourth, **lack of urban planning** is a major factor in development of slums. City development plans fail to take into account future expansion of cities. **Corruption in local bodies** lead to delay in development projects related to housing.

Read More: [Issues in Urban Planning in India – Explained, pointwise](#)

Fifth, some experts cite lack of political will towards slum redevelopment as slum becomes contesting grounds of politics. Many slum redevelopment projects are caught in politics as being favoring big real estate developers, or encroaching on rights of the poor.

What are the issues associated with Slums?

Inadequate Provision of Necessary Amenities: Slums lack basic amenities like access to clean drinking water, sanitation, waste collection systems, sewerage and electricity. There is also lack of schools and hospitals leading to neglect of both education and health.

Overcrowding and High Density: Overcrowding has been linked to low space per person, high occupancy rates, different families living together, and a lot of one-room units. Most slum units are too crowded, with five to six people or more living, cooking, and sleeping in a single room.

Substandard Housing/Illegal and Inadequate Building Structures: Slum areas have a high number of substandard housing structures (non-compliant with building standards), often built with non-permanent materials unsuitable for housing given local conditions of climate and location. Many structures are unsafe for habitation.

Unhealthy Living Conditions and Hazardous Locations: Lack of basic amenities like clean drinking water, sewerage, waste collection etc. lead to unhealthy and hazardous living conditions. Many slums are adjacent to industrial plants and the residents are exposed to

hazardous fumes/chemicals/waste. There is high prevalence of disease, especially malaria/cholera/typhoid.

Insecure Tenure: Slum-dwellers lack ownership title to the land they reside. They are under perennial risk of evacuation including harassment by land-mafia.

Poverty and Social Exclusion: Slums are considered as social exclusion areas that are often perceived to have high levels of crime and other social dislocation measures. They are also associated with illegal migrants, internally displaced persons and ethnic minorities. This also gives rise to **vicious cycle of poverty**; poverty becomes both reason and outcome of slums.

Vulnerability of Weaker Sections: Slum-dwelling women and children are at a higher risk of falling victim to social ills such as prostitution, beggary and trafficking.

Other Socioeconomic Issues: Issues like high rate of infant mortality, child marriage, and child labour plague the slums. Hunger, malnutrition, and a lack of quality education are also widely prevalent.

What steps have been taken towards Slum Redevelopment and Urban Housing?

The Government has taken several steps for slum redevelopment.

Slum areas (Improvement and Clearance) Act, (1956): The Act is intended to provide for the improvement and clearance of slum areas in certain Union Territories and for the protection of tenants in such areas from eviction. It gives the appropriate authorities the authority to declare any location to be a slum in accordance with the definition, investigate the possibilities of improvement, or eradicate slums.

National Slum Development Programme (NSDP): It was initiated in 1996. It provided both loans and subsidies to States for slum rehabilitation projects on the basis of their urban slum population.

Valmiki Ambedkar Malina Basti Awas Yojana (VAMBAY): It was introduced in 2001. It was focused on **shelter for the urban poor**, with 20% of total allocation for community sanitation facilities under the *Nirmal Bharat Abhiyan* (NBA) program.

Basic Services to the Urban Poor (BSUP): BSUP was an important component of Jawaharlal Nehru National Urban Renewal Mission (JNNURM). BSUP aimed to provide basic services to urban poor in 63 largest cities in India by population.

Slum Redevelopment Scheme (SRS): It was launched by the Government of Maharashtra in 1995. It allowed the redevelopment of slums through owners, developers, cooperatives or NGOs. In order to attract private developers to underutilized public land, the scheme granted Transferable Development Rights (TDR) and provided Floor Space Index (FSI) incentives for the developers. It also established the Slum Rehabilitation Authority (SRA).

Integrated Housing & Slum Development Programme (IHSDP): It was launched by the Government of India by merging the schemes of NSDP and VAMBAY. Its objective is to provide adequate shelter and basic infrastructure facilities to the slum dwellers in urban areas.

Interest Subsidy Scheme for Housing the Urban Poor (ISHUP): The Scheme envisages the provision of interest subsidy to economically weak section and Low income groups to enable them to buy or construct houses.

Rajiv Awas Yojana (RAY): It was launched in 2013. It was focused on bringing existing slums within the formal system and enabling them to avail of the same level of basic amenities as the rest of the town. It also aimed to tackle the shortages of urban land and housing that kept shelter out of reach of the urban poor.

Smart City Mission: It has its focus on basic amenities, education, health services, IT accessibility, digitization, e-governance, sustainable development, safety, and security.

Housing for all by 2022: Its objective is to construct houses for slum dwellers under the slum-rehabilitation scheme and provide loans at subsidized rates for the economically weaker sections.

Atal Mission for Rejuvenation and Urban Transformation (AMRUT): Its mission is to provide basic services (e.g. water supply, sewerage, urban transport) to households and build amenities in cities which will improve the quality of life for all, especially the poor and the disadvantaged.

National Heritage City Development and Augmentation Yojana (HRIDAY): It aims to preserve and holistically develop the heritage cities of India.

What are the challenges in Slum Redevelopment?

Demand side

Unmet Demand: The Government of India reports there is a shortage of about 19 million homes in urban India, 56% of which are from Economically Weaker Section (EWS) households with monthly income less than INR 25,000.

Limited Access to Financial Resources: The urban poor lack the access to formal financial resources to help them purchase new homes or maintain a new life in a new housing unit even when subsidy is provided by the Government under Rehabilitation schemes. Housing Finance Companies are reluctant to serve the urban poor due to perceived risks (lack of data to assess risk of poor clients).

Supply Side

Lack of available urban land: According to UN-HABITAT, 675 million Indians (~43%) will reside in urban areas by 2035. Land is in high demand due to urbanisation. **Stringent control over land development** generates an artificial urban land shortage, leading to urban sprawl and corruption in land licensing. **Lack of transparent land transaction records** also add up the search time and costs for developers. Additionally, a lot of non-marketable state-owned entities are located in the heart of cities, further limiting the amount of available land for housing.

Lack of Available Urban Land is Driving Up Land Cost	
Constraint	Details
Excess control on the development of land creates artificial shortage	<ul style="list-style-type: none"> • Tend to sprawl out urban development towards the periphery • May lead to rampant corruption as few stakeholders with large influence
Lack of marketable land parcels	<ul style="list-style-type: none"> • Nonmarketable state-owned entities often incompatible with real land value • Lack of monitoring provides proliferation of slums and squatter settlements
Titling issues and lack of transparent information	<ul style="list-style-type: none"> • Incomplete registration form creates great disadvantages to land buyers • Lack of transparency in transaction information hinders land acquisition

Source: niua.org

Rising Construction Costs: Over the last decade, construction costs have risen by almost 80%. With rising material and labour costs, private developers may be unable to supply inexpensive housing to the market on their own.

Regulatory Constraints: Development projects in urban areas are subject to a long approval process regarding different aspects from both State and Central level, which brings about postponement in tasks.

Litigation: The nature of informal settlements leads to complicated and disputed land rights, leading to litigation and delays. In addition, entities opposed to redevelopment projects also resort to litigation e.g., a PIL has already been filed against Dharavi Slum Redevelopment Plan, arguing it will impact Mahim Nature Park, a protected area.

Illegal subletting: According to Slum Rehabilitation Agency (SRA), many redeveloped units are illegally subleased. In the long run, this is counterproductive to the goal of creating slum free cities.

Environmental sustainability: There are concerns among urban planners about adding additional housing on an already over-constrained municipal systems. Without investing in adding capacity to existing civic infrastructure for the city, such policies could put undue burden on the city's civic amenities, in particular, utilities directly provided to households, such water and electricity.

What should be the approach for Slum Redevelopment?

A report by the National Institute of Urban Affairs (NIUA) has made several suggestions for sustainable Slum Redevelopment.

Administrative Sustainability: One-size-fit-all model may not work at a pan-India level. There is a need to adjust slum redevelopment models according to the local needs. There is need to examine demand (growth) and supply (density), as well as financial incentives. Financial incentives, Floor Space Index (FSI) and Transferable Developmental Rights should be customised according to local conditions.

Decentralized Systems: It is associated with decentralised infrastructure for sanitation and energy amenities. Municipalities have typically centralised public services. Slums lack access to essential services due to high investment costs, a lack of resources to meet development and demand, and low-income groups' refusal to pay taxes and fees. **Decentralized systems** have the ability to alleviate these challenges since they are more cost efficient.

Financial Sustainability: Giving out free housing to slum households under slum redevelopment scheme (SRS) results in issues of illegal subletting, illegal sales of housing, and people returning to slums. To address this, there should be stringent measures to prevent subletting. Financial support should be provided to the poor families in order to pay for the cost of the house.

Micro financing: Scaling up micro-finance is more effective in delivering housing funds for the urban poor.

Conclusion

Ensuring sustainable urbanization should be the top policy priority in the coming decade. Eliminating slums will be a crucial aspect in sustainable urbanization. In this context, focus has to be on prevention of creation of further slums as well as slum redevelopment to develop existing slums.

Syllabus: GS I, Urbanization, their problems and their remedies; GS III, Infrastructure.

Source: [Indian Express](#), [Mint](#), [niua.org](#)

The UN Treaty on Plastic Pollution – Explained, pointwise

Introduction

The first session of the Intergovernmental Negotiating Committee (INC-1) concluded on December 2, 2022 in Punta Del Este (Uruguay). The Committee has been tasked with developing an **international legally binding instrument to end plastic pollution** (UN Treaty on Plastic Pollution). The INC-1 has been formed under the United Nations Environment Assembly (UNEA) Resolution passed in March 2022, that had voted to formulate an international legally-binding instrument by 2024 to end plastic pollution. Plastic Pollution has become a global menace. The UNEA resolution identifies the threat that plastic pollution poses to human health and all environments. It is focused on the need to undertake measures throughout the lifecycle of

plastics in order to efficiently reduce their negative impact. A legally binding treaty is expected to push countries to take all possible steps to check plastic pollution.

What is the extent of Plastic Pollution?

Global

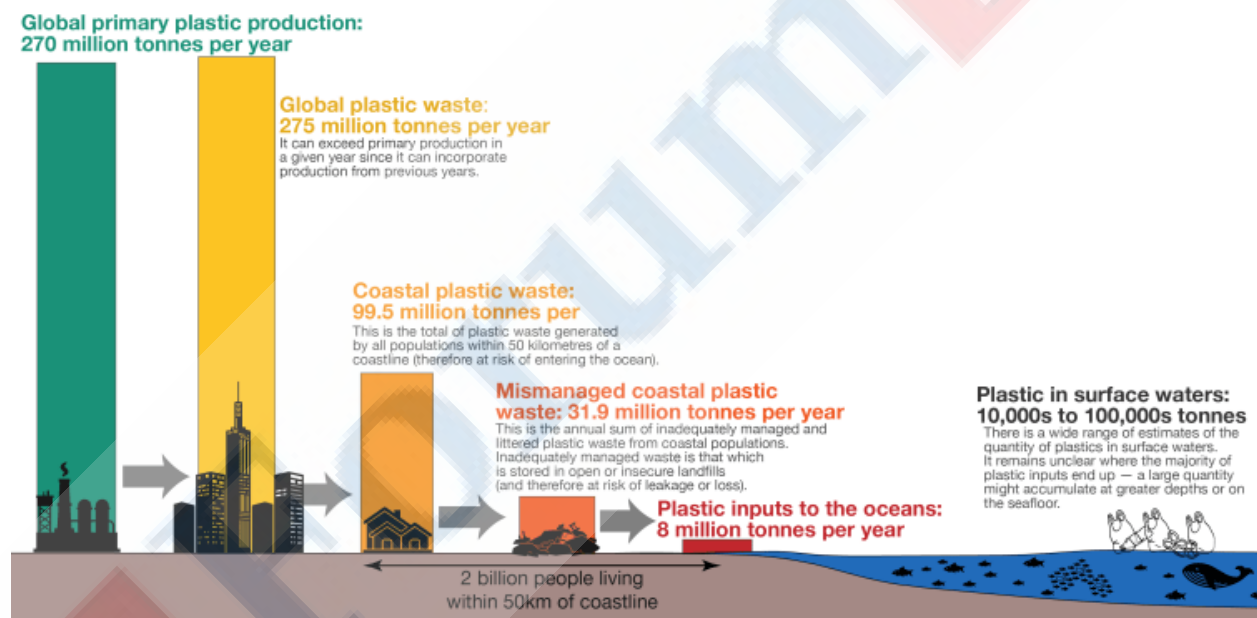
Plastic pollution is a global problem. According to UNEP, Approximately **7 billion of the 9.2 billion tonnes of plastic produced from 1950-2017 became plastic waste, ending up in landfills or dumped.** According to OECD, Plastic waste more than doubled to 353 Million Tonnes (MT, in 2019) from 156 MT (in 2000). By 2019, 109 MT had accumulated in rivers and 30 MT in oceans.

Plastic accounts for 85% of all marine litter. The UN Environment Programme (UNEP) predicts that the amount of plastic in the ocean will nearly triple by 2040, adding 23 MT to 37 MT more waste every year. According to the philanthropic Munderoo Foundation (Australia), the cost of plastic pollution to society (including environmental clean-up and ecosystem degradation) exceeds US\$ 100 billion a year.

According to various studies, plastic debris affects 86% of all sea turtle species, 44% of all seabird species, and 43% of all marine mammal species.

The pathway by which plastic enters the world's oceans Our World in Data

Estimates of global plastics entering the oceans from land-based sources in 2010 based on the pathway from primary production through to marine plastic inputs.



Source: based on Jambeck et al. (2015) and Erksen et al. (2014). Icon graphics from Noun Project.

Data is based on global estimates from Jambeck et al. (2015) based on plastic waste generation rates, coastal population sizes, and waste management practices by country.

This is a visualization from OurWorldinData.org, where you will find data and research on how the world is changing.

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Source: Our World in Data

India

According to CPCB reports, Plastic contributes to 8% of the total solid waste, with Delhi producing the maximum quantity followed by Kolkata and Ahmedabad. **Only 60% of the total plastic waste is being recycled.**

The seas near Mumbai, Kerala and the Andaman and Nicobar Islands are among the worst polluted in the

According to CSE report titled **'The Plastic Life-cycle'** plastic has gradually replaced the alternate forms of packaging like metal, paper and glass, leaving consumers with the option of

buying utilities packaged in plastic. Most of the plastic used in India today is for packaging and a major proportion of this is single-use plastic and might not be recyclable.

Most of India's plastic waste is **leaking in the environment** or **dumped in open dumpsites** (67%). 20% of the plastic waste is being channelised for end-of-life solutions like **co-incineration, plastic-to-fuel** and **road making**, and **12% is being recycled**.

What is the need for the UN Treaty on Plastic Pollution?

First, the **impacts of plastic pollution are becoming grave**. Plastic pollution is threatening land- and marine-based ecosystems. Exposure to plastics can harm human health, potentially affecting fertility, hormonal, metabolic and neurological activity.

Second, globally, **Plastic production is rising rapidly**. Plastic production increased from 2 million tonnes in 1950 to 348 million tonnes in 2017. Plastic manufacturing has become a global industry valued at US\$ 522 billion, and is expected to double in capacity by 2040. This will further damage the environment.

Third, **Plastic pollution transcends national boundaries**. A major chunk of plastic waste ends up in oceans, which are part of global commons and beyond individual jurisdictions. Micro-plastics have been found in pristine environments of Antarctica. Hence a collective effort is required to preserve the oceans and global commons.

Fourth, in an increasing integrated world, **actions by individual countries may be rendered ineffective** in the absence of commensurate efforts by trading countries e.g., India may ban single-use plastics but single-use plastic materials can still enter India through imports.

Fifth, Plastics ending up in landfills are known to contribute to **Greenhouse Gases** (GHGs) which lead to global warming and climate change. By 2050 greenhouse gas emissions associated with plastic production, use and disposal would account for 15% of allowed emissions. This **necessitates collective effort** just like the UNFCCC framework.

Sixth, a **legally binding framework**, with **measurable targets** and **periodic reviews** will force the countries to take action.

Without effective action, global plastic production is predicted to triple by 2060 and large amounts of plastic will end up in environment and oceans. Regulating plastic pollution on a global level is therefore an important step that can contribute to the climate transition, as well as protect the oceans, the environment and biodiversity.

What has been the progress on the UN Treaty on Plastic Pollution?

The UNEA had passed the resolution in March 2022 to formulate an international legally-binding instrument by 2024. The resolution was agreed by representatives from 175 nations. The Intergovernmental Negotiating Committee has been established to negotiate the treaty. Its first meeting was held from November 28, 2022 to December 02, 2022. This was the first of **five planned negotiation sessions**. The next session is due to be held in France in the first half of 2023.

According to the INC mandate, the drafted UN Treaty on Plastic Change **should be legally binding** for all countries signing and ratifying the agreement, consider the **entire life cycle of plastic**, consider **financial and technical assistance** for countries requesting such assistance, and **recognise the importance of waste pickers** involved in collecting, sorting, and recycling.

The current mandate does not clearly acknowledge and indicate the impact of plastics production and disposal on climate change. It also **does not talk about the unknown chemicals** that are used in the production of plastics. Currently, more than 10,000 chemicals (additives) are used to manufacture plastics with close to 25% of the chemicals being proven to have adverse effects on human health. On an average, every plastic product had close to 20 additives.

What steps have been taken by India to control Plastic Pollution?

Union Government: (a) The Extended Producer Responsibility (EPR) legislation, which exists in European Union, North America, Latin America, and OECD countries had been introduced in India in 2022 for plastic packaging; (b) The Government has **banned the use of Single-use plastics**; (c) **Plastic Waste Management Rules, 2016** (Amended 2022) have been formulated to deal with plastic pollution; (d) The Swachh Bharat Mission 2.0 has listed **plastic waste management as one of its key agenda**; (e) In 2018, India's World Environment Day celebrations were themed on beating plastic pollution; (f) The Ministry of Jal Shakti has requested various governmental departments to **avoid the use of plastic bottles to provide drinking water during governmental meetings** and to instead make arrangements for providing drinking water that do not generate plastic waste; (g) Shredded plastic waste has been **used in laying roads** e.g., Jambulingam Street in Chennai was one of India's first plastic roads built in 2002. In 2015-16, the National Rural Road Development Agency laid around 7,500 km of roads using plastic waste.

Read More: [Plastic Waste Management \(Amendment\) Rules, 2022 – Explained, pointwise](#)

State Governments: (a) The state of Sikkim has restricted the usage of plastic water bottles (in government functions and meetings) and styrofoam products; (b) The state of Bihar has banned the usage of plastic water bottles in governmental meetings.

Read More: [Ban on Single-Use Plastic – Explained, pointwise](#)

Other Steps: (a) Some supermarkets charge their customers for plastic bags, and in some places more efficient reusable or biodegradable materials are being used in place of plastics; (b) Some communities and businesses have put a ban on some commonly used plastic items, such as bottled water and plastic bags; (c) Technologies are available in India that can convert 1 Kg of plastic to 750 ml of automotive grade gasoline.

What should be the features of UN Treaty on Plastic Pollution?

Support and Enforcement: (a) There is need for realistic policies which must be **properly followed and enforced**. There must be **clear actionable** and **legally binding targets** and **periodic reviews** to measure progress in order to ensure implementation; (b) There is need to setup proper **financial incentives and regulations** to shape the right economic conditions for a circular economy, including for reuse models and recycled plastics. Financial support mechanisms should be setup to support developing and poor countries for transition; (c) There is a need to **facilitate investments** to scale relevant innovations, infrastructures and skills in countries and industries most in need of international support; (d) **Public-private collaboration** should be fostered for innovative solutions.

Balance Competing Opinions: There are competing opinions about how to resolve pollution: NGOs and lobbyists often want to **ban single-use plastics** and find safer alternatives. The plastics industry is of the opinion that pollution can be solved through **improved waste collection**. The waste-management and recycling industries push for **more recycling**. Experts suggest that the Treaty should evaluate all options and include all of these measures, with varying degrees from country to country. Many experts opine that banning the movement of plastic waste from high-income countries to lower-income countries will also reduce pollution.

Structural Change: The linear take-make-dispose economy needs to be **replaced by a circular economy** which forms the basis of the solutions to the plastic pollution problem facing the world. Four strategies that can guide the transition to a circular economy are: (a) Reduce the size of the problem by eliminating and substituting problematic and unnecessary plastic items, including hazardous additives; (b) Ensure that plastic products are designed to be circular— reusable as a first priority, and recyclable or compostable after multiple uses at the end of their useful life;

(c) Close the loop of plastics in the economy by ensuring that plastic products are reused, recycled, or composted; (d) Manage plastics that cannot be reused or recycled (including existing pollution) in an environmentally responsible manner.

Read More: [Circular Economy: Meaning, Benefits and Opportunities – Explained, pointwise](#)

Address Marine Pollution: For global reduction of plastic litters and ocean pollution, there is need for improvement in proper plastic waste collection, treatment and disposal. Countries should agree, as part of the treaty, to **place a surcharge on the creation of plastic products**. This money could be used to fund recycling. Most treated waste waters are discharged into rivers or oceans, therefore, there is **need for a ban** such as Annex V to the International Convention for Prevention of Pollution from Ship (MARPOL) agreement, which will **prevent plastic waste disposal into the sea**.

Bioplastics as Alternative: Bioplastics can be produced from different biodegradable and non-biodegradable materials including weeds, hemp, plant oil, potato starch, cellulose, corn starch etc. Specific provisions in the treaty can promote use of bioplastics. Italy has enacted law that has made it compulsory for biodegradable plastic bags to be used for shopping.

Conclusion

Plastic pollution is perhaps the biggest threat facing planet after climate change. UNFCCC has provided a systematic framework for collective action to address Climate Change. The UN Treaty on Plastic Pollution can provide a similar mechanism to combat plastic pollution. The UNEA has set a deadline of 2024 to agree on the treaty. All nations should support the negotiation process to reach a consensus as early as possible and stick to the 2024 deadline.

Syllabus: GS III, Conservation, Environmental Pollution and Degradation.

Source: [Down to Earth](#), [Down to Earth](#), [The Hindu](#), [Nature](#)

Climate Justice: Meaning, Challenges and Way Forward – Explained, pointwise

Introduction

The COP27 of the UNFCCC concluded recently in Sharm el-Sheikh, Egypt. The only remarkable outcome of the Summit was announcement regarding setting up on Loss and Damage Fund. Skeptics, however, are wary that the real challenge is operationalizing the Fund, and there is a high possibility that Loss and Damage Fund may also end up an empty promise like other Climate Finance measures. At the opening of the COP27, former Vice President of the US and Environmentalist, Mr. Al Gore remarked that, “*We are not doing enough*“, in context of efforts of Developed nations. Developed nations have continued to dilute the climate negotiations and are increasingly put the burden of addressing climate change on developing nations including India. Climate experts and environmentalists have lamented the lack of progress on important issues of Climate Finance, and gradual shifting of burden of climate action on developing nations. This is being termed as violative of Climate Justice.

What is the meaning of Climate Justice?

Climate justice is a term used for **framing global warming as an ethical and political issue**, rather than one that is purely environmental or physical in nature.

‘Climate Justice’ acknowledges climate change can have differing social, economic, public health, and other adverse impacts on underprivileged populations. The **impacts of climate change are not borne equally or fairly**, between rich and poor, women and men, and older and younger generations. From extreme weather to rising sea levels, the effects of climate change often have disproportionate effects on historically marginalized or underserved communities.

Pursuing climate justice means addressing **social, gender, economic, intergenerational and environmental injustice**. All the dimensions of injustice are interconnected with each other and must be acknowledged in order to address them holistically e.g., some climate projects inadvertently create climate injustices when local communities are displaced for a conservation or renewable energy initiative.

Advocates for climate justice are striving to have these inequities addressed through long-term mitigation and adaptation strategies.

Climate Justice can be summarised under Four types of Justice:

Procedural Climate Justice: It is associated with **fair, accountable, and clear ways to make decisions about the effects of climate change** and how to deal with them. It is imperative to have fair procedures in place to make sure that goods are distributed fairly and in a way that is open and accountable. This can be ensured by due process, public participation, and representative justice. This can include **access to information, access to and meaningful participation in decision-making, lack of bias on the part of decision-makers**. It includes ideas like “transparency”, “fair representation”, “impartiality”, and “objectivity”.

Distributive Climate Justice: This aspect of justice deals with **how costs and benefits of climate change are shared**. There are three main aspects of distribution: **(a)** Identifying the goods that are being distributed (e.g. food, clothing, water, power, wealth, or respect); **(b)** Identifying the entities between which they are to be distributed (e.g. members of certain communities or stakeholders, certain generations, all of humankind); **(c)** Identifying the most appropriate **mode of distribution** (e.g. status, need, merit, rights, or ascriptive and social identities).

Recognition Climate Justice: It is focused on recognition of difference. It means **identifying vulnerable people** whose vulnerability may be worsened as a result of a process such as a low-carbon transition. Recognition Climate Justice places emphasis on **understanding differences** alongside **protecting equal rights for all**, especially given uneven capacity to defend rights.

Intergenerational Climate Justice: It was recognized in the **Brundtland Report ‘Our Common Future’** (1987) which conceived of sustainable development as being about the **ability of current generations to meet their needs without compromising the ability of future generations to meet their own needs**.



Source: Center for Climate Justice

The Center for Climate Justice (University of California) has identified **6 Pillars of Climate Justice**:

Just Transition: A just transition represents the transition of fossil fuel-based economies to equitable, regenerative, renewable energy-based systems.

Social Racial and Environmental Justice: It recognizes the disproportionate impacts of climate change on low-income and poor communities around the world, the people and places least responsible for the problem.

Indigenous Climate Action: Indigenous communities around the world are facing some of the most severe climate impacts. Indigenous communities are deeply reliant on their surrounding ecosystems for their lives and livelihoods. Indigenous Peoples are leading efforts in climate change mitigation and adaptation across the globe **Climate Action should acknowledge their knowledge and role.**

Community Resilience and Adaptation: Community resilience and adaptation must be viewed from a perspective of social justice and equity. This would inspire models such as **food sovereignty, common property forest management, and energy democracy.** It would support local communities in **developing their own solutions** and allow them to benefit directly from local climate action.

Natural Climate Solutions: From a climate justice perspective, natural climate solutions take a systems approach and include regenerative farming, agroforestry, permaculture, urban gardens, and forest restoration.

Climate Education and Engagement: Widespread climate education and engagement is fundamental to addressing the root causes of climate change. A populace better educated about climate justice will fully understand why viewing climate change from a social justice and equity perspective is the best hope for solving the climate crisis.

What is the meaning of Intergenerational and Intragenerational Equity?

Intragenerational and intergenerational equity are both time-based concepts.

Intergenerational Equity refers to the balance between present and future generations. Intragenerational Equity refers to the balance between the rich and poor of the current generation.

Sustainable equity seeks to strike a proper balance between the two.

Intragenerational equity is linked to **fair utilization of resources** by human generations in past, present and future. It tries to construct a **balance of consumption of resources** by existing societies and the future generations. It is concerned with growing degradation of environment and depletion of resources. In this context, UN's concept of sustainable development is linked with Intergenerational Equity.

Intra-generational Equity deals with the **equality among the same generations** as far as the utilization of resources are concern. It includes **fair utilization of global resources** among the human beings of the present generation.

It is reflected in **Principle 6 of the Rio Declaration on Environment and Development**, mandating particular priority for the **special situation and needs of developing countries**, particularly the least developed and those most environmentally vulnerable.

What are the challenges in ensuring Climate Justice?

Gradual Dilution of Common but Differentiated Responsibilities (CBDR): Article 3 of the UNFCCC recognizes the principle of CBDR based on differences between developed and developing countries in terms of their **current circumstances and historical contributions**. However, developed countries keep on pushing for higher commitments by developing countries e.g., Western nations pushed for 'phase-out' of coal at Glasgow 2021 (before agreeing for 'phase-down'). Coal is a cheap source and phasing-out of coal imposes big costs on developing countries.

Avoidance of Binding Targets: The Nationally Determined Contributions (NDCs) under the Paris Agreement are voluntary in nature. They are not binding and legally enforceable. Kyoto Protocol had binding targets for developed countries but it has been non-functional. Developed countries by avoiding binding targets have reneged on their responsibility owing to historical contributions.

Shortfall in Climate Finance: Despite their pledge, the developed countries have failed to provide US\$ 100 billion per year for Climate Finance. Climate experts contend that US\$ 100 billion per year is minuscule to address Climate Change. IPCC estimates that US\$ 1.6–3.8 trillion is required annually to avoid warming exceeding 1.5°C.

Read More: [Climate Finance: Meaning, Need and Challenges – Explained, pointwise](#)

How can Climate Justice be ensured?

First, the intragenerational equity can be addressed through a **predictable and assured Climate Finance**. There can be binding targets on developed countries to provide funding to vulnerable countries, commensurate to their historical contributions.

Second, the Climate Finance can be **augmented by technology transfer** to the developing nations and accelerating their transition to low-carbon economies.

Third, 'Climate-induced Disasters' may become the 'new normal'. Climate Justice concerns should be mainstreamed into disaster relief efforts. Loss and Damage Fund should recognize principles of Climate Justice and **should provide relief without any conditions**.

Fourth, Developed countries, recognizing their historical responsibility, should take **binding targets in reducing their emissions**.

Fifth, Developing countries should also focus on **ensuring intra-generational equity within their own societies**. They should take steps for climate education and engagement.

Conclusion

Climate Justice has remained elusive in the present framework of Climate Negotiations and Action. The developed countries have been gradually shifting the onus on the poor and developing nations. There is a need for course correction. Non-recognition of Climate Justice in Climate Action Framework will eventually lead to failure in achieving the goals agreed under the UNFCCC and Paris Agreement.

Syllabus: GS III, Conservation, Environmental Pollution and Degradation.

Source: [The Hindu](#), [Institute of Development Studies](#), [LSE](#), [Centre for Climate Justice](#)

[Yojana November Summary] Coastal Erosion – Explained, pointwise

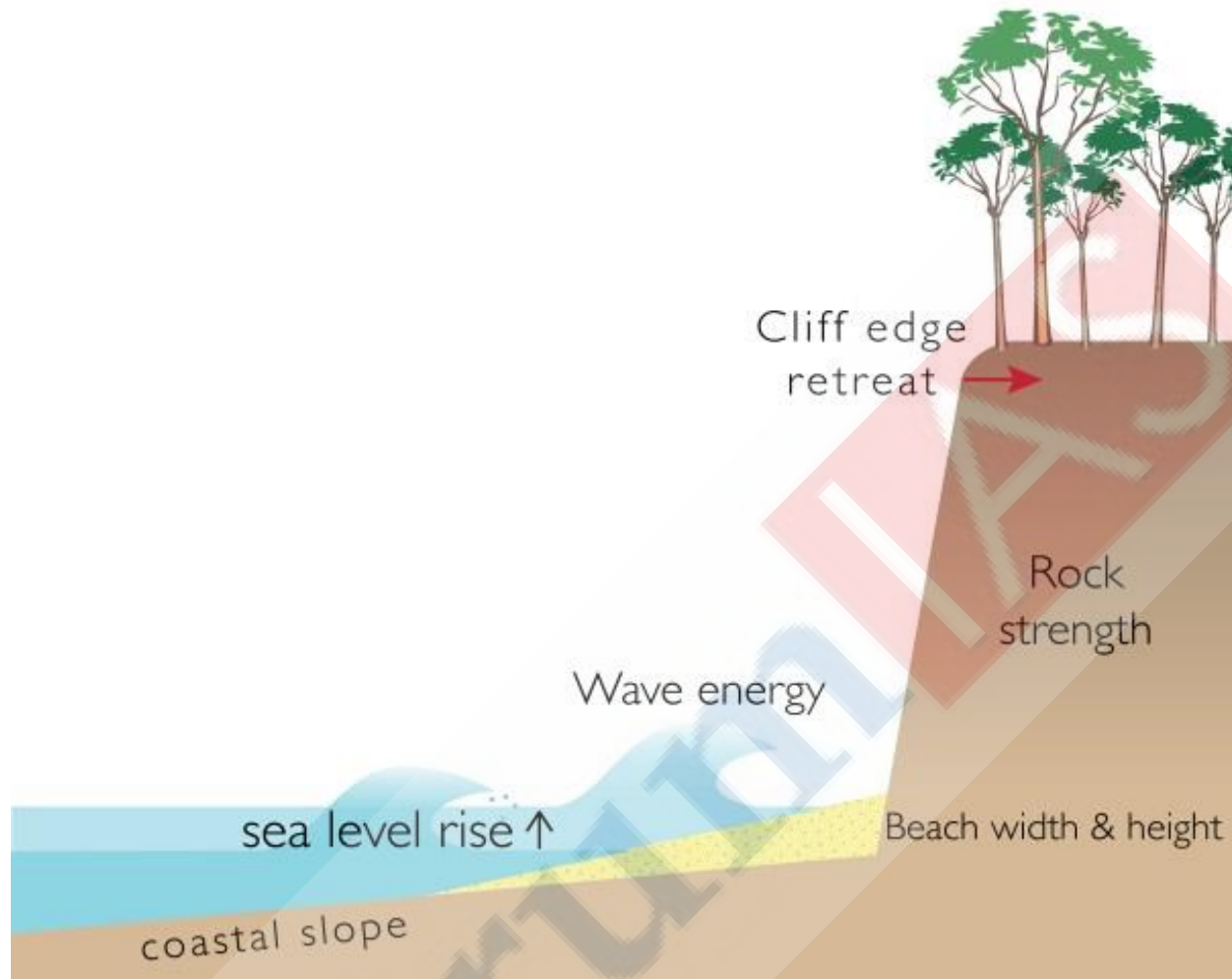
Introduction

Coastal Areas are of vital importance. According to the UNEP, ~37% of the world's population lives within 100 km of the coast. Coastal areas support a lot of economic activities including international trade and fishing. According to the OECD, ~90% of global trade occurs through marine route. Coastal areas have witnessed accelerated developmental activities and rising human population. The developmental activities have put tremendous pressure on the fragile coastal environment. The trend is same in India with coastal cities like Mumbai, Chennai, Kolkata, Kochi, Vishakhapatnam etc. witnessing tremendous growth and expansion. This has given rise to new challenges including accelerated coastal erosion. There is a need to counter the menace of coastal erosion and to protect the coasts, using both the traditional approaches and also using the new, innovative soft measures like dune rehabilitation.

About Coastal Erosion

A coastline is a complex series of interlinked physical systems in which both **offshore and onshore processes** are involved. Coastal Erosion is one such physical process.

Coastal Erosion refers to the **loss of land, long-term removal of sediment and rocks along the coastline** due the **action of sea-waves, currents, tides and other impacts of storms**. It involves wearing away and redistributing solid elements of the shoreline as well as sediment. Erosion occurs when the material being removed, for deposition elsewhere, exceeds the rate of supply finally resulting in the **landward shifting of the shoreline**.



Source: USGS

Waves are the main cause of coastal erosion. Wave takes birth in the mid-ocean and moves towards the coast. Waves bring an enormous amount of energy to the coast that is dissipated through wave breaking, generation of currents, water level changes, and movement of sediment, turbulence, and heat.

Wave energy is the result of three factors: **(a) Speed of the wind** blowing over the surface of the sea; **(b) Length of fetch** (i.e., the distance of sea over which the wind has been blowing); **(c) Length of time** that the wind has been blowing for. Waves are the major factor in determining the geometry and composition of the beaches. The action of waves dictates the processes of removal and addition of material/sediment on the coast.

Coastal sediment accumulates by **process of accretion**. Coastal erosion and accretion are natural processes that cause gradual to abrupt changes in coastlines over time and are instrumental in defining coastal landscape. These processes can occur in reaction to both **small-scale phenomena** like storms, frequent wave action, tides, and winds, as well as **large-scale events** like glacial or orogenic cycles, or tectonic movements that induce coastal land subsidence or emergence.

History of Coastal Erosion in India

Coastal erosion is an extensive and multi-dimensional problem for a vast country like India. **Kerala is worst affected State by coastal erosion in India.** In the original assessment in the 1960s, about 57% of the coastline was identified as vulnerable. Anti-erosion measures have been

undertaken in the State from the nineteenth century. An assessment made in the late 1980s indicated that almost 85% of Kerala's coastline was undergoing erosion.

Later, it was found that Karnataka and Maharashtra were also affected badly by sea erosion. The problem in other States was found to be in **patches/coastal pockets** depending on various factors.

The first anti-sea erosion measure in Puducherry was initiated by the French in the early 1920s when a 1.75 km long retaining wall was constructed along the urban coastline in Puducherry.

Findings of the Shoreline Change Atlas of Indian Coast prepared based on satellite imageries of timeframe of 2004-06 and 2014-16

State	Erosion Area (in ha)	Erosion Length (in km)	Accretion area (in ha)	Accretion Length (in km)	Stable Length (in km)	Total Length (in km)
Gujarat, Daman & Diu	313.6	109.76	207.75	49.18	1051.44	1210.4
Maharashtra	104.75	75.16	209.94	60.27	588.64	724.07
Goa	28.78	21.7	13.6	7.13	116.73	145.56
Karnataka	72.05	40.19	111.39	47.74	230.86	318.78
Kerala	285.02	137.33	303.3	121.13	327.17	585.63
Tamil Nadu and Puducherry	358.35	128.88	470.68	188.6	531.57	849.07
Andhra Pradesh	795.67	188.95	807.88	208.15	413.33	810.4
Odisha	831.35	143.6	753.5	98.77	208.19	450.53
West Bengal	393.67	56.3	141.18	33.9	67.24	157.45
Lakshadweep Islands	16.59	11.65	18.4	13.15	115.84	140.66
Andaman-Nicobar Islands	480.08	230.77	1004.01	256.31	1669.7	2156.79
Total	3679.91	1144.29	4041.63	1084.33	5320.71	7549.34

Source: Yojana November 2022

Causes of Coastal Erosion

The shoreline/coastline (the boundary between land and sea) keeps changing its shape and position continuously due to dynamic environmental conditions. Various developmental projects in coastal areas lead to diverse coastal hazards like soil erosion, seawater intrusion, coral bleaching, shoreline change, etc.

Natural Causes

Natural factors influencing coastal erosion are **waves, winds, tides, near-shore currents, storms, sea level rise**, etc.

The combined action of different processes on the coastline like waves and tides maintains the stability of the shoreline. If for any reason, the sediment supply to a section of beach is reduced due to littoral drift/sea-level rise or constant impact of waves, it can cause severe erosion.

The **natural variation in the supply of sediments** to the coastline from the river can affect the erosion of the coastline.

An **increasing sea level will promote shoreline erosion**. Such erosion is higher in the littoral coasts consisting of finer sediments, as compared to coasts consisting of coarser sediments.

Subsidence is a regional phenomenon that **lowers the surface area in a specific region**. It also contributes to coastal erosion, the rate may vary as per the factor causing this subsidence.

Catastrophic events like **severe storms, tidal surges**, and **cyclones** cause the sea level to rise to abnormal heights and cause severe erosion.

Human-induced Erosion

Most of the human-induced erosion is due to **human interventions in the natural transportation process as well as in the sediment load of the rivers**. Human activity includes

ports/harbours works, coastal defence structures, river regulation works, dredging aggregate extraction/ sand mining, oil/gas exploration (in the form of long-term subsidence) etc. that **impact sediment transport**.

Coastal activities can also directly or indirectly result in beach erosion e.g., **(a)** Building houses via land reclamation or within sand dune areas has a long-term impact on coastal processes and sediment stability; **(b)** Harbours often have shore-perpendicular/inclined **breakwaters** (permanent structure constructed at a coastal area to protect against tides, currents, waves, and storm surges), which **obstruct the long-shore transport of sand** and cause accretion on the up-drift side, and erosion down drift; **(c)** Groynes (It is a rigid hydraulic structure built perpendicularly from an ocean shore or a river bank, interrupting water flow and limiting the movement of sediment) and jetties and other structures on the coast/ shoreline interfere with long-shore sand transport and can result in erosion when these are ill-designed; **(d)** The **mining of sand/gravel along beaches** and in the surf zone will cause erosion by depleting the shore of its sediment resources; **(e)** **Coral mining** and other means of spoiling the protective coral reefs also cause coastal erosion and beach degradation. The production of carbonate sand stops due to the killing of the corals and the protective function of the reef disappears; **(f)** Dredging of harbours, navigation channels leads to loss of sand and disturbs sediment equilibrium; **(g)** The **removal of dune vegetation and mangroves** causes exposure of the low-energy shorelines to the increased energy and reduced sediment stability. This further promotes erosion of coastal zone.

Climate Change

Coasts are sensitive to sea level rise, changes in the frequency and intensity of storms, increases in precipitation, and warmer ocean temperatures.

In addition, rising atmospheric concentrations of carbon dioxide (CO₂) are causing the oceans to absorb more of the gas and become more acidic. This rising acidity can have **significant impacts on coastal and marine ecosystems**. The low-lying areas along the coast are likely to be **prone to salinisation** due to seawater intrusion (surface and ground).

Protection Measures for Coastal Erosion

Coastal preservation measures **slow natural or man-made coastline erosion** over time. Nature offers many protective measures. Headlands, reefs, coastlines, dunes, etc. show nature's coastal defence.

There are non-structural, structural and a mix of both measures to check coastal erosion. A combination of hard and soft options has become more popular for optimum results because they have weaknesses when used singularly. Many coastal protection schemes have failed and resulted in environmental and socio-economic problems owing to improper design, construction, and maintenance. They were often only implemented locally in specific places or within jurisdictional boundaries, rather than at **system boundaries that reflect natural processes**.

Brief description of these measures is given below:

Non-structural Measures

The Non-structural measures aim at the **dissipation of the wave energy by mirroring the natural forces** and **maintaining the natural topography of the coast**. These measures are also called **soft solutions**. Some of these are: **(a)** Artificial nourishment of beaches; **(b)** Coastal vegetation such as mangrove and palm plantation; **(c)** Sand bypassing at tidal inlets; **(d)** Dune reconstruction/rehabilitation.

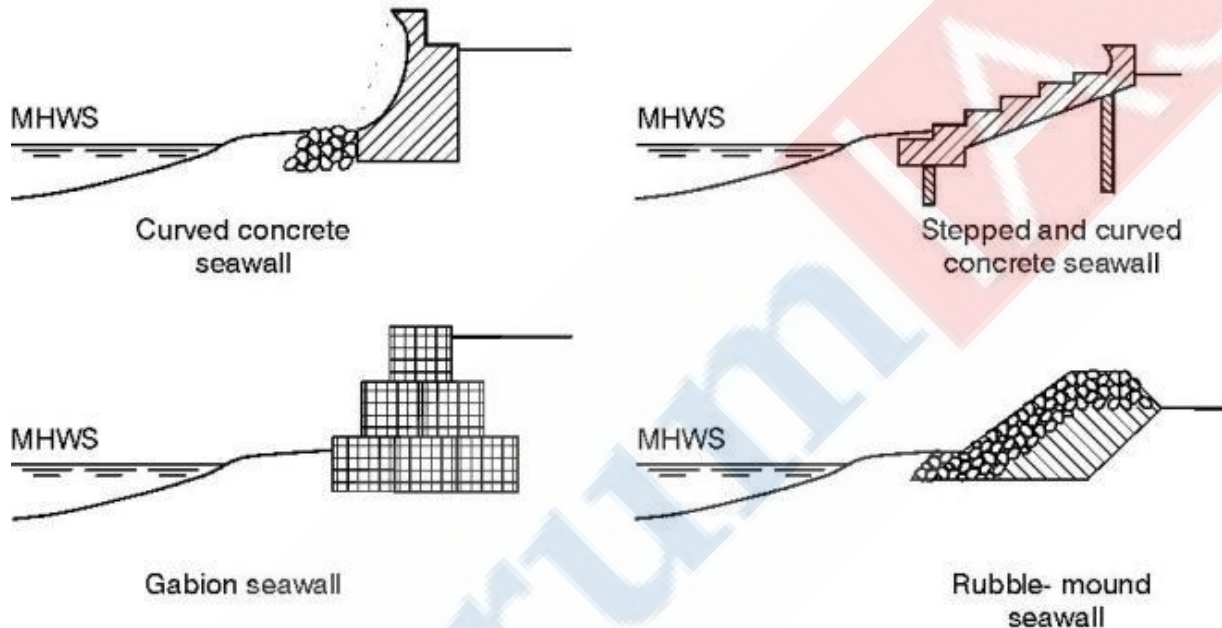
Non- structural measures like **adaptation to natural coastal processes** (by using large setback distances, relocating vital structures, etc.) and **moderation of coastal erosion** (by stabilising coastal slopes, tripping the waves, etc.) should be used before employing hard structural measures.

These measures have limitations. While **artificial nourishment of beaches** is **complicated and costly**, **mangrove plantation** is possible only in **marshy land** and in semi-tropical or tropical conditions.

Structural Measures

The structural measures, also known as the **hard structural/engineering measures** use **physical structures constructed near the coast** to **prevent or restrict water** from reaching the potential damage areas. These solutions influence the coastal processes to stop/reduce the rate of coastal erosion.

The structural measures used for coastal erosion prevention include **seawalls, off-shore breakwaters, groins/groynes/spurs, offshore reefs, and artificial headland**.



Source: Wikimedia Commons

Out of the above measures, seawall is popular and generally used in almost all maritime regions. Hard solutions **cause erosion and needless accretion**, are **expensive**, and can reduce the site's economic worth by making it less appealing. Soft solutions are not quick-fixes and need time to be successful in the medium to long term.

Combination of the Structural and Non-Structural Measures

Combining structural and non-structural measures **improves efficacy and efficiency**. The combination creates a **sustainable and affordable coastal protection system**. Some of the common approaches of combinations are: **(a)** Combining beach nourishment with artificial headlands/groynes; **(b)** Revegetation with temporary offshore breakwaters/ artificial reefs.

Using a combination of beach nourishment and groynes/artificial headlands promotes the trapping of the downdrift movement of the sediment, thus reducing **downdrift erosion**. This also reduces the frequency of renourishment.

Initiatives to Check Coastal Erosion

Coastal Management Directorate, Central Water Commission (CWC), Department of Water Resources, River Development & Ganga Rejuvenation have undertaken a project entitled, "Shoreline Change Atlas of the Indian Coast" along with the Space Applications Centre (ISRO), Ahmedabad.

The Indian National Centre for Ocean Information Services (INCOIS) had prepared and published an **atlas of Coastal Vulnerability Index (CVI)** maps for the entire coastline of India.

'**Coastal Management Information System**' (CMIS) has been initiated to collect data on coastal processes towards coastal protection measures.

National Centre for Sustainable Coastal Management aims to promote **integrated and sustainable management of the coastal and marine areas** in India for the benefit and wellbeing of the traditional coastal and island communities.

Integrated Coastal Zone Management Plan is a process for the management of the coast using an integrated approach, regarding all aspects of the coastal zone, including geographical and political boundaries, in an attempt to achieve sustainability.

The **Coastal Regulation Zone (CRZ) Notification** was issued in 1991 under the **Environmental Protection Act, 1986**, by the Ministry of Environment, Forest and Climate Change (MoEFCC) to regulate activities in coastal areas.

A **National Strategy for Coastal Protection** along with guidelines has been framed for all Coastal States and Union Territories by the MoEFCC.

The Flood Management scheme of Ministry of Jal Shakti, includes anti-sea erosion schemes.

Way forward

According to the Fifteenth Finance Commission, the National Disaster Management Authority (NDMA) and the Ministry of Home Affairs may adopt **appropriate regulations for erosion mitigation measures**. Both the Union and State Governments may develop a policy to cope with the widespread displacement of people caused by coastal and river erosion.

In addition, the Commission has provided specific recommendations for "Mitigation Measures to Prevent Erosion" under NDMF (National Disaster Mitigation Fund) and "Resettlement of Displaced People Affected by Erosion" under NDRF (National Disaster Response Fund).

Conclusion

As a result of globalisation, the diverse and culturally productive coastal ecosystems such as mangroves, coral reefs, sea grasses, and sand dunes are under threat from growing anthropogenic activity. To ensure sustainable development, these coastal ecosystems must be protected. It is critical to analyse the interplay between various activities carried out in coastal zones. This will ensure prudent, long-term development of the coastal zone while protecting the environment and ecology.

Syllabus: GS I, Important Geophysical phenomena, Geographical features; GS III, Disaster and Disaster Management.

Source: Yojana November 2022

Cooperative Societies: Benefits and Challenges – Explained, pointwise

Introduction

The Government has introduced the Bill to amend the Multi-State Cooperative Societies (MSCS) Act, 2002 in the Lok Sabha during the ongoing Winter Session of the Parliament. The Amendments have been introduced to improve governance, reform the electoral process, strengthen monitoring mechanisms, and enhance transparency and accountability. The Bill also intends to ensure financial discipline and enable the raising of funds by Multi-State Cooperative Societies. Opposition Parties have contended that the Bill encroaches on the rights of the States and have asked for referral of the Bill to a Standing Committee. The Bill, if passed, can improve the working of cooperative societies in India, which continue to face several challenges in their functioning.

What are Cooperative Societies (Cooperatives)?

According to the **International Cooperative Alliance (ICA)**, cooperatives are **people-centred enterprises jointly owned and democratically controlled** by and for their members to realise their common **economic, social and cultural needs and aspirations**.

India's cooperative movement was inspired by the German model of Agricultural Credit Banks and was formalised at the end of the 19th century. In 1904, the British Government enacted the **Cooperative Credit Societies Act**. The Act dealt solely with the extension of credit. The sector was opened up to other activities in 1912. Administrative reforms in 1919 transferred cooperatives to Provincial control.

After Independence, Cooperatives were placed in the **State List**. Cooperative Societies were considered to be **instruments of socio-economic development** and were an essential focus of the initial Five-Year Plans. States had enacted their own laws to regulate cooperatives within their jurisdiction. In 1984, the **Multi-State Co-operative Societies Act** was enacted by the Parliament to consolidate different laws at the Central level. The Act was amended in 2002.

Read More: [Multistate Cooperatives: Govt plans to amend the Law – Explained, pointwise](#)

There are two types of co-operative structures in the country i.e. **State Cooperative Societies** and **Multi-State Cooperative Societies (MSCS)**. Multi-State cooperatives are societies that have operations in more than one State — for instance, a farmer-producers organisation which procures grains from farmers from multiple States. The board of directors are from all the States these collectives operate in and control all the finances and administration. The **Multi-State Cooperative Societies come under the Union Government** and the **State Cooperative Societies are under the State Governments**.

What are the provisions related to regulation of Cooperative Societies?

Constitutional Provisions

The **97th Constitutional Amendment Act, 2011** added **Part IXB** to the Constitution. Part IXB deals with various provisions related to Cooperative Societies like their incorporation, elections, audits, and general operations.

The Act also added **Article 43B to the Constitution**. Article 43B states that the State shall endeavour to promote voluntary formation, autonomous functionality, and professional management of Cooperative Societies.

The Act amended Article 19(1)(c) to include freedom to form cooperative societies.

SC Ruling

In July 2021, the Supreme Court struck down certain provisions of the 97th Amendment Act, 2011, because **(a)** Part IX B (Articles 243ZH to 243ZT) has “significantly and considerably impacted” the “exclusive legislative power” of State Legislatures over the cooperative sector. The Court noted that Cooperative Societies is a matter entirely in the domain of State Legislatures (Entry 32 List 2 of Seventh Schedule). For Multi-State Cooperative Societies, the power is with the Union of India through Entry 44 of List 1; **(b)** The Parliament had passed the 97th Amendment without having it ratified by State Legislatures, as required by the Constitution. Further, the SC upheld the constitutionality of the provisions of Part IX B relating to Multi-State Cooperative Societies (MSCS).

Other Provisions

In 1958, the National Development Council (NDC) advocated a National Policy on Cooperatives. The **National Policy on Cooperatives** was formulated in 2002.

The **National Cooperative Development Corporation (NCDC)** was established by law in 2002 saw India's National Cooperative Policy.

The **Ministry of Cooperation** was established in July 2021 to boost the Cooperative sector and realize the vision From Cooperation to Prosperity.

Read More: [Ministry of Cooperation – Explained, pointwise](#)

What are the benefits of Cooperative Societies?

Easy setup, less legal implications: Any ten members who have acquired the majority can form a cooperative society with few legal formalities.

Promote equality and transparency: A cooperative society is based on the principle of 'one man, one vote'. All members have **equal rights in handling the internal affairs**. The surplus generated by these societies is dispensed equally among the members.

Limited Liability: The member's liability in a cooperative society is confined to the extent of their capital contribution.

Eliminate Middlemen: Consumer cooperative societies are set up to attain a seamless supply of essential commodities. These societies **purchase commodities directly from the producers** & wholesalers and sell them to the end-users at affordable prices. Thus they eliminate middlemen and make supply chains more efficient. Similarly, Farm Producer Organizations (FPOs) deal directly with the buyers and help the farmers get better profits.

Read More: [Farmers Producer Organizations \(FPOs\) in India- Explained, pointwise](#)

Access to Credit: Cooperative societies have helped in reducing the influencing of private money lenders in rural areas. Cooperatives facilitate credit at the nominal interest rate.

Support Agriculture: Cooperative societies have supported the government's effort to improve agricultural production. They act as a bridge between the government and farmers e.g., the government disburses High-Yielding Variety (HYV) seeds and fertilizers via Cooperatives.

Reserve Funds: Cooperative societies are under the legal obligation to transfer their 25% of profit to the general reserve. Thus, it reduces the need for external funding.

Fosters Habit of Saving: Cooperative societies cultivate the habit of saving among their members. They render credit facilities generally for productive purposes only.

Social Benefits: Cooperative societies have played a significant role in modulating social customs and controlling irrelevant expenses. The profits reaped by the cooperatives can be used for facilitating fundamental amenities of the society.

What are the issues in the working of Cooperative Societies?

Disputes and Conflicts: Occasionally, Cooperative Societies suffer from internal conflicts due to presence of members with diverse backgrounds. Some members seek personal gain ignoring the spirit of service.

Lack of Expertise: Many Cooperative Societies have failed to be profitable. The society's earnings are **insufficient to hire skilled and experienced members** for proper management.

Government Control: Big Cooperative Societies have to face interference by Governments. Experts contend that certain provisions/rules are too restrictive and Cooperatives lack expertise and manpower to comply with these regulations. This hampers their growth and expansion. Moreover, Cooperatives also become contesting field of political parties for electoral benefits, which impacts their functioning.

Limited Resources: Most members can contribute limited capital. Cooperatives struggle with shortage of funds, especially at the initial stages. Moreover, the societies are formed for the welfare of the society and the profit motive is ignored to some extent.

Other Problems: Cooperatives also suffer from issues like misappropriation of funds by members, pursuing narrow interests, political interference etc. leading to inefficient functioning.

What should be done to address the issues?

Financial Support: (a) Long-term, interest-free loans should be made available to address the fund crunch; (b) Credit should be provided not only for small farmers, tenants and share croppers but also for landless workers and artisans; (c) Security requirements for provision of credit should be eased. The volume of loanable funds should be enlarged through rediscounting facility.

Technical Guidance: A package of inputs and services including marketing services and technical guidance can prove to be vital in sustaining Cooperative Societies. Eventually, they can be become self-sufficient by developing in-house expertise with time.

Use of Local Resources: Local conditions must be taken into account when establishing cooperative groups. Farming and marketing societies must maximise the utilisation of local resources.

Reduce External Interference: Red tape, political meddling, administrative bottlenecks etc. must be eliminated. Cooperative societies should not be impeded by influential village lobbying groups.

Awareness Generation: (a) Women should be told about programmes, especially those that help with child care, nutrition during pregnancy, balanced diet etc.; (b) Adult education and literacy programmes should be implemented on a wide basis in rural areas; (c) People need to be made aware about the utility of Cooperatives through social media, TV, newspapers etc.

Conclusion

Cooperatives can play a vital role in the rural transformation. Provision of adequate financial and technical assistance can enable them to address rural challenges and contribute to India's growth story. Government should take all possible steps to facilitate growth ecosystem for the Cooperatives.

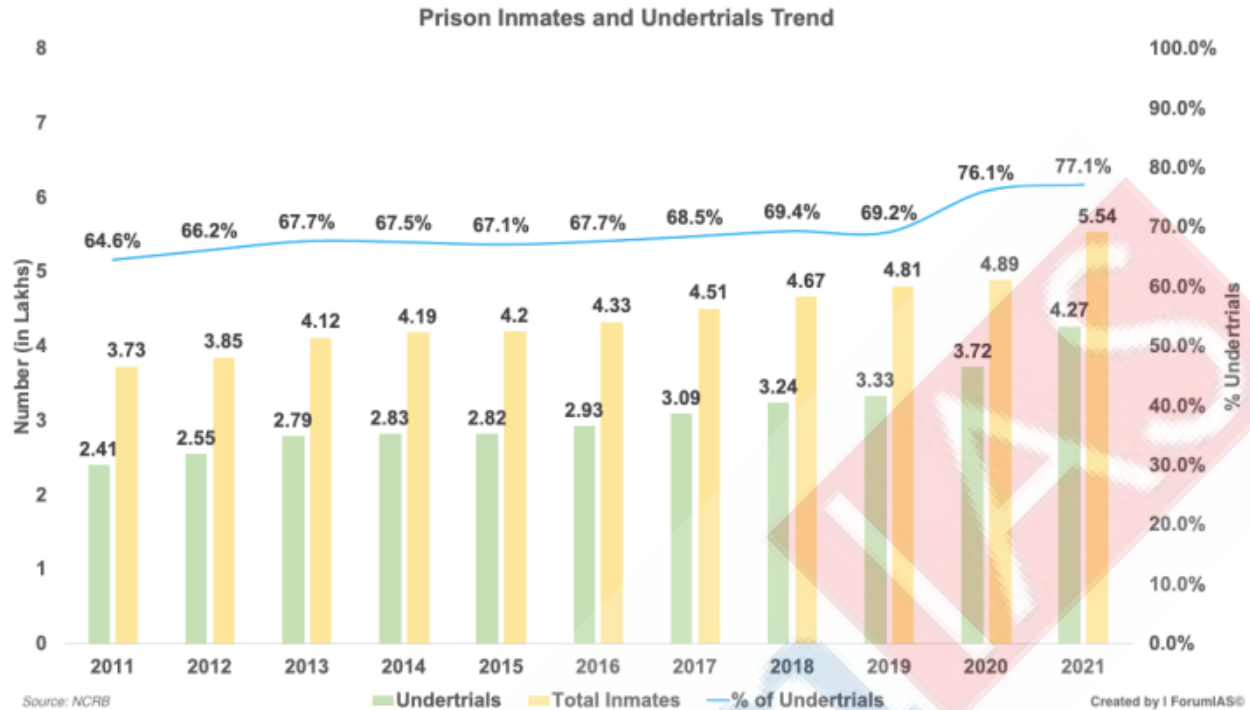
Source: [The Hindu](#), [Business Standard](#), [IJIP](#), [PIB](#)

Issue of Undertrials in India – Explained, pointwise**Introduction**

On the occasion of National Law Day (Constitution Day) on November 26, 2022, the President of India highlighted the plight of a large number of undertrials holed up in the prisons of India. The proportion of undertrials in prisons has reached a historical high figure of 77% in 2021 and the trend indicates that the number of undertrial prisoners has risen consistently over the last decade. Undertrial prisoners face considerable challenges and most of them belong to under-privileged communities. Multitude of reforms are required including in terms of procedures, implementation of existing provisions to address the issue.

What is the current status of Undertrials in India?

According to National Crime Record Bureau (NCRB), of the 554,034 prisoners, 427,165, or **77% were undertrials in 2021**. There has been a 14.9% increase from 371,848 undertrials in 2020.



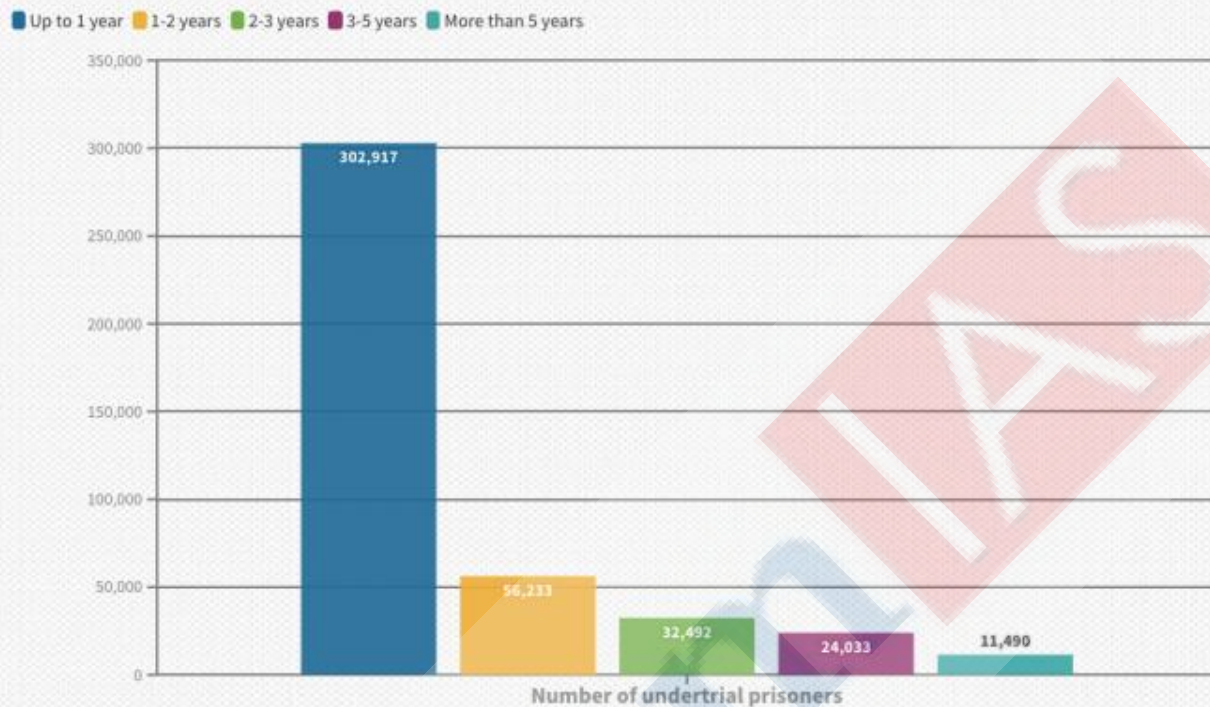
In 2021, 25.2% of prisoners were illiterate and 40.2% had not completed high school.

Scheduled Castes made up 8% of under-trials and 21.7% of convicts (16.6% of the population (2011 Census)). Adivasi groups made up 10.7% of all under-trials and 14.1% of all prisoners (8.6% of the population (2011 Census)).

In 2011, 1% undertrials had been in prison for less than three months, while almost 22% had been imprisoned for a year or more. By 2021, **29.1% of undertrials had been in prison for more than a year.**

The number of years undertrials have spent in jail

Combined data shows that as much as 1,24,248 undertrial prisoners have spent more than one year in jail.



Source: National Crime Records Bureau (NCRB) • (As of December 31, 2021)

Source: MoneyControl

District jails had the highest share of undertrials, accounting for 51.4% of the total, followed by the Central jails (36.2%) and Sub-jails (10.4%).

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 the subordinate courts.

Uttar Pradesh reported highest number of undertrials followed by Bihar and Maharashtra. The proportion of undertrials to the total number of prisoners was the highest in Bihar with 89.1%, followed by West Bengal (87.6%), and Odisha (87.3%).

The prison occupancy rate is 130.2%. Uttarakhand had the highest prison occupancy rate at 185%, followed by Uttar Pradesh (184.8%) and Sikkim (166.9%).

What safeguards are in place to protect the Undertrials?

Constitutional Safeguards

Article 21: “No person shall be deprived of his life or personal liberty except according to procedure established by law”.

Article 22: Undertrials have the right to consult and be defended by a legal practitioner of their choice (**State of Madhya Pradesh vs. Shobharam (1966)**).

Article 39A: The State is obligated to ensure that the functioning of the judicial system promotes justice and should provide free legal aid.

Legal Safeguards

Bail provisions have been defined in **Criminal Procedure Code (CrPC)** under sections 436-450. The first schedule of CrPC defines the bailable and non-bailable offences.

Section 436 of CrPC deals with provisions for bail in bailable offences and Section 437 deals with provisions for bails regarding non-bailable offences.

Section 436A states that when an person has (during investigation/trial under the CrPC for an offence other than for which punishment of death has been specified) **undergone detention for a period extending up to one-half of the maximum period of imprisonment** specified for that offence, the person **shall be released by the Court** on a personal bond.

Section 167 states that undertrial prisoners have the **indefeasible right to be released on default bail** (even for non-bailable offences), when their judicial custody exceeds 90/60 days, but **no charge sheet has been filed** by the police.

Supreme Court Judgments

The Supreme Court has said that unless a crime is devious and attracts a punishment of 7 years or more, no arrest should be made.

The SC in *Bhim Singh v Union of India* has sought **effective implementation of Sec 436A**. In *Rasiklal v Kishore (2009)*, the SC held **right to bail for bailable offences is an absolute and indefeasible right**. No discretion can be exercised in granting bail as under Section 436, bail is imperative and the person accused of an offence is bound to be released as soon as bail is furnished.

International Safeguards

The **Universal Declaration of Human Rights** (1948) recognises the presumption of innocence until proven guilty.

The **United Nations Standard Minimum Rules for the Treatment of Prisoners** (the Nelson Mandela Rules) clearly specify the standards of treatment with prisoners on trial.



What are the reasons for high number of Undertrials in India?

Low Capacity of Judicial System: India has 21 judges per million population, while the Law Commission has recommended 50 per million. This along with lack of infrastructure results in large pendency of cases which now has reached over 4.5 crore cases.

Poor Economic and Education Levels: A large number of under trials are poor, illiterate, belonging to the marginalized communities. This along with lack of financial resources leads to inability to get legal aid and pay the bail amount.

Unnecessary Arrests and Issues of Bail System: Law Commission (268th Report) has highlighted that over 60% of arrests are unnecessary. The Commission report also highlighted that the rich and the affluent get bail with ease. However, poverty becomes the reason for incarceration of many prisoners, as they are unable to afford bail bonds or provide sureties.

Read More: [The Need for a Bail Law – Explained, pointwise](#)

Delay in Investigation: Investigation and trial process is often delayed by police and prosecution functionaries. This is due to poor 'Police-Population' Ratio. According to PRS, the sanctioned police strength was 181 police personnel per lakh persons in 2016, the actual strength was 137. The United Nations recommended standard is 222 police personnel per lakh persons.

What are the problems faced by Undertrials?

Prison Violence: Prisoners are vulnerable to violence. Group violence is also endemic and riots are common.

Criminalizing effect of Prison: There is absence of scientific classification methods to separate hardened criminals/convicts from young, first-time new criminals. Intermingling exposes circumstantial/young offenders to hardcore criminals making them vulnerable.

Health Problems: Overcrowding of prisons leads to shortage of adequate space to lodge prisoners in safe and healthy conditions.

Mental Health Issues: Long incarceration without conviction, especially when the undertrial eventually turns out to be innocent, leads to mental health issues. Moreover, there is lack of facilities to deal with mental health issues in prisons.

Drug Abuse: People booked under anti-drug laws constitute a substantial percentage of the prison population. Isolation inside prison leads to increased desperation to access banned substances. It also increases the danger of other prisoners being inducted into drug abuse.

Effect on the Families: Many prisoners are sole breadwinners for their families. Arrest and incarceration leads to loss of income and susceptible to poverty. Also, social stigmatization post release impact the ability to get employment. Often it leads to juvenile delinquency among suffering families.

Violation of Rights: The 'Right to Speedy Trial' was recognized by the Supreme Court in *Hussainara Khaton vs. Home Secretary, State of Bihar (1979)*. Prolonged incarceration without bail violates the right. The 'Right to Bail' is denied. Even in bailable offences, many prisoners continue to be in prisons due to exorbitantly high bail amount. 'Right to Effective Legal Aid' is violated due to absence of adequate support.

What should be done to address the problem?

Prisoners: (a) Undertrials should be housed in open jails, where they can move around freely and earn a living, to reduce the punitive character of incarceration. They can be provided greater opportunity to communicate with families; (b) Undertrials should also be compensated, upon release/acquittal; (c) Steps should be taken for their rehabilitation after release, by providing them with self-employment skills, educational and vocational training etc.

Read More: [Right to Compensation \(Against Wrongful Prosecution, Incarcerations, and Convictions\) – Explained, pointwise](#)

Government: (a) A comprehensive **Bail Law** should be enacted to curb arbitrary arrests. There is a need to **revamp outdated prison laws** like the Prisons Act, that provide for penalties like fetters, solitary confinement etc. for prison offences, which have been held to be violative of the Constitution; (b) Police functions should be **separated into investigation and law and order duties** and sufficient strength should be provided to complete investigations on time and avoid delays; (c) To counter discrimination, prejudice and bias in the police, **sensitisation programmes** and workshops should be introduced; (d) The issue of **judicial vacancies** should be addressed on an urgent basis. The number of judges should be increased.

Judicial Processes: (a) **Aid to Undertrials:** Access to free legal aid shall be provided to under trials through NALSA by increasing its capacity and reach; (b) **Automatic extension of remands** should be stopped; (c) Video conferencing between jails and courts should be encouraged and tried in all states beginning with the big Central jails and then expanding to District and Sub-jails; (d) The practice of lower judiciary to **grant adjournment of hearings on arbitrary grounds** should be curbed. A big cause for pendency is arbitrary adjournments delaying court proceedings; (e) Computerization of Court procedures can help manage pendency.

Conclusion

Undertrials are overcrowding India's prisons. Statutory provisions have been changed to reduce unnecessary arrests and to allow for bail/personal bonds. Several judgements have backed undertrials' rights to a speedy trial and legal representation. However, undertrial population continues to expand. This mismatch is caused by poor enforcement of legislation and legal judgements in this area by the police, lower judiciary, and jail administration. Many experts are of the opinion that the issue can be addressed to a large extent by effective implementation of existing provisions. There is a need for greater political and judicial will to push through the procedural reforms.

Syllabus: GS II, Structure, organization and functioning of the Judiciary, Important aspects of governance, transparency and accountability.

Source: [Indian Express](#), [MoneyControl](#)

Farm Subsidies in India – Explained, pointwise

Introduction

The Government has sought approval of the Parliament for fresh expenditure of INR 214,581 crore towards major subsidies, over and above INR 317,866 crore budgeted for FY2022-23. Of this, INR 109,289 crore will go to fertilisers and INR 80,348.25 crore on food and rest on petroleum. Farm subsidies have remained a debatable issue in India, with criticism surrounding leakages and impacts on cropping pattern. Yet, given that majority of farmers have small landholdings, and agriculture in India is predominantly rain-dependent, provision of subsidies become a necessity. The Government can consider rationalizing the subsidies, while finding innovative ways to check the leakages.

What are the different types of Farm subsidies?

Direct and Indirect Subsidy: A direct subsidy is provided to the farmer in the form of cash. Indirect subsidy is provided by discounts on agricultural purchases like seeds and fertilizers. The most common example of direct subsidy is Farm Loan Waivers, the PM *Kisan* Scheme etc.

Explicit and Implicit Input Subsidy: Explicit subsidy is paid to farmer for purchasing agricultural products like fertilizers. This is generally paid to small and marginal scale farmers not able to buy inputs on their own e.g., KALIA scheme of Odisha or *Ryuthu Bandhu* Scheme of Telangana. Implicit Input Subsidy does not directly provide money but helps the farmers by

cutting the extra costs e.g., providing subsidies on electricity bills and interest subvention scheme (relaxation in bank loan interests).

Output Subsidy: This subsidy provides support to farmers on their outputs like Minimum Support Price (MSP) on crops like wheat, paddy etc.

Major Farm subsidies provided by the Government of India include **(a)** PM-KISAN Scheme; **(b)** Minimum support Price (MSP); **(c)** *Pradhan Mantri Fasal Bima Yojana*(PMFBY); **(d)** Modified Interest Subvention Scheme (MISS); **(e)** Agricultural Marketing Scheme under *Krishionnati Yojana* in 2022-23; **(f)** Under the Aatmanirbhar Bharat Economic Package, the Union Government has announced the setting up of an Agriculture Infrastructure Fund (AIF) of One Lakh Crore rupees for financing farm-gate infrastructure; **(g)** The *Rashtriya Krishi Vikas Yojana* (RKVY) umbrella scheme: **(i)** *Pradhan Mantri Krishi Sinchai Yojana*– Per Drop More Crop; **(ii)** *Paramparagat Krishi Vikas Yojana*; **(iii)** National Project on Soil and Health Fertility; **(iv)** Rainfed Area Development and Climate Change; **(v)** Sub-Mission on Agriculture Mechanization including Management of Crop Residue.

Union Budget 2022-23 earmarked **INR 68,000 crore for PM-KISAN**, while the **fertilizer subsidy** for FY2022-23 (Kharif and Rabi seasons) is expected to cross **INR 2.25 Lakh crore**. Other allocations under Union Budget 2022-23 include **INR 10,433 crore for RKVY**; **INR 19,500 for MISS**; **INR 15,500 under PMFBY** (allocation, actual spending may be different based on claims) etc.

What are the benefits of Farm Subsidies?

Support Farm Income: Farm subsidies increase the purchasing power of farmers and thus uplift their living standards.

Food Security: The farm subsidies assure adequate food supply and reduce the chances of food shortage and food inflation.

Bridge the Income Divide: According to FAO, 70% of Indian rural households rely mostly on agriculture for a living. Income support for small and marginal farmers bridges the income gap. It promotes risk taking among farmers and also ensure that the poor farmers are supported at the time of loss.

Stimulate Economic Growth: Subsidies (e.g., to create irrigation systems) improve farm output. Improvement in farm incomes results in greater demand (consumer) contributing to economic growth. It also generates more employment opportunities.

Improvement in HDI: Improved farm incomes and food security aids in addressing issues like malnutrition, improving overall living standard.

Achieve National Goals: Farm subsidies are crucial levers in the achievement of goals such as achieving the US\$ 5 trillion economy status, Sustainable Development Goals (SDG) etc.

What are the concerns associated with Farm Subsidies?

Fiscal Burden: Farm subsidies form about 2% of India's GDP. The total subsidy to farmers form about 21% of their farm income. High amount of farm subsidies put excessive burden on Government finances reducing space for capital expenditure.

Resource Wastage: It results in overuse and wastage of resources e.g., subsidized electricity for farms can be misused for personal use.

Environmental Degradation: Fertilizer subsidies have resulted in overuse of Urea and DAP. Overuse of fertilizers is harmful to the environment e.g., it leads to soil and water pollution.

Increase Inequalities: Critics of farm subsidies argue that benefits of most farm subsidies is cornered by the large and wealthy farmers. This defeats the purpose of subsidies.

Distorted Cropping Pattern: Farm subsidies especially the MSP has led to distortion in crop pattern e.g., pre-dominance of wheat and paddy in Punjab/Haryana at the cost of pulses, maize, vegetables etc.

Corruption and Leakages: Farm subsidies are susceptible to corruption and leakages. This leads to welfare loss and additional fiscal burden. Urea meant for farms is diverted to industrial usage or smuggled to neighbouring countries.

WTO Concerns: India's farm subsidies are questioned by the developed nations at the WTO. MSP is considered trade distortionary and breaches the Aggregate Measures of Support (AMS) level limited by the WTO norms.

What should be the approach?

Rationalization: Farm subsidies should be rationalized according to the demand of programmes based on marketability, affordability and input cost and according to different income groups. This could pave the way for optimal utilisation of subsidies.

Backward and Forward Linkage: There is need to strengthen the agri sector by strengthening backwards and forward linkages.

Investments: There is a need to invest more in agriculture R&D, build better infrastructure to create efficient value chains bringing farmer producer organisations (FPO). The expenditure on agricultural research in India has remained around 0.3-0.4% of the agriculture GDP since 2001, and must be enhanced. This can improve agricultural productivity and incomes, reducing the need for providing subsidies.

Financial Support: (a) **Incentivise Long-term Capital Formation:** Kelkar Committee recommended the **phased elimination of subsidies** and **convert them to capital investments**. In 2015, the Committee on Medium-term Path on Financial Inclusion under the RBI observed that the interest subsidy provided for short-term crop does not incentivise farmers to take up long term loans for capital formation; (b) **Credit Eligibility Certificates:** The 2015 RBI Committee on Financial Inclusion recommended that credit eligibility certificates, which would act as tenancy or lease certificates, should be issued to tenant farmers. These certificates would enable landless tenant cultivators to obtain agricultural credit.

Technology: Technological improvement like Aadhaar, direct benefit transfer can be used to **eliminate inclusion and exclusion errors**. The third party verifications of beneficiary will help in eliminating the free riders.

Targeted Subsidies: There should be better targeting of subsidies by linking them to specific crops, size of farms, area, regions etc. This is important to prevent false beneficiaries and to benefit only the eligible.

International Measures: Under the WTO's Nairobi package, developed and developing nations have committed to phase-off export subsidies. Rather than limiting agricultural value production as a whole, subsidies should be limited depending on individual products such as cotton, wool etc. The base year used to compute the de-minimus level should be modified in response to developing countries' requests.

Conclusion

Farm subsidies have proven to be vital in supporting agriculture and providing income security to farmers. However, instances of leakages, unintended consequences (impact on crop pattern) and high fiscal burden necessitate a relook on the farm subsidies. The Government should take steps to rationalize farm subsidies and invest more on capital formation (e.g., irrigation) and R&D in agriculture. This will improve agriculture productivity and make agriculture more remunerative.

Syllabus: GS III, Issues related to direct and indirect farm subsidies.

Source: [Indian Express](#), [Business Standard](#), [India Spend](#), [PRS](#), [NIPFP](#)

Karnataka-Maharashtra Border Dispute – Explained, pointwise

Introduction

The Karnataka-Maharashtra Border Dispute has escalated with reports of violence in both States, attacking vehicles of other State. The border dispute has its origins in the States' reorganization in 1956 and has flared up every now and then since 1960s. The matter is already under adjudication of the Supreme Court. However, in the absence of any judicial settlement so far, the dispute has been exploited for political mobilization. In this context, there is a need for peaceful settlement acceptable to all stakeholders, either through Judiciary or through the intervention of the Union Government.

What is the Karnataka-Maharashtra Border Dispute?

The Karnataka-Maharashtra Border Dispute has its origins in the reorganisation of states along linguistic lines via the **State Reorganisation Act, 1956**. Since its creation on May 1, 1960, Maharashtra has claimed that 865 villages, including Belagavi (then Belgaum), Carvar and Nipani, **should be merged into Maharashtra**. These regions have a significant Marathi-speaking population. Karnataka, however, has refused to part with its territory. On the other hand, **some villages in Maharashtra want to join Karnataka**. In November 2022, all 40 gram panchayats of the Jath taluk in Sangli district of Maharashtra, passed a resolution to join Karnataka. The Government of Maharashtra has submitted a petition challenging certain clauses of the State Reorganisation Act of 1956.

Genesis of the Dispute: The erstwhile Bombay Presidency, a multilingual province, included the present-day Karnataka districts of Vijayapura, Belagavi, Dharwad and Uttara-Kannada.

In 1948, the Belgaum municipality requested that the district, having a predominantly Marathi-speaking population, be incorporated into the proposed Maharashtra state. The States Reorganisation Act of 1956, divided states on linguistic and administrative lines. The Act made Belgaum and 10 talukas of Bombay State a part of the then Mysore State (renamed Karnataka in 1973).

Views of Maharashtra: Maharashtra has demanded realignment of its border with Karnataka. It invoked **Section 21 (2)(b)** of the State Reorganisation Act, submitting a petition to the Union Ministry of Home Affairs stating its objection to Marathi-speaking areas being included in Karnataka. It claimed 814 villages and the three urban settlements of Belagavi, Karwar and Nippani as part of the Bombay Presidency before Independence. It **filed a petition in the Supreme Court in 2004**, staking a claim over Belagavi.

Views of Karnataka: Karnataka has consistently argued that the inclusion of Belagavi as part of its territory is beyond dispute. It has cited the demarcation done on linguistic lines as per the Act and the **1967 Mahajan Commission Report** to substantiate its position. Karnataka has argued for the inclusion of areas in Kolhapur, Sholapur and Sangli districts (falling under Maharashtra) in its territory. From 2006, Karnataka started **holding the winter session of the Legislature in Belagavi**, constructing a massive Secretariat building in the district headquarters on the lines of the Vidhana Soudha in Bengaluru to reassert its claim. Karnataka asserts that **only Parliament can decide the borders of States** (Article 3 of the Constitution). Maharashtra has referred to **Article 131 of the Constitution**, which says that the Supreme Court has jurisdiction in cases related to disputes between the Union Government and States.



Using Article 3 of the Indian Constitution, Karnataka asserts that **only Parliament can decide the borders of states, and not the Supreme Court.**



Maharashtra has referred to Article 131 of the Constitution, which says that the Supreme Court has jurisdiction in cases related to disputes between the Union government and states.



Almost two decades after the petition, its maintainability remains challenged.

Source: MoneyControl

What are the reasons for the Inter-State Border Disputes?

Linguistic Identities: Several inter-state border disputes have their roots in the reorganisation of states in the 1950s, which was primarily based on language; language is now tied to the State identity. As a result, there have been a border disputes between Karnataka and Maharashtra, Karnataka and Kerala, Karnataka and Andhra Pradesh, Maharashtra and Telangana and so on.

District Boundaries: Many of these State boundaries were based on district boundaries established by the British instead of village boundaries. Borders are associated with maps. If a map is not laid out in minute detail where the administrative border stands, it can lead to a disagreement.

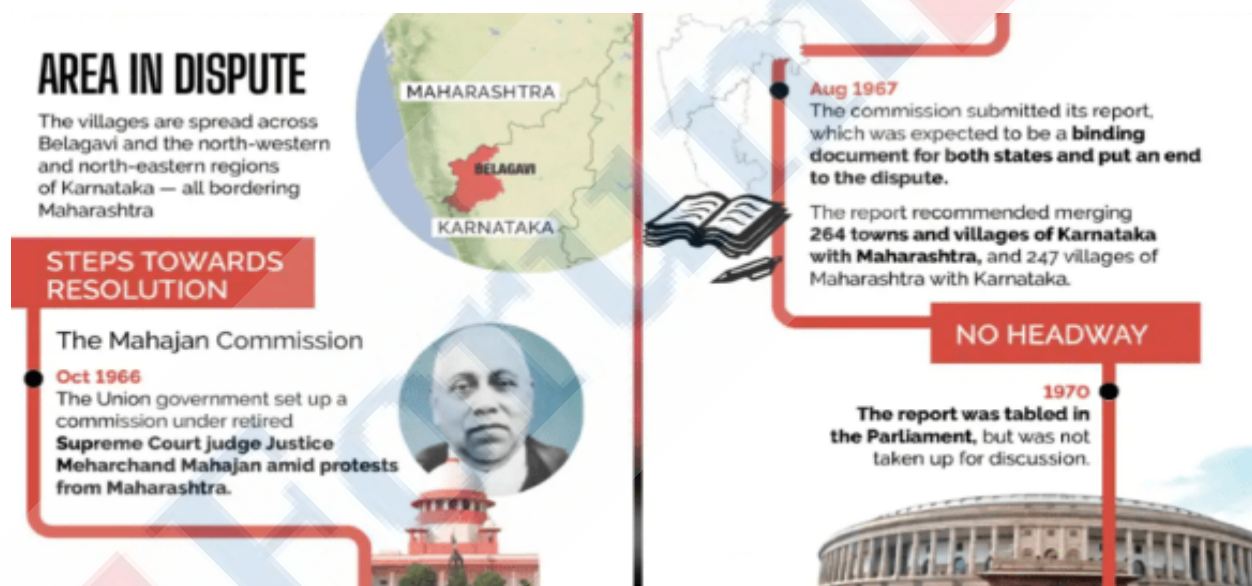
Colonial Cartographies: Most States boundaries have been constructed out of colonial cartographies on the basis of host states. They **rarely recognise the socio-cultural liminality of borders.**

Complex Topography: The topography has also been a source of difficulty; in many locations, rivers, hills, and forests span the border between two states, and the line itself cannot be physically demarcated. On their maps, colonial cartographers often labelled enormous tracts of

land as “thick forests” or “unexplored.” Indigenous communities were, for the most part, left alone.

What steps have been taken to resolve the Karnataka-Maharashtra Border Dispute?

Union Government: (a) Mahajan Committee: The Union Government constituted the Mahajan Committee in 1966 to assess the situation. Representatives from both Maharashtra and Karnataka (then Mysore) state were part of the committee. The panel submitted its report in 1967. It recommended to merge 264 cities and villages of Karnataka with Maharashtra (including Nippani, Nandgad, and Khanapur), as well as 247 villages of Maharashtra (including South Solapur and Akkalkot) with Karnataka. The Report was presented to the Parliament in 1970 but was not taken up for discussion; **(b) The Setalvad Study Team on Centre-State Relationships** (Part of Administrative Reforms Commission): It strongly recommended establishment of an Interstate Council. It said, “*Inter-state disputes need to be settled quickly and impartially; otherwise, they become festering sores that create friction, prevent development, give a perverse direction to the energies of people and governments, and generate hard feelings on all sides*”; **(c) Union Government Affidavit:** In 2010, the Union Government in its affidavit had stated that the transfer of certain areas to then Mysore (now Karnataka) was neither arbitrary nor wrong. It had also underlined that both Parliament and the Union Government had considered all relevant factors while considering the State Reorganisation Bill, 1956, and the Bombay Reorganisation Bill, 1960.



Source: MoneyControl

States: (a) In 1960, a 4-member committee was formed by both States, but it couldn't arrive at a consensus. Representatives submitted reports to their respective State Governments. In the subsequent decades, Chief Ministers of both States have met several times to find an amicable solution but have failed to settle the dispute; **(b)** In 2004, Maharashtra approached the Supreme Court challenging certain clauses of the State Reorganisation Act.

Supreme Court: The Supreme Court has observed that the issue should be handled via mutual dialogue. The Supreme Court is still hearing the case.

What are the Constitutional Provisions to resolve Inter-State Border Disputes?

The Constitution of India contemplates a variety of mechanisms for the settlement of Inter-State disputes.

Article 3: The Parliament has the power to alter the border of any State.

Article 131: It creates a judicial mechanism for dealing with Inter-State Disputes. The Supreme Court has original Jurisdiction to adjudicate any dispute between two and more States. The Jurisdiction is extremely wide and includes Inter-State Border Disputes.

Article 263: In Article 263, there is provision for the formation of an Inter-State Council. The President can create an Inter-State Council for inquiring into and advising upon disputes between States.

However, there is no explicit provision for boundary disputes similar to Article 262 for settlement of water disputes.

What are the implications of the Inter-State Border disputes?

Politicization of Disputes: Inter-State Border Disputes become an avenue of political mobilization. Political parties raise popular passions to reap electoral benefits. It becomes beneficial for parties to prolong the dispute, which hampers efforts for peaceful settlement.

Law and Order: Often political mobilization results in violence among the communities in border areas e.g., in the ongoing Karnataka-Maharashtra Border Disputes, buses/vehicles from the other States were targeted in both States. Blockades, restriction on free movement of goods from other States have economic implications as well.

Neglect of Disputed Regions: Uncertainty about the status of the disputed regions in future generally deters the State Governments from undertaking development activities in these regions. There is infrastructure deficit, lack of investments as well as neglect of basic facilities. This also leads to poor human development.

Trust Deficit: It leads to trust deficit between leaderships of the disputing States. It prevents cooperation and hampers the spirit of Cooperative Federalism.

What should be the approach for settling Inter-State Border Disputes?

Legal Settlement: The Supreme Court should take a more proactive approach in settling the Inter-State Disputes. The Karnataka-Maharashtra Border Dispute has been pending since 2004 (18 years). States should also abide by the Supreme Court Judgments.

Inter-State Council: The ISC has been [reconstituted](#) in May 2022. The Council should be enabled to play a more proactive role in Centre-State/Inter-state cooperation and dispute settlement. Settlement of all Inter-State Disputes (include water disputes) should be a mandate of the Council.

Pragmatic Approach: The State Governments/Political Parties also need to adopt a more pragmatic approach keeping national interest above all. Dispute Settlement requires a give-and-take approach, and States/Parties should be **ready to compromise** in peaceful settlement. Union Government should support the constructive efforts.

Address Local Concerns: All Stakeholders (Union Government, State Governments, Political Parties) should be mindful of the concerns of the local residents and should settle disputes taking into account their interests.

Conclusion

The violence ensuing amidst the Karnataka-Maharashtra Border Dispute is most unfortunate. Political parties need to realize that parochial/narrow approach may lead to short-term benefits but impacts national interests in the longer term. Hence it is best to settle such disputes through

a pragmatic approach. The Supreme Court should also be more proactive in settling such disputes, rather than letting them fester for long.

Syllabus: GS I, Post-independence consolidation and reorganization within the country, Regionalism; GS II, Issues and challenges pertaining to the federal structure.

Source: [Indian Express](#), [The Hindu](#), [The Times of India](#), [MoneyControl](#)

[Kurukshetra December Summary] Technology Integration for Quality Education – Explained, pointwise

Introduction

Technology is the major driver of the 21st century, touching every aspect of human life. The effect of technology has increasingly blurred the distinctions between the physical, digital, and biological domains and it is rapidly affecting how people live, work, and communicate. With the advancement of digital technology, administrations and institutions all over the world have been fundamentally altered structurally and in terms of the relationship between governments and individuals. One of the most important lessons learnt from the epidemic is that the future is hybrid (a mix of digital and physical). In fact, the major goal of technology is to recognise and cultivate human potential while also promoting long-term human growth through digitalization. In this context, technology will become vital for imparting quality education in the coming future.

Importance of technology in Governance

The pandemic has amplified the importance of e-government and digital technologies as essential tools for communication and collaboration between policy makers, private sectors and societies across the globe. **e-Governance has become the cornerstone for building effective, accountable, resilient and inclusive institutions at all levels**, as called for in Sustainable Development Goal (SDG) 16, and for strengthening the implementation of Goal 17 (UN E-Government Survey, 2022).

With such revolutionary impact of technology, education sector could not be left untouched and during the COVID-19 pandemic, the pace of integration of technology in teaching learning processes has increased exponentially. During the pandemic, digital technology played an **indispensable role in holding the civil society together** by supporting the provision of basic-fundamental services in the field of health, education, and service.

National Education Policy (NEP) 2020 gives utmost importance to technology and states that *“The thrust of technological interventions will be for the purposes of **improving teaching-learning and evaluation processes, supporting teacher professional development, enhancing educational access, and streamlining educational planning, management, and administration** etc.”*. It also recognises and addresses the issue of **digital divide** and elucidates that *“The benefits of online/digital education cannot be leveraged unless the digital divide is eliminated through concerted efforts, such as the Digital India campaign and the availability of affordable computing devices. It is important that the use of technology for online and digital education adequately addresses concerns of equity.”*

Use of Technology in Education

In the school education sector of India, technology has been used both in governance processes to **improve the efficiency and effectiveness of schooling system** and also for **enhancing quality of education**. Various governance related technological interventions have been initiated and undertaken by the Government:

UDISE+: Timely and accurate data form basis of effective policy and decision-making. Ministry of Education (MoE) had initiated Unified District Information System for Education (UDISE) in 2012-13 integrating DISE for elementary and secondary education which is one of the **largest management information system for school education** covering more than 5 million schools , 9.6 million teachers and 264 million children.

UDISE+ is an updated and improved version of USIDE. This is now online and has been collecting data in real-time since 2018-19. UDISE+ provides **robust, real-time, and credible information for an objective evaluation of the system**, which can be used for designing evidence based specific interventions for improvement in the school education sector. Further, UDISE+ has a mandate of **collecting information from all recognised and unrecognised schools** which are imparting formal education from Pre-primary to Class XII.

UDISE+, collects information through an online Data Collection Form (DCF) on parameters ranging from students, schools, teachers, infrastructure, enrolments, examination results etc. Ever since its introduction, UDISE+ has acquired the status of the official database of the MoE and is now operational in all the districts of the country.

Performance Grading Index (PGI): It is a tool to provide insights on the status of school education and to catalyse transformational change in the States/UTs on the basis of key indicators that drive their performance and critical areas for improvement. It grades all States/UTs on their **performance across 77 indicators on school education** and **helps identify gaps** thereby enabling all States/UTs to design appropriate interventions to bridge them. This was introduced from 2018-19/

The purpose of this PGI therefore is to help the States/UTs to **pinpoint the gap and accordingly prioritise area for intervention** to ensure that the school education system is robust at every

Online Survey Platform for National Curriculum Framework (NCF): With the arrival of NEP 2020, the focus of education has moved towards learning about **how to think critically**, solve problems, how to be **creative and multidisciplinary**, how to innovate, adapt, and absorb new material in changing fields. Pedagogy is expected to evolve to make education more experiential, holistic, integrated, inquiry-driven, discovery-oriented, learner-centred, flexible, and enjoyable. To make the above expectations a reality, a new CF is being developed by the NCERT. The development of this framework is unique as it is adopting a **'bottom-up'** approach in which suggestions are invited from all stakeholders on the basis of which new NCF will be developed.

In addition, drawing insights from citizen-centric process of development of NEP 2020, this framework has also been made **consultative**. To ensure participation of each and every citizen of the country in this curriculum development process, a citizen-centric **Digital Survey for National Curriculum** – DiSanc has been launched. Under this survey, suggestions and feedback has been collected from the public at large for the formulation of the NCFs.

NDEAR (National Digital Education Architecture): NDEAR has been launched with a larger vision to create a **unifying national digital infrastructure** to energise and catalyse the education ecosystem. The core idea of NEAR is to facilitate achieving the goals laid down by NEP 2020, through a digital infrastructure for innovations in the education ecosystem, ensuring autonomy and participation of all the relevant stakeholders. NDEAR will **enable a common set of principles and approaches to be followed in building, using, and re-using technology for education**.

Vidya Samiksha Kendra: Vidya Samiksha Kendra (VSK) has been set-up at national level at NCERT and is aimed at **leveraging data and technology to bring a big leap in learning outcomes**. VSK will include Student, Teacher and School registry which will bring synergy to

the work being done in the ecosystem by integrating data from different datasets and empowers students, teachers, and parents to bridge the gap. This will cover the entire data of school ecosystem and will **analyse by using big data analysis**, artificial intelligence and machine learning in order to enhance the overall monitoring of the education system and thereby improving learning outcomes. All States and UTs have been provided financial support under **Samagra Shiksha Scheme** for setting up VSKs.

PRABANDH: Department of School Education and Literacy had launched PRABANDH (**Project Appraisal, Budgeting Achievements and Data Handling System**) in 2020. This System has been developed under *Samagra Shiksha* as a significant step towards leveraging technology to enhance efficiency and manage the implementation of the Centrally Sponsored Integrated Scheme for School Education. It has more than 10 lakh activated users and can be accessed from the School, Block, District and State Level.

A **data visualisation dashboard** has been created in the PRABANDH System for display of **monthly status of physical and financial progress** under the major interventions of *Samagra Shiksha* such as text books, uniforms, transport allowance, status of civil works, teaching learning materials etc. Technology integration has also been an integral part of enhancing quality of education.

Enhancing Quality of Education

Technology integration has also been an integral part of enhancing quality of education. Various initiatives have been undertaken to tackle this challenging situation:

PM e-Vidya: PM e-vidya **ensures coherent access to digital education** through multimodal approach. The digital platform of MoE 'DIKSHA' has been declared as '**One Nation, One Digital Platform**'. DIKSHA can be accessed by learners and teachers across the country and currently **supports 30 Indian languages**.

Each State/ UT leverages this platform in its own way and has the freedom to use the various capabilities of the platform to design and run programs for teachers and learners. DIKSHA policies and tools make possible for the education ecosystem (educationist, experts, organisations, institutions – government, autonomous institutions, non-government and private organisations) to participate, contribute and leverage a common platform to achieve learning goals at scale for the

For digital content to aid in the teaching and learning processes, a rich repository of varied resources was **contributed by Schools/individual teachers, content partners, NGOs, corporates through CSR under VidyaDaan**.

For Children with Special Needs, **2970 Indian Sign language (ISL) based content, Mukta Vidya Vani**, an **audio streaming podcast** and **Radio Vahini**, with 24×7 broadcast and talking books (in Daisy format) for learners with Blindness and Low Vision have been prepared. A total of 3424 Audio Books have been 10,000 ISL dictionary words, have been uploaded on DIKSHA.

At present, **12 PM eVIDYA DTH TV channels** (One Class, One Channel from classes | to XII), are functioning that delivers class-wise contents on 24×7 basis are linked to DIKSHA through QR codes. A Podcast called **Shiksha Vani** of the CBSE is also being effectively used by learners of grades 9 to

Capacity Building of Teachers through NISHTHA online: National initiative for School Heads and Teachers Holistic Advancement (NISHTHA), an integrated training programme was initiated covering all the recommended areas and aims at **holistic development of teachers**.

Under NISHTHA 1.0, about 24 lakh school teachers and head teachers at elementary education level (Classes 1-8) across 34 States/UTs had completed training and were certified.

Subsequently, **NISHTHA 2.0 for Secondary teachers**, **NISHTHA 3.0 for Foundational Stage teachers**, and NISHTHA 4.0 for training of master trainers have been launched for building capacities of teachers at all levels.

Ensuring Learning for All

Realizing the necessity for digital education during COVID-19, the government resolved to focus on digital learning in 2022-23 to reverse the academic disruption produced by COVID. The following measures were announced in Budget 2022-23 to increase digital technology and ensure learning for all :

200 TV Channels: Due to learning gaps caused by the pandemic-induced closure of schools, there is a need to **impart supplementary teaching** and to **build a resilient mechanism for education delivery**. For this purpose, the **'one class- one TV channel'** program of PM e-VIDYA will be **expanded from 12 to 200 TV channels**. This will enable all states to provide supplementary education in regional languages for classes 1-12.

Virtual Labs: NEP 2020 recommends creating virtual laboratories so that **all students have equal access to quality practical, critical thinking** and hands-on experience for teaching-learning of Science, Mathematics and Vocational Skills. To support this around 750 virtual labs in science and mathematics, and 75 skilling -labs for the simulated learning environment, will be set up in 2022-23.

High Quality e-Content: High-Quality e-content in all spoken languages will be developed for delivery via internet, mobile phones, TV, and radio through Digital Teachers.

Competitive Mechanism For e-Content: A competitive mechanism for the development of quality e-content by the teachers will be set up to empower and equip them with digital tools of teaching and facilitate better learning outcomes.

Conclusion

The NEP 2020 calls for investment in digital infrastructure, online teaching platforms and tools, learning etc. It is focused on the promotion of multilingualism and the power of language in teaching and learning through innovative and experiential methods. These methods include gamification and apps, weaving in the cultural aspects of the languages – such as films, theatre, storytelling, poetry, and music- and by drawing connections with various relevant subjects and with real-life experiences.

Technology will be integral in developing lifelong learners who have a growth mind-set, innate curiosity, drive to explore and firm belief in ongoing, voluntary, and self-motivated pursuit of knowledge. An inclusive, equitable, affordable and integrated digital ecosystem is needed to facilitate and sustain lifelong learning and to reap the benefits of inclusive technology development so that no one is left behind.

Source: Kurukshetra December 2022

Solar Energy in India: Status, Challenges and Way Forward – Explained, pointwise

Introduction

India has undertaken ambitious targets under the Paris Agreement. India's climate action is dependent upon energy transition (in the electricity sector) by betting large on shift to solar energy. In 2014-15, the Government had set a target of producing 175 Gigawatt (GW) of renewable energy by 2022, with 100 GW of solar energy. The present installed capacity of solar energy is only 60% of the target. While, the Government is set to miss the ambitious target, nevertheless the progress in expansion of renewable and solar energy has been commendable. The installed renewable energy capacity has trebled from 38GW in 2014. The Government should take steps to address the challenges facing the sector and further enhance the pace of transition to clean energy.

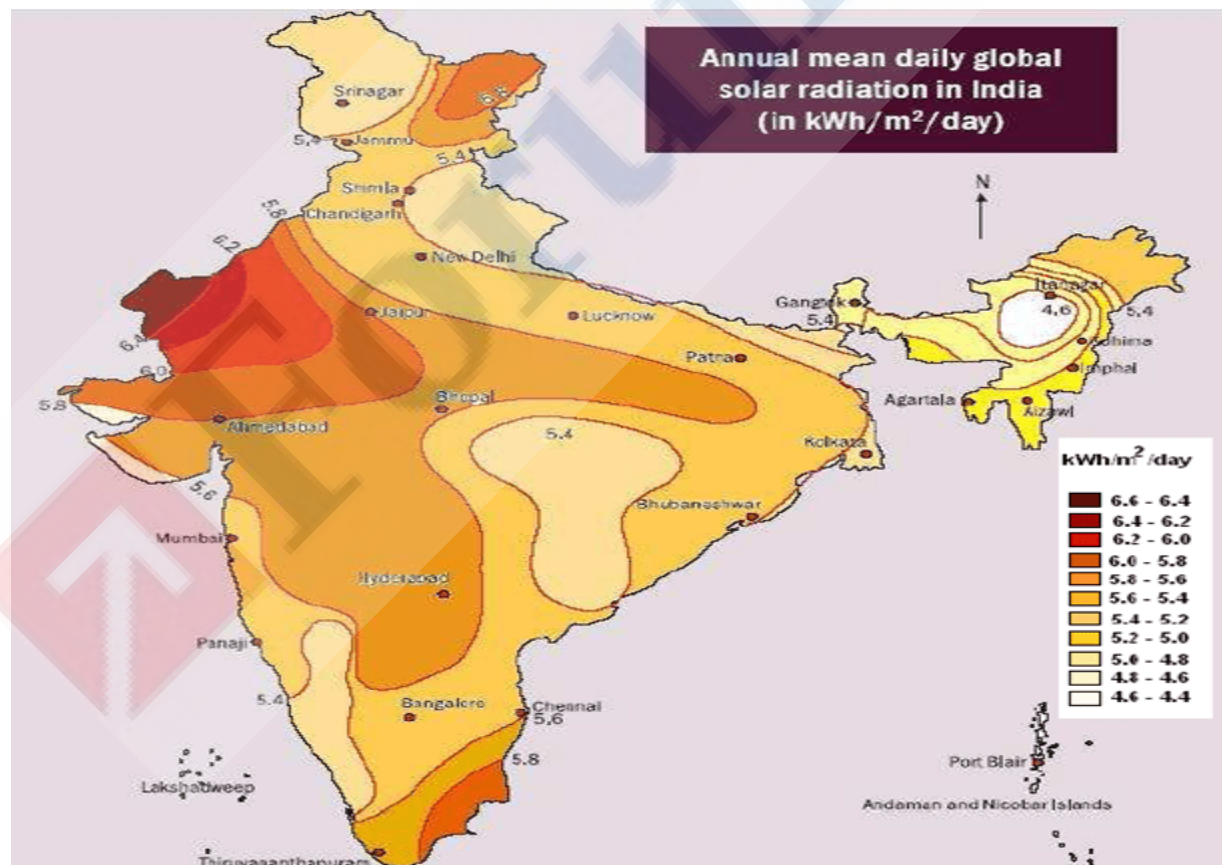
What are the Potential, Targets and Status of Solar Energy in India?

Potential

India is endowed with vast solar energy potential. India receives nearly 3000 hours of sunshine every year. About **5,000 trillion kWh per year** energy is incident over India's land area with most parts receiving **4-7 kWh per sq. m per day**. Solar photovoltaics power can effectively be harnessed providing huge scalability in India.

National Institute of Solar Energy has assessed India's **solar potential to be about 750 GW** assuming 3% of the waste land area to be covered by Solar PV modules.

Gujarat and Rajasthan have the highest solar energy potential.



Source: Ministry of New and Renewable Energy (MNRE)

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Targets

In 2014, the Government had set an ambitious target of 175 GW of installed capacity of renewable energy. The target for **Solar Energy was set to be 100 GW by 2022**.

At COP26 in Glasgow (2021) India updated its Nationally Determined Contributions (NDCs). India set a target of 500 GW of non-fossil electricity capacity and half of energy from renewables. Of this, **~300 GW is expected to be contributed by Solar Energy**.

A 25-year vision document by the Government has targeted 85% of the power generation from renewable and green sources of energy. This enables India to be one of the key markets for solar energy and also a huge customer base for solar applications.

Bloomberg New Energy Finance (BNEF) estimates in its NEO 2018 report, that India will generate 75% of its electricity from renewable energy sources by 2050.

Status

India's current installed capacity stands at ~408 GW, of which renewable energy (Wind, Solar and other renewable energy) is ~118GW. This is ~67% of the 175 GW target set in 2014. In terms of Solar Energy, **the installed capacity is ~60 GW which is ~60% of the 100 GW target (2014)**. This has been a remarkable growth from just 2.6 GW of solar energy capacity in 2014.

INDIA WILL MISS THE 175 GW RENEWABLE ENERGY TARGET BY 2022

Over the years, while the overall solar industry has seen strong growth, the rooftop solar segment is the main reason behind missed targets

RENEWABLE ENERGY INSTALLED CAPACITY TARGETS VS ACHIEVEMENT (IN GW)



Source: The Print

The top States in terms of **installed solar energy capacity** (March 2021) include: **Karnataka** (7.35 GW), **Rajasthan** (5.73 GW), **Tamil Nadu** (4.47 GW), **Gujarat** (4.43 GW) and **Andhra Pradesh** (4.2 GW).

What are the challenges in scaling up Solar Energy?

Higher per-unit Production Costs: Solar power costs have come down considerably but the costs of small solar power projects is higher than other sources. The Union Government is facilitating establishment of large solar parks.

Basic Challenges: Large Solar Parks face hurdles in acquiring large tracts of land. Other challenges include high transmission and distribution losses, grid integration etc. Grid integration is a challenge due to intermittent nature of solar energy and the problem of load balancing (e.g., high load during night but non-availability of solar power at night).

Environmental Issues: Establishment of large solar parks has led to conflict with the local communities and issues in bio-diversity protection e.g., in Rajasthan and Gujarat, some projects have been halted because the transmission lines encroach upon the habitat of the critically endangered Great Indian Bustard.

Slow pace of growth: Despite significant growth in the installed solar capacity, the contribution of solar energy to the country's power generation has not grown at the same pace. The capacity expansion of rooftop solar projects has particularly low (< 20% of target by October 2022).

Financial Constraints: Residential consumers and Small and Medium Enterprises (SMEs) who want to install solar rooftop projects face financial constraints as initial investments are generally high. A critical issue is an absence of innovative financing options offering higher sums at lower interest and longer durations.

Reliance on Imports for Solar Equipment: India at present lacks the capability to produce solar wafers or polysilicon. During the fiscal year 2021-22, India imported solar cells and modules worth about US\$ 76.62 billion from China alone. This accounted for 78.6% of India's total imports (2021-22).

Waste Management: India's solar waste is estimated to grow to 1.8 million tonnes by 2050. However, India's e-waste rules do not mandate solar cell manufacturers to recycle or dispose of waste from this sector.

WTO Constraints: India's Domestic Content Requirement (DCR) clause has faced legal challenges at the World Trade Organisation (WTO). DCR mandates the use of both solar cells and modules manufactured domestically as per specifications and testing requirements fixed by the Ministry of New and Renewable Energy (MNRE).

What steps have been taken to enhance Solar Energy generation in India?

The MNRE launched the **Jawaharlal Nehru National Solar Mission** in 2010 to achieve 20 GW of grid connected solar power by 2022 in three phases through several steps including **Solar Park Scheme**, Central Public Sector Undertakings (CPSUs) scheme for grid connected solar PV power projects, and Viability Gap Funding (VGF). The target was revised to 100 GW in 2014-15.

The Government has also launched the [Pradhan Mantri Kisan Urja Suraksha Utthan Mahabhiyan Yojana](#) (PM-KUSUM) for grid connected agricultural solar pumps.

[Suryamitra Skill Development Programme](#) by the National Institute of Solar Energy (NISE) focuses on Solar Energy project's installation, operation & maintenance.

Atal Jyoti Yojana has been launched to provide solar street lighting systems for public use.

Under the **Solar Transfiguration of India (SRISTI) Scheme**, **financial incentives** are provided to the beneficiary for installing **solar power plant rooftop projects**.

Green Energy Corridor Scheme: It is related to laying of new transmission lines and creating new sub-station capacity for evacuation (from region of production to region of consumption) of renewable power.

In 2014, the Government announced the '**Solar Parks and Ultra-Mega Solar Power Projects**' policy to facilitate the creation of large solar parks.

The Government has also provided **financial incentives** for expansion of solar energy. These include: **(a)** The Government has provided a 10-year **tax exemption** for solar energy projects; **(b)** **Waiver of Inter-State Transmission System (ISTS) charges** for inter-state sale of solar and wind power for projects to be commissioned by 30th June 2025; **(c)** The Ministry of New and Renewable Energy provides **30% subsidy** to most solar powered items such as solar lamps and solar heating systems. It has further extended its subsidy scheme to solar-powered cold storages; **(d)** The Government has allowed 100% Foreign Direct Investment (FDI) under the automatic route; **(e)** Government has issued orders that power shall be dispatched against Letter of Credit (LC) or advance payment to **ensure timely payment by distribution licensees to renewable energy generators**; **(f)** Government has also launched Green funds like the National Clean Energy and Environmental Fund, Green Masala Bond etc.

The Government has also undertaken initiatives for **international collaboration**. India is the founding member of the **International Solar Alliance** (ISA) which is headquartered in India. India has proposed the idea of "**One Sun, One World, One Grid**" as a means of tapping into the copious solar electricity available on a worldwide scale.

What should be done going ahead?

Manufacturing of Solar Equipment: Manufacturing of solar equipment is dominated by a handful number of countries. In order to become a world leader in solar power, India must develop the entire manufacturing value chain ecosystem to become competitive and achieve sustainable growth in the long run.

Last mile connectivity: The Government should also focus on last mile connectivity in remote areas where developing transmission infrastructure is a challenge. This can be achieved through small solar installations or solar community grids by using domestically manufactured products with small power inverters or batteries in every home. It may be helpful to ensure power for all.

Investment in New Technology: The Government should invest prudently in new and emerging solar technologies through strong financial measures that include green bonds, clean energy funds and institutional loans.

Promote R&D: There is a need to promote R&D particularly in **renewable energy storage technology** and tackle bureaucratic hurdles in implementation of such efforts.

India must also take proactive steps towards formulation of an **efficient Solar PV Waste Management and Manufacturing Standards Policy** for sustainable waste management.

Technology Diplomacy: The Government should also leverage on the Ministry of External Affairs's **New and Emerging Strategic Technologies** (NEST) Division to engage in technology diplomacy and negotiate technology governance to favour India.

Conclusion

Although the Solar Energy target set for 2022 will be missed, the Union and State Governments have done well in facilitating the capacity expansion of solar energy. The Governments should

continue to undertake policy reforms and provide financial and other incentives to the industry, so that India can enhance its climate action and fasten the pace towards Net Zero.

Syllabus: GS III, Energy; Conservation, Environmental Pollution and Degradation.

Source: [The Hindu](#), [The Hindu](#), [MNRE](#), [Ministry of Power](#)

Governance of the Arctic – Explained, pointwise

Introduction

The launch and flag raising ceremony of two nuclear-powered icebreakers was held in St. Petersburg, Russia recently. At the ceremony, the Russian President said that the icebreakers were of strategic importance and would help strengthen Russia's status as a "Great Arctic Power". The melting of the Arctic Ice has increased global attention on potential commercial opportunities, research, and peace and stability in the region. The lack of proper framework for governance of Arctic has raised concerns that the gap may open a confrontational theatre. Moreover, unchecked exploitation of the resources of Arctic and the resulting consequences may have a runaway effect on global climate. This raises the need for an international cooperative framework for the governance of the Arctic.

What is the importance of Arctic Region for the World and India?

Environment, Climate Change and Scientific Research

Arctic is crucial for Global climate. Arctic ice acts as a big reflector of sunlight and **help maintain radiation balance and moderating the temperature**. Any change in the Arctic will have deep implications for the global climate. From 1971 till 2019, the Arctic snow cover and the extent of Arctic sea ice have shrunk by 21% and 43% respectively, and all regions of the Arctic experienced net loss of land ice. It will result in **global sea-level rise**, which is already getting evident.

Scientists believe that Arctic ice cover has **an impact on monsoon rainfall** as well, although the relationship has not been established with full certainty.

The Arctic and the Himalayas, though geographically distant, are interconnected and share similar concerns. The Arctic meltdown is helping the scientific community to better understand the glacial melt in the Himalayas. Himalayas have often been referred to as the 'third pole' and have the largest freshwater reserves after the North and South poles. They are also the source of main rivers of India, including the Ganga and Brahmaputra, the basins of which support a population of about 600 million and 177 million respectively and generate over 40% of India's GDP. The study of Arctic is therefore critical to Indian scientists.



AGREEMENT ON ENHANCING INTERNATIONAL ARCTIC SCIENTIFIC COOPERATION
NON-BINDING ILLUSTRATIVE MAP

This non-binding illustrative map shows the approximate extent of the Identified Geographic Areas described in Annex 1 of the Agreement on Enhancing International Arctic Scientific Cooperation. It is intended for illustrative purposes only and does not form part of the Agreement.

- Approximate Extent of Identified Geographic Areas
- 62°N
- - - Arctic Circle
- Additional areas covered voluntarily by Canada

Continental shelf areas are not depicted.
 U.S. Department of State, OES/OPA, April 12, 2019

Source: US Department of State

Economic and Human Resources

Mineral Resources and Hydrocarbons: Arctic region has rich deposits of coal, gypsum and diamonds and also substantial reserves of zinc, lead, placer gold and quartz. **Greenland** possesses about a quarter of world's **rare earth reserves**. A US Geological Survey (USGS) appraisal of the Arctic estimated that the region "may constitute the geographically largest unexplored prospective area for petroleum remaining on Earth" amounting to **30% of the world's undiscovered natural gas** and **13% of the world's undiscovered oil**. With the increasing ice-melt, these resources are becoming more accessible and feasible for extraction. The resources have implications for India's energy security as well.

Geopolitical and Strategic

The opening of the **shipping routes** and possibilities of increased resource extraction has led to scramble for **establishing position of influence** among Russia, China, the US (and the NATO) among others. In 2018, Russia and NATO conducted Exercise Vostok and Trident Juncture respectively, their largest since the Cold War.

Apart from the strategic contestation, there are **unresolved boundaries** between the Arctic States e.g., the US has continental shelf overlap with Canada and Russia, while Russia and Canada themselves have differing continental shelf claims.

What is the current framework for Governance of the Arctic?

Unlike Antarctica, that has the **Antarctic Treaty System**, there is a lack of comprehensive overarching framework for the governance of the Arctic. There is no single governing body for the Arctic. However, there are several organizations that loosely cooperate.

The most successful has been the **Arctic Council**, a forum of the 8 Arctic nations; Canada, Denmark, Finland, Iceland, Norway, Sweden, the Russian Federation, and the US. It was established by the **Ottawa Declaration in 1996**, and is the preeminent intergovernmental forum for addressing issues related to the Arctic Region. The Arctic Council is **not a treaty-based international organization** but rather an international forum that **operates on the basis of consensus**. It has recently signed three legally-binding agreements among Arctic States. The Arctic Council primarily deals with environmental protection and sustainable development.

Arctic Council: Members, Permanent Participants and Observers

The Arctic Council consists of the eight Arctic States. Indigenous peoples' organizations have been granted permanent participants status in the Arctic Council. The permanent participants have full consultation rights in connection with the Council's negotiations and decisions. Observer status in the Arctic Council is open to non-Arctic states, inter-governmental and inter-parliamentary organizations and non-governmental organizations.

■ Member states □ Observer countries



Observer organizations

Intergovernmental and inter-parliamentary organizations observers:

- International Council for the Exploration of the Sea (ICES)
- International Federation of Red Cross & Red Crescent Societies (IFRC)
- International Maritime Organization (IMO)
- International Union for the Conservation of Nature (IUCN)
- Nordic Council of Ministers (NCM)
- Nordic Environment Finance Corporation (NEFCO)
- North Atlantic Marine Mammal Commission (NAMMCO)
- OSPAR Commission
- Standing Committee of the Parliamentarians of the Arctic Region (SCPAR)
- United Nations Development Programme (UNDP)
- United Nations Environment Programme (UNEP)
- World Meteorological Organization (WMO)
- West Nordic Council (WNC)

Non-governmental organizations observers:

- Advisory Committee on Protection of the Sea (ACOPS)
- Arctic Institute of North America (AINA)
- Association of World Reindeer Herders (AWRH)
- Circumpolar Conservation Union (CCU)
- International Arctic Science Committee (IASC)
- International Arctic Social Sciences Association (IASSA)
- International Union for Circumpolar Health (IUCH)
- International Work Group for Indigenous Affairs (IWGIA)
- Northern Forum (NF)
- Oceana
- University of the Arctic (UArctic)
- World Wide Fund for Nature, Arctic Programme (WWF)

Permanent participants



Aleut International Association (AIA)



Gwich'in Council International (GCI)



Arctic Athabaskan Council (AAC)



Inuit Circumpolar Council (ICC)



Saami Council (SC)



Russian Association of Indigenous Peoples of the North (RAIPON)

Source: <http://www.arctic-council.org>. Graphic: Kelli Berger, Infarm.us

Source: WWF

Other institutions and organizations associated with the Arctic include:

Barents Euro-Arctic Council (BEAC): It is a forum for intergovernmental cooperation on issues concerning the **Barents Region** and its sustainable development. The members of BEAC are **Denmark, Finland, Iceland, Norway, Russia, Sweden** and the **European Commission**, with Germany and 8 other countries as Observers.



Nordic Council (NC): It is the official body for formal inter-parliamentary cooperation among the Nordic countries as well as the autonomous areas of the Faroe Islands, Greenland, and the Åland islands.

Northern Forum (NF): It is an international organization composed of sub-national or regional governments from nine northern countries. The NF is a regional voice on the current Arctic agenda and an **Observer to the Arctic Council**.

Northern Dimensions (ND): It is the joint policy of 4 partners: the **European Union (EU)**, **Russian Federation**, **Norway** and **Iceland**, with EU member states also participating in their national capacities. The ND aims at supporting stability, well-being and sustainable development in the region and focuses on environment, transport and logistics.

Standing Committee of Parliamentarians of the Arctic Region (SCPAR): Standing body of the biennial Conference of Parliamentarians of the Arctic Region represents the 8 Arctic countries and the European Parliament.

International Treaties Relevant to the Arctic

- The **Stockholm Convention on Persistent Organic Pollutants** and the **Minamata Convention on Mercury** deal with pollutants that reach the Arctic through atmospheric, oceanic, and terrestrial pathways and adversely affect the Arctic.
- The **UN Framework Convention on Climate Change** (UNFCCC) is the primary global mechanism for dealing with causes and effects of anthropogenic climate change.
- The threat to Arctic biodiversity is covered by the **Convention on Biological Diversity** (CBD).
- **Shipping in Arctic waters** is regulated by the **International Maritime Organization** and provisions of its **Polar Code**. Polar Code was adopted in 2014 and entered into force in 2017.
- The general law of the sea, both through the **UNCLOS** and customary international law, applies to the Arctic Ocean.

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What are the challenges in Governance of the Arctic?

Not a Global Common: Arctic does not conceptually qualify as a **global commons** (much of the region's ocean falls within the recognized national jurisdictions of the Arctic coastal states). There are complex **sovereignty issues**, as the region encompasses areas and resources within and outside national jurisdictions. Therefore, it is very difficult to formulate a unified Arctic treaty system, similar to the one that exists for the Antarctica.

Militarization: The North Atlantic Treaty Organisation (NATO) has been conducting regular exercises in the region while partner countries are investing in upgrading military capabilities. There has been a rapid increase in military outposts along Russia's northern coast.

Emergence of Northern Sea Route: Northern Sea Route is emerging as a new strategic international energy corridor. Russia has demanded for **restrictive measures along the shipping route**, including that all foreign warships provide advance notice and get Russian approval prior to transit. Such measures limit international access to this sea lane and **challenge freedom-of-navigation rules** defined by the UN Convention on the Law of the Sea.



At the same time, China, which calls itself to be a **near-Arctic State**, has also announced ambitious plans for a '**Polar Silk Route**' to connect to Europe as well building massive icebreakers.

Exclusive Economic Zone (EEZ) Dispute: The global warming and predicted melting of Arctic sea ice has stimulated the discourse on extended EEZ towards the north pole in a hope of possible natural resource discoveries.

Fragmentation of Governance Mechanisms: The existence of multiple organizations makes it difficult to coordinate responses to and effectively manage national, subregional, regional, and global Arctic challenges e.g., even though UNCLOS applies to the Arctic, it does not contain provisions that determine the policies and procedures regarding Arctic scientific research and resource extraction.

What has been the India's approach towards the Arctic?

Arctic Policy: India unveiled its **Arctic Policy** ('India and the Arctic: Building a Partnership for Sustainable Development') in March 2022. The Policy has laid down **6 Pillars**: **(a)** Strengthening India's scientific research and cooperation; **(b)** Climate and environmental protection; **(c)** Economic and human development; **(d)** Transportation and connectivity; **(e)** Governance and

International Cooperation; **(f)** National capacity building in the Arctic Region. The Arctic Policy has been synchronised and adapted to Goal 11 of Sustainable Development Goals.

Global Presence: **(a)** India is also one of the 13 Observers in the Arctic Council; **(b)** India got elected to Council of the **International Arctic Science Committee (IASC)** in 2012, followed by its induction to the Council with observer status in 2013; **(c)** India is also signatory to the Svalbard Treaty that recognises the sovereignty of Norway over the Arctic archipelago of Svalbard.

Scientific Research: India has taken several initiatives for scientific research in the Arctic: **(a)** India launched its first scientific expedition to the Arctic in 2007 and set up a research station '**Himadri**'(2008) in the international Arctic research base at Ny-Ålesund in Spitsbergen, **Svalbard, Norway**; **(b)** In 2014, India deployed **IndArc** which is a **multi-sensory observatory** in Kongsfjorden, **Svalbard, Norway**; **(c)** In 2016, India set up **Gruvebadet Atmospheric Laboratory** at Ny Alesund, **Svalbard, Norway**; **(d)** Indian researchers are monitoring arctic glaciers for their mass balance and comparing them with glaciers in the Himalayan region; **(e)** India has also been actively involved in studies related to the Arctic oceanography, atmosphere, pollution and micro-biology; **(f)** Over 25 Institutes and Universities are currently involved in Arctic research in India. The **National Centre for Polar and Ocean Research (NCPOR)** in Goa (under the Ministry of Earth Sciences), is the nodal institution for India's Polar research programme; **(g)** India has successfully conducted thirteen expeditions to the Arctic so far.

What should be done going ahead?

First, There is a need for a **consensus-based decision-making process**. There is need to strengthen the existing **multi-tier Arctic governance structure** by considering the issue at global level, at regional level, and at the sub regional level. **Sustainability should be the guiding principle for cooperation**, while balancing protection and resource utilization.

Second, there is a need to establish a **comprehensive framework** governing all aspects of the Arctic region. However, a US-based think tank recommends that rather than negotiating an all encompassing treaty in one-go, the **existing institutional arrangements can be broadened to gradually cover all relevant issues**. This approach better conforms to current geopolitical realities in the Arctic and, to some extent, would avoid the potential race for dominance among existing governance mechanisms.

Third, Governance of the Arctic should be based on respect for the sovereign rights and jurisdictions of Arctic countries while taking into account the concerns of non-Arctic states and non-state actors in accordance with relevant international treaties and international law.

Fourth, All relevant parties should be encouraged to contribute capital, technology, and human resources toward fostering new models of cooperation in setting the agenda and building institutions for Arctic governance.

Fifth, Scientific research should be prioritized. Interested parties should promote joint research and data sharing. Besides conducting research on climate change trends and ecological assessments, innovation in both the natural and social sciences can be promoted by strengthening research on Arctic politics, economics, law, society, history, culture, and the management of human activities.

Conclusion

The rapid effects of climate change as well as technological innovation intensify the need for increased interaction and coordination among existing frameworks affecting the Arctic. The developments in the Arctic will have direct and indirect impacts on India's strategic interests. As India is poised to play a greater role in global geopolitics, India should push for a consensus

based approach guided by principles of sustainability to formulate a comprehensive framework for the governance of the Arctic.

Syllabus: GS II, Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests; Effect of policies and politics of developed and developing countries on India's interests; Important International institutions, agencies and fora.

Source: [The Hindu](#), [NewsOnAir](#), [PIB](#), [German Arctic Office](#), [Council on Foreign Relations](#), [IDSA](#)

The Issue of Net Neutrality – Explained, pointwise

Introduction

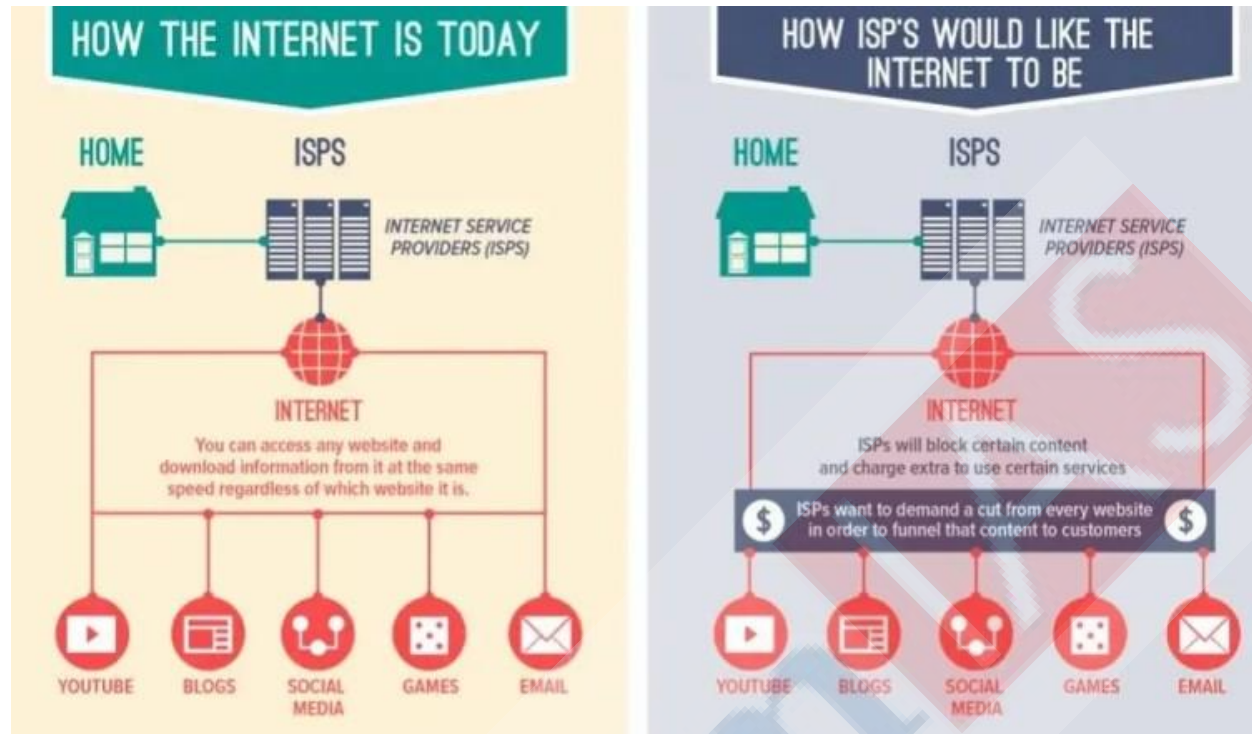
Digital Technologies have become an inseparable part of modern lives, so much so, that many essential services are now being delivered digitally. The internet has become a necessity for most day-to-day affairs. This digital ecosystem has been enabled by various stakeholders and gateways like telecom service providers, personal computers and smartphones, operating systems, App developers etc. However, when these gateways restrict access to internet/networks, they become gatekeepers and threaten net neutrality and openness of the internet. The Government has undertaken several steps to ensure Net Neutrality in India. As the digital technologies evolve further, the regulators must adopt a dynamic approach to keep the norms and regulations inline with the latest developments to ensure equitable access to internet to all.

What is the meaning of Net Neutrality?

There is no standard definition of Net Neutrality. Net Neutrality is globally understood as a network principle of **equal treatment of data packets moving across the IP networks**. The concept has been used more broadly to describe the **open and non-discriminatory access to the Internet**. Attempts have been made by many to define the contours of Net Neutrality.

The **Body of European Regulators for Electronic Communications** (BEREC) defines Net Neutrality as the principle that **all electronic communication passing through a network is treated equally**. Equal treatment means that it is treated independent of content, application, service, device, sender's address, and receiver's address. Neutrality towards the sender and receiver address implies that the treatment of data packets is independent of both users – sender and the receiver – at the edges of the network.

The term 'Net Neutrality' was coined by Professor Tim Wu. He had observed that, "*Network neutrality is best defined as a network design principle. The idea is that a maximally useful public information network aspires to treat all content, sites and platforms equally. This allows the network to carry every form of information and support every kind of application*".



Source: Wikimedia Commons

What are the benefits of Net Neutrality?

Protect Small Entrepreneurs: Net neutrality protects small entrepreneurs from unfair competition with big internet tech giants. Net Neutrality is extremely important for **small business owners and start-ups** who can launch their businesses online, advertise the products and sell them openly, without any discrimination.

Free and Democratized Internet: It will ensure open and free Internet accessible to all. It has enabled myriad of online services including e-commerce.

Equality of Consumers: It is a step promotes equality of consumer and accentuate free and open internet access.

Reduced Tariffs: Net neutrality principles have ensured that tariffs remain low and internet remains affordable in India.

Increasing Internet Penetration: Affordable tariffs have enabled internet penetration including in rural areas. This has also facilitated access to public services as well.

Employment Generation: Net neutrality has proven to be crucial in fostering digital economy. Digital economy has given rise to tremendous opportunities, both big-tech companies and numerous tech-based start-ups. It has also supported gig economy which has supported livelihood opportunities in the informal sector.

How has Net Neutrality evolved and being implemented in India?

The idea of Net Neutrality started flowing in December 2014 in India, when telecom operator Bharti Airtel decided to charge extra for making Internet calls. This led to widespread protests, which forced Airtel to roll-back its plan.

In June 2015, Department of Telecommunication (DoT) constituted a six-member committee on Net Neutrality to recommend overall policy Regulations and Technical responses.

TRAI released the **Prohibition of Discriminatory Tariffs for Data Services Regulations** in 2016.

In November 2017, TRAI recommended that the **license agreement entered into between the Government and ISPs should be amended** to clarify that **Internet Service Providers (ISPs) are not permitted to discriminate between different types of content on the Internet**, including based on factors such as the sender or receiver of the data packets, the protocols being deployed or the equipment being used.

In July 2018, the DoT released the **Regulatory framework on Net Neutrality**. The said Regulations provide for principle of non-discriminatory treatment. Through this decision, Internet service providers (ISPs) were **disallowed from indulging in any kind of discriminatory treatment of content**, including practices like blocking specific websites or speeding/ slowing down of content.

The Union Cabinet approved the final **National Digital Communications Policy, 2018**. The Policy aimed at providing 'broadband to all', and replaced the National Telecom Policy, 2012. It aims to: **(a)** Establish a strong, flexible and robust data protection regime; **(b)** Introduce appropriate disclosure and transparency requirements to **ensure compliance with Net Neutrality Principles**; **(c)** Address security issues of digital communications and develop security standards for equipment and devices; **(d)** Formulate a policy on encryption and data retention; **(e)** Develop a comprehensive plan for network preparedness, disaster response relief, restoration and reconstruction.

Even though net neutrality is advocated for and supported by TRAI's guidelines for the **Unified Access Service License**, it is not mandated. In India, there are no laws that protect net neutrality. In addition, the Information Technology Act of 2000 does not prohibit private companies from throttling their respective services.

What are the concerns with Net Neutrality?

Less Network Innovation: Network Operators have to invest in maintaining and expanding the internet's infrastructure to support new services while most benefits are reaped by Internet content companies like Google, Facebook etc. Critics say that lack of investment in infrastructure will eventually increase the costs to customers.

No free Internet access: Opponents of net neutrality contend that more vital services could be made accessible for free if the companies that draw excess bandwidth (e.g., the video streaming websites/OTTs) are charged extra for their heavy use.

Access to Objectionable Content: Offensive, dangerous, illicit and illegal content is accessible to everyone through net neutrality, and is difficult to remove. In the absence of net neutrality, Internet service providers can filter dangerous content.

Net Neutrality not necessary for Tech Evolution: Critics of Net Neutrality argue that the internet developed amazingly well even in the absence of Net Neutrality e.g., most large internet companies including Google (1998), Facebook (2004), YouTube (2005) and Twitter (2006) were started and grew to success without net neutrality regulations.

Burdensome Regulations: Net neutrality created burdensome and overreaching regulations to govern the internet e.g., Net Neutrality rules mandate extra reporting standards for ISPs to ensure compliance which adds to costs.

What should be done going ahead?

First, India's blocking rules, contain a legal obligation to maintain the confidentiality of blocking requests and any action taken under them. This apparent inconsistency between the two sets of rules can allow ISPs to indulge in unjustified interference with Internet traffic under the shield of confidentiality offered by the website blocking rules. So, there is need to bring transparency in this rules.

Read More: [Need of reforming the blocking powers of Government](#)

Second, It is important for authorities in India to create appropriate frameworks for the monitoring and enforcement of the norms. The Government must specify transparency obligations to be followed by ISPs in relation to their traffic management practices.

Third, The TRAI has recommended the **establishment of a regulatory body** to uphold Net Neutrality. This should be discussed with all stakeholders and taken forward. The body should be designed in a manner that shields it from any kind of industry capture, either by the telecom sector or large Internet-based businesses.

Conclusion

The Government has done a commendable job by formulating the Net Neutrality norms that have ensured that the content over internet remains accessible to all without any discrimination. The technology sector is evolving at a rapid pace and the Government and its agencies must remain alert to check any discriminatory practices especially by tech giants. The Competition Commission of India recently fined Google for its billing policy related to Google Playstore. This is reassuring, the same proactive should be continued to ensure that benefits of the digital economy are accessible to all.

Syllabus: GS II, Government policies and interventions for development in various sectors and issues arising out of their design and implementation; GS III, Awareness in the field of IT.

Source: [Indian Express](#), [Indian Express](#), [Department of Telecommunications](#)

COP15 of Convention on Biodiversity – Explained, pointwise**Introduction**

The 15th Conference of Parties (COP15) to the UN Convention on Biological Diversity (CBD) concluded recently in Montreal, Canada. The meeting was originally scheduled to be held in 2020 but was repeatedly postponed due to COVID-19 Pandemic. The first part of the COP15 was held in hybrid mode (part online, part in-person meetings) in Kunming, China in 2021. However, due to restrictions in China due to COVID-19 led to the shift of venue to Montreal. At the end of the Conference, the **Kunming-Montreal Global Biodiversity Framework** (GBF) was adopted.

What is the Convention on Biological Diversity (CBD)?

The Convention on Biological Diversity (CBD) was the outcome of the **1992 Rio Earth Summit (United Nations Conference on Environment and Development (UNCED))** along with the **UN Framework Convention on Climate Change (UNFCCC)** and the **Convention to Combat Desertification (CCD)**.

The [Convention on Biological Diversity](#) (CBD) came into force in December 1993. India became a party to the convention in February 1994. With 196 Parties, the CBD has near universal participation among countries.

The Convention **seeks to address all threats to biodiversity and ecosystem services**, including threats from climate change, through: **(a)** Scientific assessments; **(b)** Development of tools, incentives and processes; **(c)** Transfer of technologies and good practices; **(d)** Full and active involvement of relevant stakeholders including indigenous peoples and local communities, youth, women, NGOs, sub-national actors and the business community.

Objectives: Three main objectives of the Convention are: **(a) Conservation** of biological diversity; **(b) Sustainable use** of resources; **(c) Fair and equitable sharing of benefits** arising out of the use of these resources and associated traditional knowledge.

Protocols Under the Convention: There are two protocols under the Convention (CBD): **(a) The Cartagena Protocol on Biosafety** seeks to protect biodiversity from genetically modified organisms by ensuring their safe handling, transport and use; **(b) The Nagoya Protocol on Access and Benefit Sharing** deals with the commercial utilisation of biological and genetic resources.

Structure: The CBD's governing body is the **Conference of the Parties (COP)**. It includes all nations that have ratified the treaty and it **meets every two years** to review progress, set priorities and commit to work plans. The **Secretariat** of the Convention on Biological Diversity (SCBD) is based in **Montreal**, Canada. Its main function is to assist governments in the implementation of the CBD and its programmes of work, to organise meetings, draft documents, and coordinate with other international organizations and collect and spread information. The Executive Secretary is the head of the Secretariat.

What are the outcomes of COP15?

Global Biodiversity Framework (GBF): **(a)** It contains **4 goals** and **23 targets** that need to be **achieved by 2030**. This will replace the failed **2010 Aichi Biodiversity Targets**; **(b) 2050 Vision:** The vision of the framework is a world of **living in harmony with nature** where 'By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all'; **(c) 2030 Mission:** To take urgent action to halt and reverse biodiversity loss to put nature on a path to recovery for the benefit of people and planet by conserving and sustainably using biodiversity, and ensuring the fair and equitable sharing of benefits from the use of genetic resources, while providing the necessary means of implementation.

Subsidies: The COP15 agreed on reducing harmful subsidies, such as subsidies for fossil fuel production, agriculture, forestry and fisheries etc by at least US\$ 500 billion per year.

Pesticides and highly hazardous chemicals: The COP15 has reached a consensus on reducing the overall risk from pesticides and highly hazardous chemicals by at least half by 2030.

30×30 Target: The Conference agreed to a commitment to **protect at least 30% of the world's lands, oceans and coastal areas by 2030**. A related commitment is to ensure that **restoration activities** would be started on at least 30% of degraded land or marine ecosystems by 2030.

Financial Package: The GBF hopes to see at least US\$ 200 billion raised per year from all sources (domestic, international, public and private), towards **implementation of the national action plans**. In terms of international funding, developing countries should get at least US\$ 20 billion a year by 2025 and at least US\$ 30 billion by 2030 through contributions from developed countries. The **Global Environment Facility (GEF)** has been asked to establish in 2023, and until 2030, a Special Trust Fund to support the **implementation of the GBF**.

The delegates at COP15 have agreed to establish within the GBF a **multilateral fund for the equitable sharing of benefits** between providers and users of digital sequence information on genetic resources (DSI), to be finalised at COP16 in Türkiye in 2024.

Reducing Food Wastage: A commitment has been made to reduce global food wastage by half.

Reduction in Extinction: Another goal is to ensure a ten-fold reduction in extinction rate of species.

Paris moment for nature

The UN Biodiversity Summit has approved a landmark deal to protect nature and direct billions of dollars towards biodiversity conservation. Highlights of the deal

2030 limit

The Kunming-Montreal Global Biodiversity Framework contains 23 action-oriented targets, which have been divided in three broad categories:

- Reducing threats to biodiversity
- Meeting people's needs through sustainable use and benefit-sharing
- Tools and solutions for implementation and mainstreaming

KEY TARGETS

- Conserve area:** At least 30% of terrestrial, inland water, and coastal, marine areas, are conserved
- Restore ecosystems:** At least 30% of areas of degraded ecosystems are under restoration
- Reduce harmful subsidies:** Identify, and eliminate incentives harmful for biodiversity

Officials at the United Nations Biodiversity Conference (COP15) in Montreal. AFP

DIVERGENCES REMAIN: Division over how to fund efforts led to intense negotiations, with China, chair for COP15, disregarding objections from the delegation of the DRC

Source: Hindustan Times

What are the challenges to protecting Biodiversity?

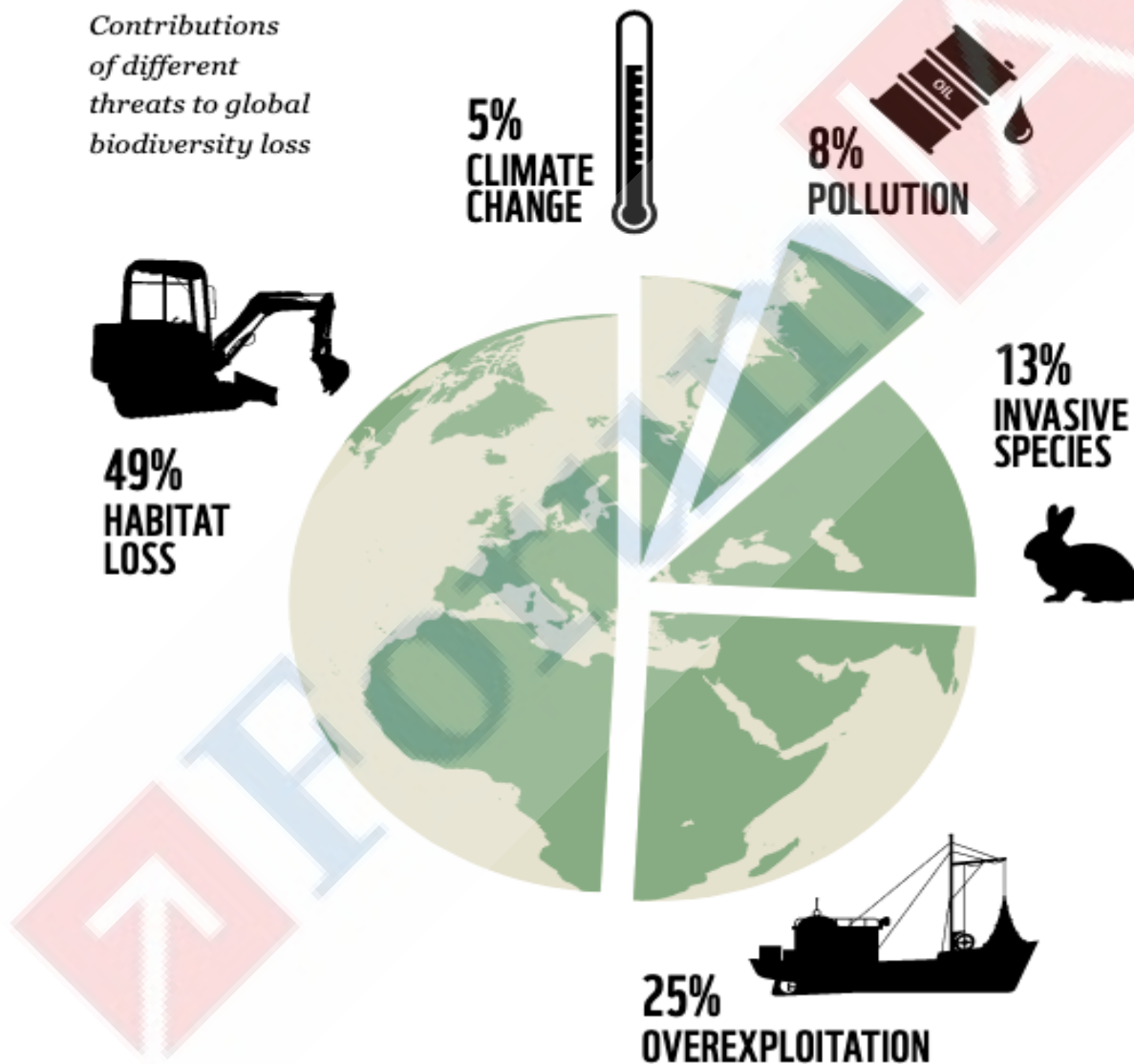
Population growth and increasing demand for biological resources: Rapid rise in population and the expanding demand from biological resources has led to over-exploitation of natural resources. Rapid deforestation especially in the Amazons (and other evergreen forest regions) is responsible for large-scale extinction of species.

Habitat Degradation: The major threats to biodiversity that result from human activity are habitat destruction, habitat fragmentation, habitat degradation, overexploitation of species for human use, introduction of exotic species, and increased spread of diseases. Most threatened species face at least two or more of these threats, speeding their way to extinction and hindering efforts to protect them.

Climate Change: Climate change is disturbing the fragile ecological balance leading to extinction of species e.g., a study has found that Australia's Great Barrier Reef has lost more than half of its corals since 1995 due to warmer seas driven by climate change.

Exotic Species: Introduction of exotic species (deliberate or inadvertent) leads to poses a threat to native species. According to the [CBD](#), Invasive alien species have contributed to nearly **40% of all animal extinctions since the 17th century** for which the cause is known.

Government Policies: Government policies, in pursuit of development and without adequate safeguards, have contributed to loss of biodiversity e.g., the major reasons for deforestation in Amazons is due to exploitative policies of the Brazilian Government.



Source: WWF

What are the major concern of new global biodiversity framework?

First, The World Wide Fund for Nature (WWF) warns that the agreement's goal of reversing biodiversity loss by 2030 could be undermined if **weak language in critical areas** such as the

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protection of intact ecosystems and tackling unsustainable production and consumption is not addressed at the national level.

Second, It lacks a **mandatory ratcheting mechanism** that undertakes **periodic review and upgradation** of targets. Ratchet mechanism is part of the Paris Agreement wherein NDCs (Nationally Determined Contributions) are reviewed and updated after 5 years.

Third, the Aichi Targets remain unfulfilled. In the absence of proper implementation mechanisms, the targets agreed under COP15 many end up the same way.

What should be done going ahead?

First, Protection and sustainable use of biodiversity requires the participation of all stakeholders and ministries responsible for such areas as agriculture, forestry, fisheries, energy, tourism, trade and finance.

Second, There is need to mainstream the conservation and sustainable use of biological resources across all sectors of the national economy, the society and the policy-making framework.

Third, Integrated management of natural resources, based on the **ecosystem approach**, is the most effective way to promote the conservation of biodiversity.

Fourth, It is essential that the all countries, especially developing countries, take necessary steps to establish good governance, including rule of law and improvement in the economic and social management capacity. This can check unregulated exploitation of biological resources.

Fifth, The **private sector must recognise that profit and protection go hand-in-hand**. The Food and Agriculture industry should shift towards sustainable production and natural means of pollination, pest control and fertilisation; the timber, chemicals, building and construction industries should account for impacts of their activities on nature in their business plans; and biotech and pharmaceutical industries should equitably share benefits fairly and equitably.

Sixth, International financial institutions and multilateral development banks should **align their portfolios with the conservation**, and sustainable use of biodiversity.

Conclusion

The outcomes of COP15 are promising and provide hope that the rapid loss of biodiversity can be reversed. Global Biodiversity Framework (GBF) is expected to act as the new guiding force for the conservation efforts in the coming decade. However, the focus now has to be on implementation and achievement of targets or else GBF will also end up like rest of the global agreements and protocols that promised a lot but delivered a little.

Syllabus: GS III, Conservation.

Source: [The Times of India](#), [Down to Earth](#), [Indian Express](#), [The Hindu](#)

Gene Therapy: Approaches, Benefits and Concerns – Explained, pointwise

Introduction

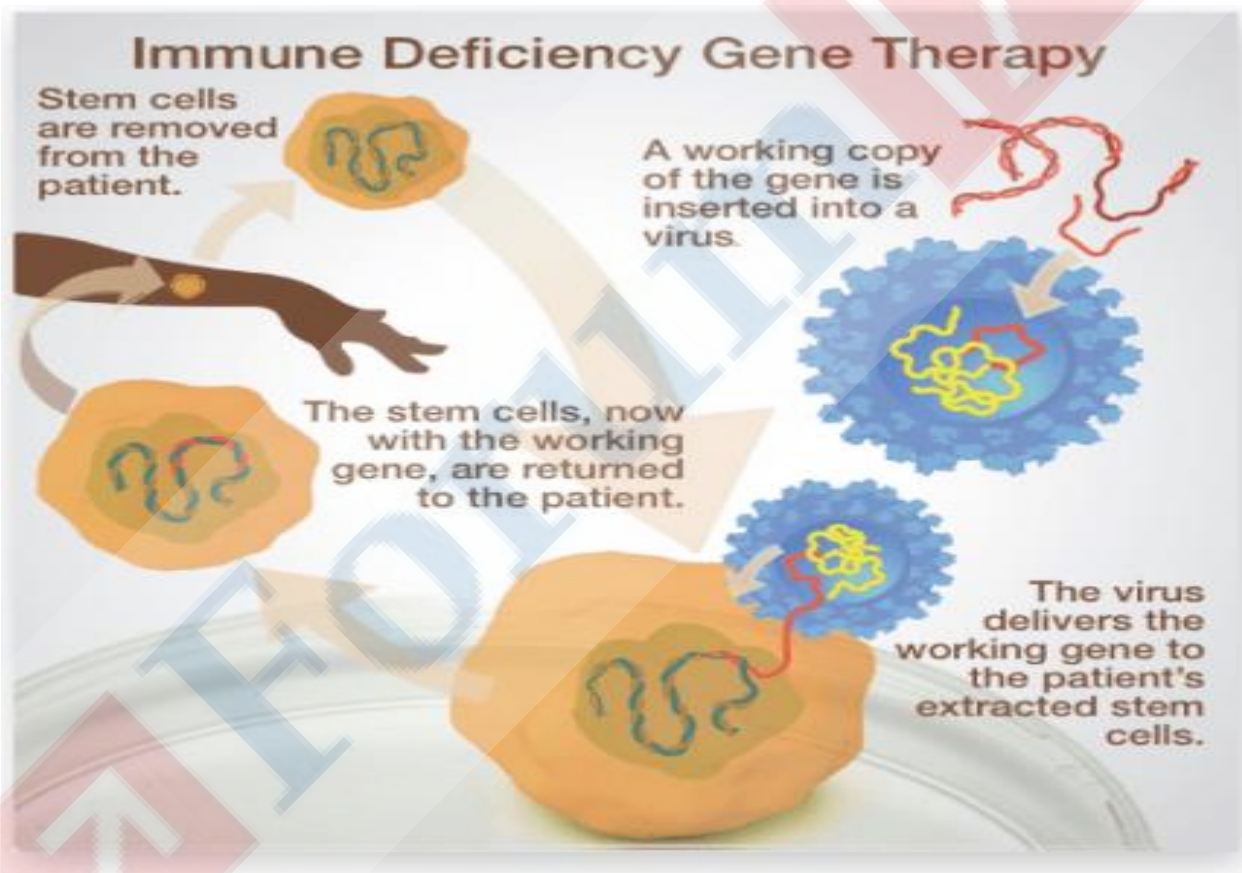
Scientists in the United Kingdom had been testing a technique of Gene Therapy on a girl suffering from a form of cancer (T-cell acute lymphoblastic leukaemia). The doctors had tried several standard treatments including chemotherapy and radiation but with limited success. The Scientists have reported some success in the treatment of the disease through Gene Therapy. Gene Therapy has the potential to revolutionize the curative care and treat diseases not treatable

by standard methods. However there are several concerns associated with Gene Therapy that must be addressed before widespread application.

What is Gene Therapy?

Gene therapy is the **introduction, removal or change in genetic material** (typically means DNA and RNA) **in the cells** of a patient **to treat an inherited or developed disease**. Gene therapy **replaces a faulty gene** or **adds a new gene** in an attempt to cure disease or improve human body's ability to fight disease.

Typically, genetic material, such as a working copy of a gene, is **transferred into the target cell**. It is difficult to insert a new gene into cells, so **a vector is used to insert the genes**. The vector is often a virus (other options are using liposomes, electroporation etc.), but the viral genes that could cause disease are removed. Once in the cell, the working copy of the gene will **help make functioning proteins** despite the presence of a faulty gene. The production of proteins helps in overcoming the defect/disease. Achieving the normal expression and function of proteins makes a big impact on the overall health of the individual.



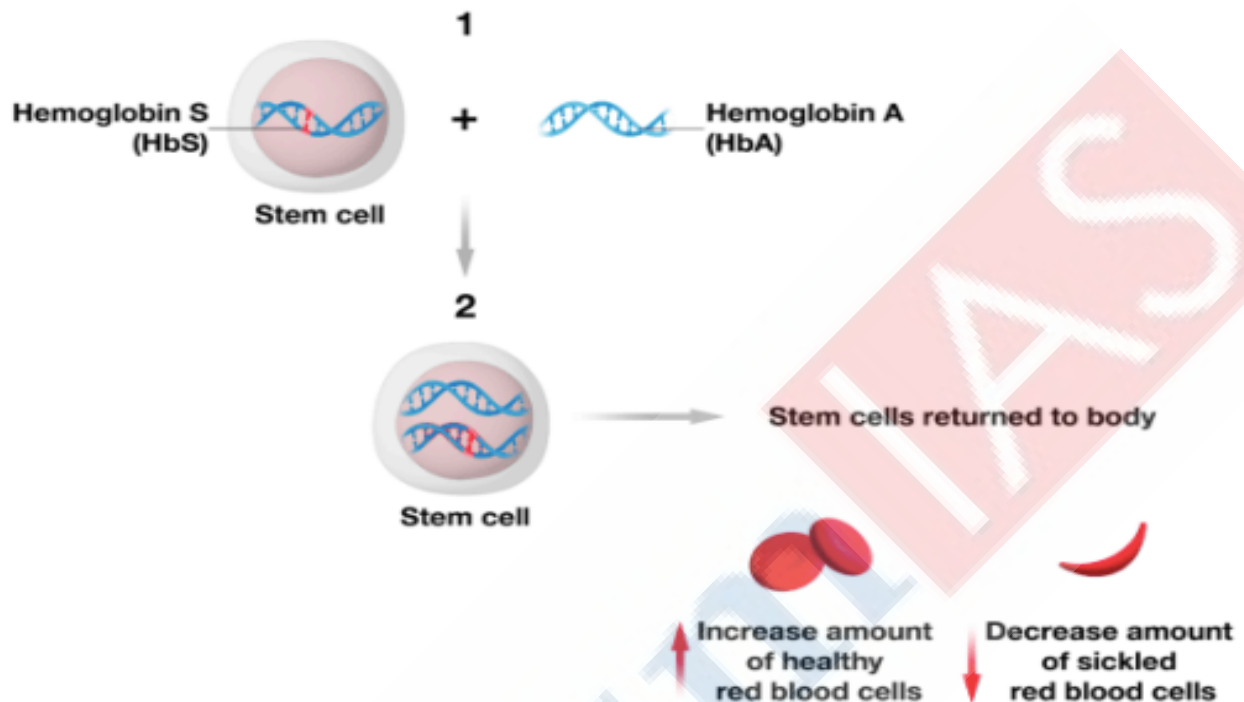
Source: University of Utah

Gene therapy holds promise for treating a wide range of diseases, such as cancer, cystic fibrosis, heart disease, diabetes, hemophilia and AIDS etc.

What are the various approaches to Gene Therapy?

Various approaches are available for Gene Therapy. For instance, for treatment of Sickle Cell disease, the approaches used are:

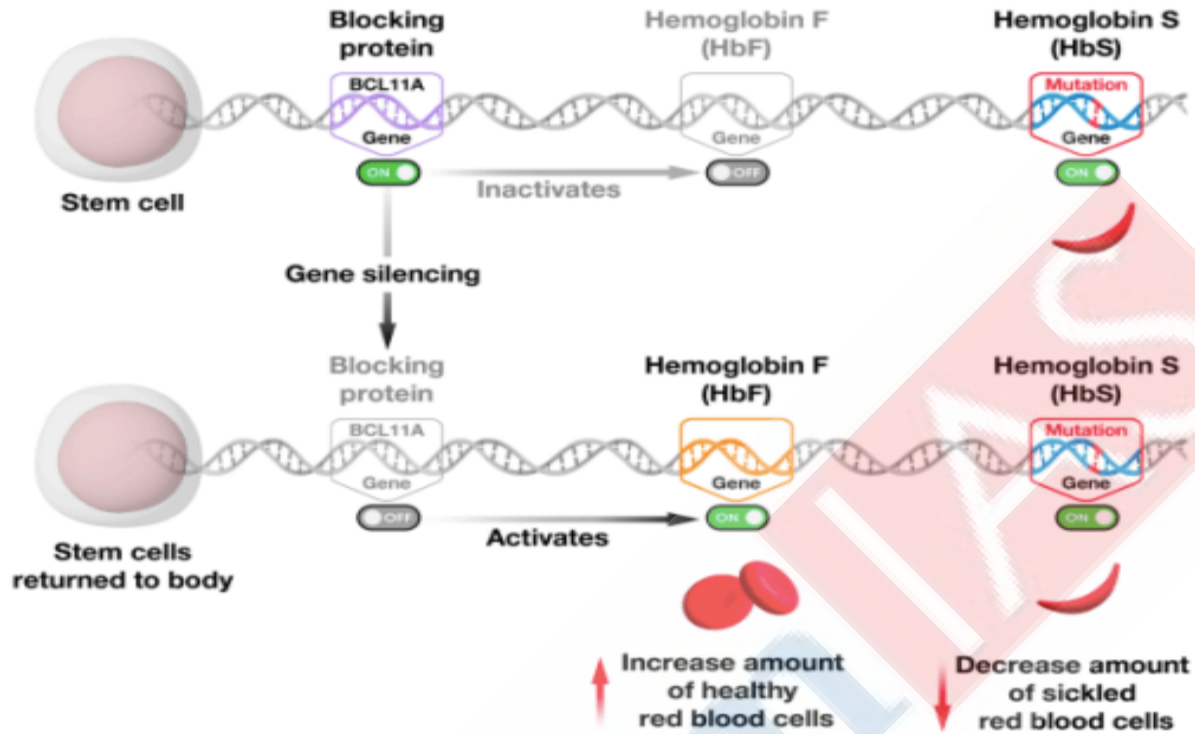
Gene Addition: The stem cells from the patient are collected and taken to a lab for modification. An extra copy of a haemoglobin A gene (missing in patient) is added to the stem cell, which allows the cells to produce haemoglobin A (non-sickling haemoglobin).



Gene Addition, Source: NHGRI.

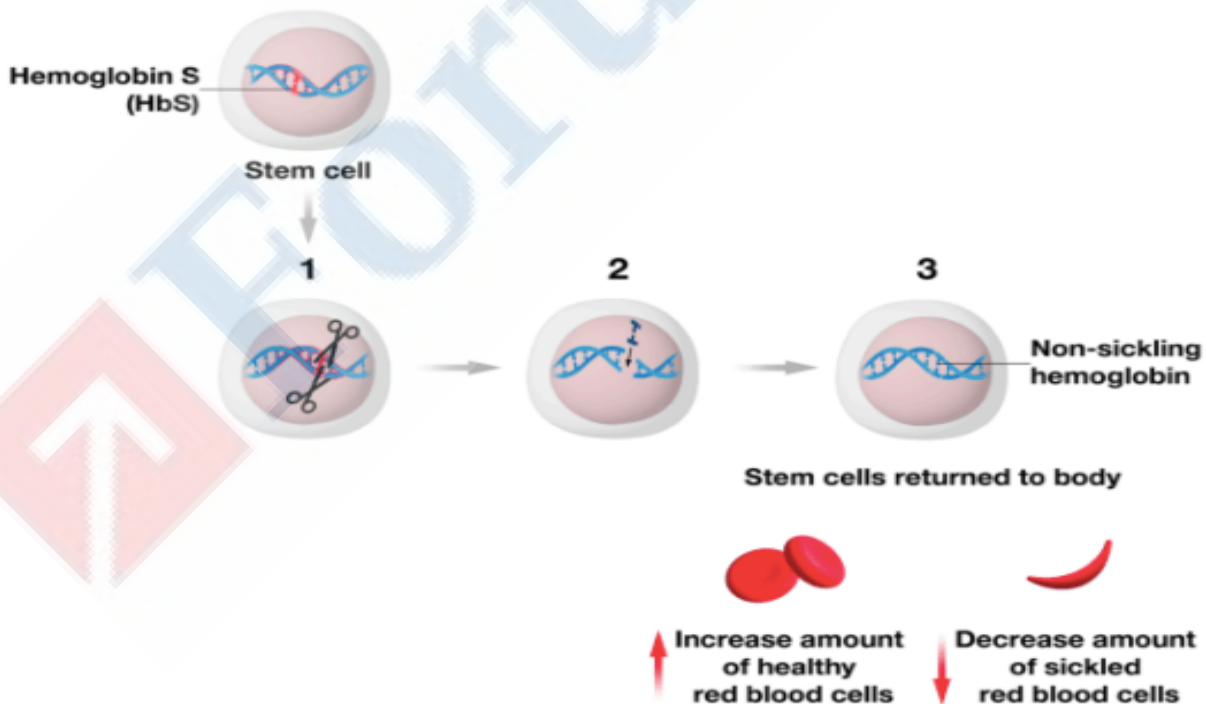
Gene Editing: The goal of gene editing is to remove, disrupt or **correct faulty elements of DNA** within the gene rather than replace the gene. Gene editing **uses systems that are highly precise** to make this change inside the cell. The cells can be from the patient or donor. There are two types of Gene Editing: **Gene Silencing** and **Gene Correction**.

Gene Silencing: In this method, the faulty segment of the gene (e.g., that inhibits the production of haemoglobin) is silenced. By silencing this gene, the correct gene (e.g., that makes haemoglobin) can be activated. Methods like CRISPR are used to silence genes.



Gene Silencing, Source: NHGRI.

Gene Correction: The variant in the gene that is faulty (e.g., that causes sickle cell disease) is corrected so that it **codes for correct function** (e.g., produce haemoglobin).



Gene Correction, Source: NHGRI.

Cell-based Gene Therapy: This type of treatment combines both Gene Therapy and Cell (Cellular) Therapy techniques. Cell therapy (CT) is **the transplantation of human cells to replace or repair damaged tissue and/or cells**. It introduces cells to the body that have a particular function to help treat a disease. **CAR T Cell Therapy** (or chimeric antigen receptor T cell therapy) is an example of cell-based gene therapy.

In cell-based gene therapy, the **cells have been genetically altered to give them the special function**. CAR T cell therapy introduces a gene to a person's T cells (a type of immune cell). This gene provides instructions for making a protein, called the chimeric antigen receptor (CAR), that attaches to cancer cells. The **modified immune cells can specifically attack cancer cells**.

RNA Therapy: It uses pieces of RNA to help treat a disorder. In many of these techniques, the pieces of RNA interact with a molecule called **messenger RNA** (mRNA). In cells, mRNA uses the information in genes to create a blueprint for making proteins. By interacting with mRNA, **these therapies influence how much protein is produced from a gene**, which can compensate for the effects of a genetic alteration. Examples of these RNA therapies include antisense oligonucleotide (ASO), **small interfering RNA** (siRNA), and **microRNA** (miRNA) therapies. An RNA therapy called RNA aptamer therapy introduces small pieces of RNA that attach directly to proteins to alter their function.

Epigenetic Therapy: It affects epigenetic changes in cells. Epigenetic changes are specific modifications (often called "tags") attached to DNA that control whether genes are turned on or off. Abnormal patterns of epigenetic modifications alter gene activity and, thus protein production. Epigenetic therapies are **used to correct epigenetic errors that underlie genetic disorders**.

What are the benefits of Gene Therapy?

Treatment of Rare Diseases: Gene and cell-based gene therapy can **help treat rare and debilitating diseases that have limited treatment options**. Often, these rare inherited diseases result in disability or premature death. Studies have shown that Gene and Cell-based Gene Therapies have slowed or completely stopped the progression of rare diseases.

Effectiveness: The advantage of gene therapy over traditional pharmacological approaches is that **therapeutic benefits of Gene Therapy remain effective for a long period of time** without the need of repeated interventions. A fundamental aspect of Gene Therapies is that they aim to treat the cause of the disease, not just the symptoms.

Accuracy: It's difficult to design specific medicines that influence specific proteins. However, with gene therapy it may be possible to design therapeutic agents that can influence any of body's roughly 20,000 genes.

What are the challenges associated with Gene Therapy?

Complexity of Gene Delivery and Activation: Success with gene therapy requires delivering a healthy gene to a very large number of cells (multiple millions) in a tissue. Moreover the delivery has to be to the right cells, in the right tissue. The **gene must be turned on once** it reaches its target in order **to produce the protein it encodes**. Also, once activated, it must stay that way; cells tend to turn off genes that are too active or display other aberrant behaviour.

It is also **crucial to prevent the gene from being introduced into the wrong cells**. It would be inefficient and **potentially harmful** to deliver a gene to the wrong tissue.

Immune Response: Human body's immune systems are designed to fight off 'intruders' such as bacteria and viruses or any foreign material. Gene-delivery vectors must be able to avoid the

body's natural surveillance system. An **unwelcome immune response to introduced genes (through vectors) could cause serious illness** or even death.

Vulnerability to Disrupt Other Cells: A good gene therapy is long-lasting. Ideally, an introduced gene will continue working for the rest of the patient's life. For this to happen, the introduced gene **must become a permanent part of the target cell's genome**, usually by **integrating, or 'stitching' itself**, into the cell's own DNA. But if the gene stitches itself into an inappropriate location, it will disrupt another genes giving rise to newer problems.

Commercial Viability: Many genetic disorders that can potentially be treated with gene therapy are extremely rare, some affecting just one person out of a million. Gene therapy could be life-saving for these patients, but the high cost of developing a treatment makes it an unappealing prospect for pharmaceutical companies.

Read More: [National Policy for Rare Diseases, 2021: Provisions and Concerns – Explained, pointwise](#)

What are the ethical concerns related to Gene Therapy?

Most ethical discussions related to genome editing center around human germline because changes made in the germline would be passed down to future generations, thus having long term implications.

Safety: Due to the possibility of off-target effects (edits in the wrong place) and mosaicism (when some cells carry the edit but others do not), **safety and unintended consequences are of primary concern.**

Informed Consent: Some people worry that it is impossible to obtain informed consent for germline therapy because **the patients affected by the edits are the embryo and future generations.** Researchers and bioethicists also worry about the possibility of obtaining truly informed consent from prospective parents **as long as the risks of germline therapy are unknown.**

Justice and Equity: As with many new technologies, there is concern that genome editing will only be **accessible to the wealthy** and will **increase existing disparities in access to health care** and other interventions. Some worry that taken to its extreme, germline editing could create classes of individuals defined by the quality of their engineered genome ([designer babies](#)).

Use of Embryos: Some scientists have expressed moral and religious objections to the use of human embryos for genome-editing research.

What should be the approach going ahead?

Use as Last Resort: Gene Therapy should be utilized only for rare diseases that cause serious illness/fatality, when no other treatment alternatives are available.

Monitoring: There is a need to have data on the health risks and benefits, as well as the requirement for continuous monitoring throughout clinical trials. In addition, there should be long-term surveillance in the future generations for any unintended side-effects.

Regulation and Scrutiny: Gene Therapy experiments and tests must be subjected to strict regulation and scrutiny to **keep any unethical activity** (like designer babies) **under check and prevent commercial misuse.** There is a need to create a multi-sector collaboration to develop an accessible mechanism for confidential reporting of concerns about possibly illegal, unregistered, unethical and unsafe human genome editing research and other activities.

IP Rights and Equitable Access: The WHO should work with all stakeholders to encourage relevant patent holders to help **ensure equitable access** to human genome editing interventions.

Engagement and Education: The UN/WHO should establish inter-agency working groups on frontier technologies that facilitates global dialogue to formulate ethical frameworks to guide their applications (of frontier technologies like human genome editing). There is a need for an inclusive dialogue on the future of human genome editing, including scientific, ethical and societal aspects.

Conclusion

Gene Therapy has a huge potential to cure rare and untreatable diseases. However, the approach to Gene Therapy requires extreme caution as it can have several long-terms unintended consequences. The field needs appropriate regulation to address the social, equity and ethical concerns. Nevertheless, these concerns should not act as roadblock to the scientific research in this field, that has huge untapped potential.

Syllabus: GS III, Science and Technology: Developments and their applications and effects in everyday life; Awareness in the fields of Bio-technology.

Source: [The Hindu](#), [National Human Genome Research Institute](#), [National Library of Medicine](#)

India-China Trade: Status and Concerns – Explained, pointwise

Introduction

The relationship between India and China has become strained due to the recent clashes between the Indian Army and PLA personnel in Tawang, Arunachal Pradesh. Popular sentiment has called for a more aggressive approach in dealing with China, amid calls for snapping of trade ties. Policy experts have pointed out India's persistent trade deficit with China. Even more concerning is India's dependence on China for some critical goods including pharmaceutical goods and electronics. In this context, a focused approach is required to correct the India-China Trade deficit and reduce dependence on China for critical items.

What is the status of India-China Trade?

China is **India's second biggest trading partner** after the United States. In 2021-22, India-China bilateral trade stood at US\$ 115.83 billion. This accounted for 11.2% of India's total merchandise trade of US\$ \$1,035 billion (US\$ 1.03 trillion). The US was the largest trade partner with US\$ 119.48 billion trade (11.5%)

Trade Deficit: In 2021-22, India had a trade deficit of US\$ 73.31 billion with China. India's deficit with China was US\$ 44 billion in 2020-21, thus worsening by 66% in a year. India's trade deficit with China has increased from US\$ 1 billion to \$73 billion in the past 21 years. In no year India had a surplus with China.

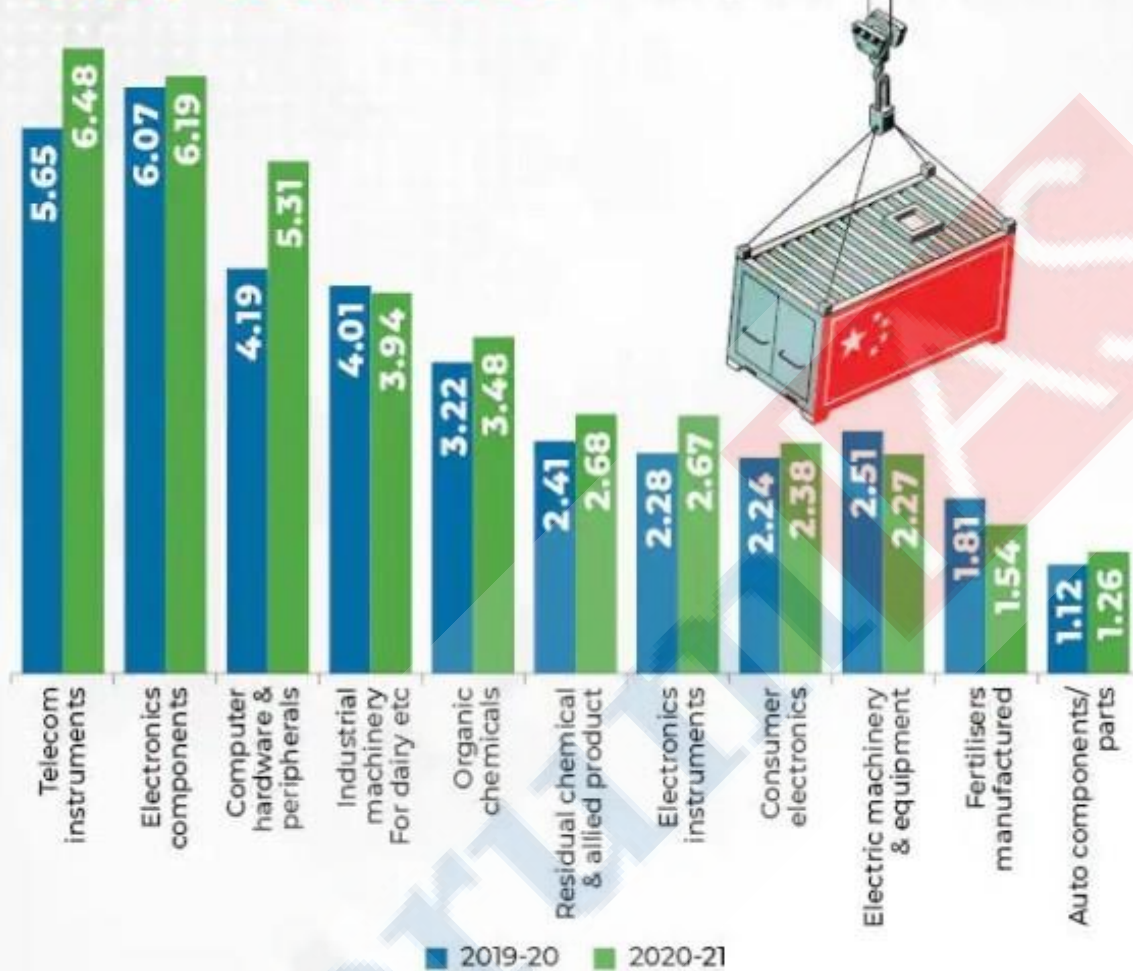


Source: MoneyControl

Two decades ago, India's imports accounted for about 60% of the total bilateral trade between two countries, but now it is over 80%.

India' Imports: During 2021-22, 42% (US\$ 94.57 billion) of India's total imports (US\$ 613.05 billion) came from China. Indian import basket was the personal computer (laptop, palmtop etc), which accounted for US\$ 5.34 billion in 2021-22. It was followed by 'monolithic integrated circuits-digital' (\$4 billion), lithium-ion (\$1.1 billion), solar cells (\$3 billion) and urea (\$1.4 billion).

KEY IMPORTS FROM CHINA



Source: System on Foreign Trade Performance Analysis, Department of Commerce
Figs in \$ billion

Source: MoneyControl

India's Exports: In 2021-22, India's exports to China stood at US\$ 21.25 billion, which was 5% of India's total shipments (US\$ 422 billion). Among the top commodities China bought from India included: Ores, slag and ash (\$2.5 billion); organic chemicals (\$2.38 billion), mineral fuels, mineral oils and products of their distillation, bituminous substances, mineral waxes (\$1.87 billion); iron and steel (\$1.4 billion); aluminum and articles of thereof (\$1.2 billion); and cotton (\$1.25 billion). Among single items, light Naphtha (\$1.37 billion) was India's most valued export item to China during 2021-22.



Source: The Times of India

What are the reasons for high India-China Trade Deficit?

The trade deficit has risen from less than US\$ 2 billion in 2001-02 to US\$ 73.3 billion in 2021-22. Imports from China have risen at a much rapid pace compared to exports from India, resulting in large trade deficit.

Access: Access to Chinese markets presents a significant challenge for businesses in India. China has placed certain regulations, especially in pharma, agriculture and IT, which make it difficult for Indian goods to enter Chinese market. According to PHD Chambers of Commerce and Industry (PHDCCI), on 78 products China imposes greater tariffs on Indian goods than rest of the world. These are products on which India has competitive advantage e.g., Agricultural and raw material goods, coffee, tea, oil seeds, tobacco, man-made staple fibre, vegetable textile fibre, and wool, minerals and fuels, chemicals, fertilizers etc. among others.

Competitiveness: Chinese goods have cost competitiveness over India goods. Chinese political economy is the major factor. Policy decisions and implementation faces lesser opposition e.g., land acquisition is quick. Additionally manufacturing is provided with various incentives and subsidies. Conversely in India, there are high land acquisition costs, prolonged litigations and delays in getting permits etc.

Demand: Demand for Chinese goods is robust. China produces a very wide range of goods, from raw materials and intermediate good to final finished products. Imports from China stretch across the board — from capital goods to intermediates to raw material used in industries like electronics, organic and inorganic chemicals, medical and pharmaceutical products, fertilisers, and materials used by the leather industry.

What are the concerns associated with high India-China Trade Deficit?

Weaponisation of Trade and Security Concerns: India-China relationship is strained due to border dispute. India is dependent on China for many critical items e.g., India imports ~70-80%

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of Active Pharmaceutical Ingredients (APIs) from China. APIs are used in pharmaceutical industry for manufacturing medicines. Similarly, concerns have been raised about India's rising dependence on China for lithium batteries used in Electric Vehicles (EVs). It will create future dependence on China as India undergoes mobility transition from fossil-fuel based vehicles (Internal Combustion Engines, ICEs) to EVs.

China can '**weaponise**' the trade, like Russia's decision to cut gas imports to the EU/West. China has resorted to such practices in the past, e.g., After Liu Xiaobo was awarded the Nobel Peace Prize in 2010, Chinese trade with Norway was severely reduced and did not recover until after the king of Norway visited China in October 2018. It used its monopoly of rare earths to stop their supply to Japan in 2010. Chinese curb on import of goods can severely dent Indian economy.

Economic Impacts: High trade deficit drains India's foreign exchange. Import of cheap Chinese goods limit expansion of India's domestic industry. Small manufacturers find it difficult to compete with Chinese goods and are forced to shut down.

What can be done to bridge the Trade Deficit?

Enhancing Domestic Production: (a) India should concentrate on production of commodities in which it has a **comparative advantage** e.g., India has a strong and competitive chemical industry, and steps should be taken to produce APIs domestically; (b) Focus should be on **labor-intensive industries** which will also create mass employment opportunities e.g., apparel and toys; (c) There are approximately 36 sub-sectors where India can reduce reliance on Chinese goods. These sectors together account for around US\$ 35 billion in imports. India's domestic market has production capabilities in these sectors. Hence, dependence on China can be readily reduced without substantial additional investments.

6 Point Agenda to Raise India's Trade Competitiveness

A white paper on '**Building Competitiveness for Inclusive Growth**', by CUTS International, Institute for Competitiveness and Institute for Studies in Industrial Development has outlined an action agenda for improving Indian competitiveness



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Export Enhancement: Targeted policy approach is required to support exports. New Foreign Trade Policy has been delayed considerably and should be formulated on priority. Government should focus on **reducing tariff and non-tariff barriers** to exports (like inverted duty structure). New FTAs should be negotiated keeping in mind **India's competitive advantage**. All

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stakeholders including industry bodies like FICCI, CII, ASSOCHAM etc. should be kept informed and their feedback should be taken during the negotiation phase of the FTAs.

Government Support: The Government should focus on **lowering the cost of doing business** including compliance costs, logistics cost, land acquisition costs etc. There is need to diversify source of imports and build domestic capacities. India can adopt approach of the EU and the US e.g., The EU has unveiled a \$221 billion plan to wean itself off Russian oil and gas. The US Creating Helpful Incentives to Produce Semiconductors (CHIPS) and Science Act 2022 includes a \$52.7 billion subsidy for domestic semiconductor production. India has pledged to spend more than US\$ 26 billion on the production-linked incentive (PLI) scheme to encourage companies to 'Make in India'. Focus should be on implementation and achieving outcomes. The Government should implement the recommendations of the SCALE Committee.

Recommendations of the SCALE Committee

The Steering Committee for Advancing Local Value-Add and Exports (SCALE) is a **joint Government-Industry panel**. It has been setup to look at ways to **increase localisation**, component manufacturing and employment in the toy industry. Its recommendations include:

- a. The Government must reduce problems in the areas such Ease of Doing Business, Market access via trade treaties, Technology and quality issues etc.
- b. **Address Cost Issues:** The Government must urgently address cost issues related to **land, power and capital**.
- c. **Make companies more competitive:** Address concerns around infrastructure and logistics, labour flexibility and strengthening of MSMEs. This could also help in **lowering costs for companies** and make them **more competitive** in global markets.
- d. India need to push the '**China plus one strategy**' to attract investment from multinationals while positioning India as an export hub.

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Public-Private Sector Cooperation: Both the private and public sectors in India require a comprehensive strategy to deal with China. Economic experts contend that China operates as a "system" in many respects when dealing with other countries, consisting of both the government and industry. Indian businesses and the government would benefit greatly from concerted efforts to collect data and insights about the Chinese markets. This will help develop appropriate strategies for penetrative Chinese markets.

Conclusion

The persistent trade gap with China is matter of urgent concern. The Government has articulated the vision of Aatmanirbhar Bharat about making India self-reliant. Based on this vision, Government should take all possible steps to make India's manufacturing sector and domestic goods more competitive. The Government should also enhance engagement with like-minded

friendly countries like Japan, Taiwan etc. to address the India-China trade gap. This will help safeguard Indian economy from possible Chinese aggression in the future.

Syllabus: GS III, Indian Economy

Source: [Indian Express](#), [Mint](#), [Economic Times](#), [PHD Chamber of Commerce and Industry](#)

[Kurukshehra December Summary] Citizen Participation and Rural Well-being – Explained, pointwise

Introduction

Enlargement of people's choices and capabilities is the cornerstone of all kinds of governance and a prerequisite for inclusive development and a nation's overall growth. India is the world's largest democracy; its democratic freedom and expression lie with **citizen participation in every sphere of public policy making**. The building block of good governance are **citizen participation** and **civic engagement**. e-Governance is the critical component of good governance.

Regarding rural development, it is essential to focus on sustainable governance, considering its contribution to national income (nearly 50%). About 70% workforce resides in rural areas. It requires better facilities, including health, education, drinking water, sanitation, housing, employment opportunities, and an overall better standard of living.

In this regard, the Government of India has taken various initiatives. More recent development focuses on **governance using digital technology and ICT** to energise rural development initiatives in **meeting the needs of the rural development sector**. Several digital initiatives have been taken, including digital-first and other ICT application services, to **improve public service delivery through improved digital connectivity**.

e-Governance and Rural Economy

e-Governance is a mechanism through which **public services are made available and accessible** to the common public at their doorstep at ease, through common services delivery outlets. It further ensures **services' efficiency, transparency, and reliability at affordable prices**.

The Government of India implemented **National e-Governance Plan in 2006**, especially for the rural areas by **providing services** including birth and death certificates, land registration, employment opportunities, market-related information, farming, and veterinary services, education etc.

It represents a paradigm shift in the **provision of essential public services**, moving from a **human to a technological interface**. Some of the popular of initiatives include **e-Panchayat**, e-Gram, and **Priasoftware** (It is a centralized Accounting Software intended for use by all the three levels of Panchayati Raj namely Zilla, Block and Village Panchayat) e-District etc. These initiatives are further supported by other initiatives which are contributing significantly in the e-governance process: **e-Choupal, e-Shakti, TARA haat, e-Health, e-Education, e-Sanjevani, e-Hospital, e-Pathshala, e-Raktkosh, Bhoomika, Gyandoot, e-Suvidha, e-NAM, e-Sewa** etc.

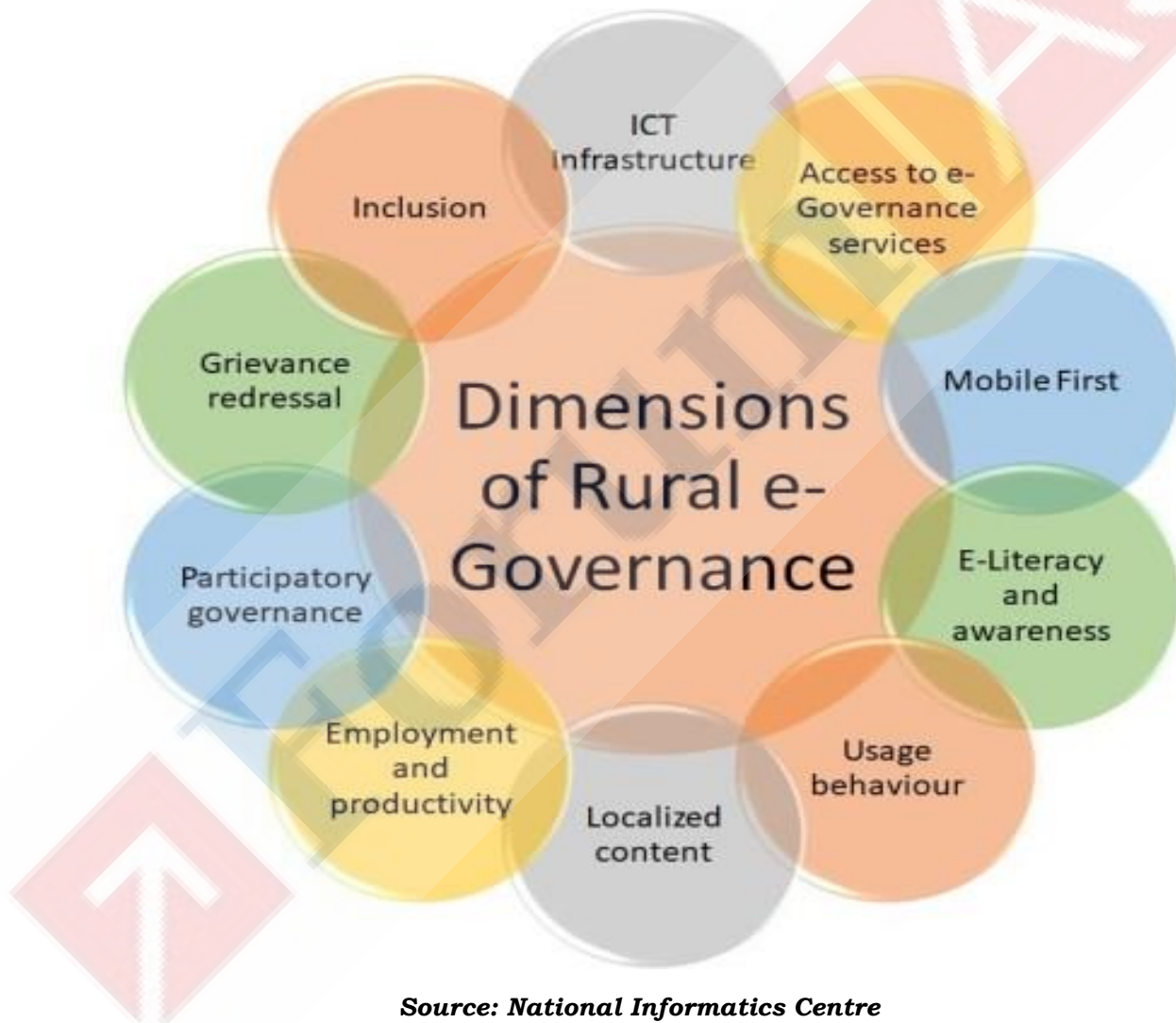
The government of India has launched an innovative platform, 'MyGov', to **ensure citizens' engagement in the decision-making process**; citizens can share their views/opinions directly with the Prime Minister of India. The primary focus of these initiatives is to contribute to 'Surajya' and **encourage citizens to 'discuss and do'**. It includes various projects: Clean Ganga, Green India, Job Creation, Girl Child Education, Skill Deployment, Digital India, and

Swachh Bharat, through which it is expected to bring qualitative changes in policy-making through people's participation.

Dimensions of Rural e-Governance

Rural e-governance is the core of the socio-economic development of the rural economy. The effectiveness and impact of rural e-governance is measured through various dimensions. The various dimensions of e-governance in the rural sector are: **(a)** ICT infrastructure; **(b)** Access to e-government services; **(c)** Mobile first; **(d)** e-literacy; **(e)** Usage behaviour; **(f)** Localised content; **(g)** Employment and productivity; **(h)** Participatory governance **(i)** Grievance redressal; **(j)** Inclusion.

Over all, these dimensions are required to be strengthened and rebooted to get the best outcome and optimisation of public policy, designed for developing the rural economy.



Source: National Informatics Centre

e-Governance and Citizen Participation

The success of any governance is based on citizen participation and engagement. India is a country of diversity in language, culture and livelihood patterns which vary from region to region. Designing any program should be able to address all the issues/needs and expectations of people in those areas. To enhance e-governance projects' efficiency, **understanding of social-cultural**

factors and people's expectation is essential. To design a suitable governance initiative in rural areas, **diverse needs and people's capabilities** should be considered during the policy formulation. Hence, there is a need to design customised e-governance initiatives.

In the process of reform and formulation of governance, **citizen involvement and their feedback are essential.** The ultimate process is to empower people by **making them part of citizen governance.**

Citizen Governance and **Civic Engagement** are two important pillars in strengthening valued-citizen participation. Citizen governance is a valued-based proposition, helps in removing gaps and difference between governments and citizens. On the other hand, **civic engagement involves active participation and collaboration** among individuals, institutions, communities and government and helps in shaping public policy. It opens up the window for citizens to participate and take an interest in public affairs and public policy meetings.

Citizen Participation and Governance

Citizen participation is essential in all public policy-making, especially in e-governance, designed for rural areas. Citizen participation has a significant role in shaping and **transforming 'governance into good governance'**, which is the need of the hour.

Citizen as a Customer: Citizen is considered as a valued customer as public services are meant for public use. Hence as a consumer, citizen participation and their feedback is very essential in designing public services and ensuring quality service delivery at an affordable cost.

Citizen as an Owner: In a democratic set-up, citizens are the real owners of public services. They are **considered as investors in public services** as they contribute through taxes etc. As an owner, citizen involvement is essential, and she must seek information about public services and delivery.

Citizen as a Co-producer: Citizens are often asked to play the role of co-producer in providing public services. Citizens are expected to act as a partner; hence their involvement and participation will improve the quality and timely delivery of services.

Citizen as a Quality Evaluator: Being the co-producer and consumer, the citizen can become the evaluator of the public services quality and their delivery effectiveness. Thereby she can help the government in designing better e-governance facilities and suitable public policy.

Citizen Participation and Framework

A customised framework should be carefully planned to ensure meaningful engagement with citizens. **All stakeholders must be able to voice their contributions and concerns.** A suitable feedback mechanism must be in place to close the deficiencies and leakages.

The key components needed to enable successful and meaningful citizen involvement in e-governance projects are: **(a)** Need analysis; **(b)** Degree of engagement; **(c)** Creation of engagement team; **(d)** Engagement activities; **(e)** Analysis of outcome; **(f)** Feedback analysis; **(g)** Institutionalisation of engagement.

Citizen participation can be viewed from three different perspectives; firstly, at what stages there is a need for participation; secondly, at what levels and thirdly, what are the tools through which participation can become more meaningful and effective.

To appreciate the value and nature of participation in the governance process, understanding the 'propose and techniques' of people's participation is vital. Public participation spectrum includes:

Table 2: Citizen Participation & Engagement Spectrum

No.	Purposes	Tools & Techniques
1	Inform	Mass Media, Print, TV, Radio, Citizen Charters, Bulletins Boards, Newsletters, Social Media, Websites & Portals, and Face-to-Face Meetings
2	Consult	Focus Groups, Surveys, Expert Panels, Delphi Methods, Open Meetings, Debate & Discussion
3	Involve	Citizen Outreach, Workshops, Qualitative Interview
4	Collaborate	Social Networking, Crowd Sourcing, Participatory Planning
5	Empower	Stakeholder's Dialogue, Participatory Learning & Actions, Matrix Scoring Ranking

Source: Kurukshetra December 2022

Benefits of Citizen Participation

Citizen participation ranges from just information receiving/sharing to being highly responsible in managing the process with accountability. The higher is the citizen participation, the better is the governance and its effect on the socioeconomic outcome and well-being.

First, Citizen participation helps in the **smooth formulation and implementation of public policy**. It helps in transparency and makes citizens more accountable and responsible.

Second, Citizen participation in e-governance will **enhance the projects' efficiency and efficacy**.

Third, It develops a **sense of belongingness and upholds ownership**. Engaging the public in creating policy directly impact them is one method to **assure accountability**.

Fourth, Participation and contribution of various stakeholders, individuals, communities, political parties, and government agencies will **reduce the conflicts** and confusion and make it more coherent. Thereby, it will become more people-driven, participatory, and meaningful.

Fifth, It helps in bringing more **inclusiveness** and **positive outcomes**.

Sixth, It helps in improving the political positioning of marginalised and vulnerable groups, those are often neglected or not taken into consideration.

Seventh, It helps in developing long-term sustainable e-governance and **outcome-focused initiatives**.

Eighth, It helps in **community empowerment**, leading to **better awareness** and **superior monitoring**.

Way Forward

e-Governance initiatives have a transformational impact on providing public services. Their deliveries to the mass are especially effective in rural India. It is a key enabler in the realisation of government mandate. It is expected that outcome of e-governance will be optimised through active citizen participation. **The vision to transform India into a digitally empowered society and knowledge economy can be accomplished only through citizen participation and engagement.** The collaborative approach of policy-making emphasises more on citizen participation and ownership of actions. This is necessary to reduce socio-economic stress, minimise deprivation, and help overall development. A variety of services can be delivered in rural areas with collaborations with all the stakeholders, with maximum citizen participation.

Syllabus: GS II, Important aspects of governance, transparency and accountability, e-Governance: applications, models, successes, limitations, and potential.

Source: Kurukshetra December 2022, [National Informatics Centre](#)

Bilateral Investment Treaties (BITs): India's Approach and Concerns – Explained, pointwise

Introduction

India is negotiating Free Trade Agreements (FTAs) with several trading partners. The European Union (EU) is also negotiating an Investment Protection Agreement (IPA) along with the negotiations for an India-EU FTA. The IPA will contain investment protection standards and an independent mechanism to settle disputes between investors and the Government under international law. Over the past decade, several Multi-National Corporations (MNCs) have been involved in investment disputes with the Government of India including Cairn Energy, Vodafone and White Industries among others. They had invoked proceedings under Bilateral Investment Treaty Agreements (BITAs) India had signed with trading partner nations. To avoid such proceedings, the Government had amended the text of Model Bilateral Investment Treaty (Model BIT) in 2015 and renegotiated its Agreements with trading partners. However, experts have pointed out several concerns with the provisions of India's Model BIT which may have an impact on India's FTA negotiations and foreign investments in India.

What is a Bilateral Investment Treaty Agreement (BIT/BITA)?

Bilateral Investment Treaties (BITs) are reciprocal agreements between two countries to **promote and protect foreign private investments** in each other's territories. The Agreements establish minimum guarantees between the two countries regarding the **treatment of foreign investments**, and protect them from arbitrary decisions of national Governments. BITs typically have provisions like **National treatment** (treating foreign investors at par with domestic companies), **Fair and equitable treatment** (in accordance with international law), and **Protection from expropriation** (limiting each country's ability to take over foreign investments in its territory) etc. among others.

India's BITs

The Government had released the first **Model BIT text in 1993**. Under this model, India signed its first Bilateral Investment Treaty (BIT) with the United Kingdom in 1994. The Government had released **Model Bilateral Investment Promotion Agreement (BIPA) in 2003**. As of **2015**, India had **signed BITs with 83 countries (of which 74 were in force)**.

The BITs were invoked by several MNCs in context of their disputes regarding sovereign actions of the Government of India. In 2011, an International Chamber of Commerce (ICC) Tribunal **ordered the Government of India to pay US\$ 4.10 million to White Industries** under the 1999 Indo-Australia BIT. The Government also received notices under various BITs concerning **retrospective tax amendments** and the **cancellation of 2G licenses**. Post these developments, the Government initiated a review of its existing bilateral investment treaties (BITs).

In 2015, India started drafting a new model BIT to replace the existing model BIT (1993) and BIPA (2003). In 2016, the model BIT was completed and released to the public domain.

Since the release of the model BIT in 2016, **India has signed only four BITs** with Belarus, Kyrgyzstan, Taiwan, and Brazil. The Government is negotiating with 37 countries/blocks, and has **terminated its older BITs with 77 countries** (i.e., older BITs with only 6 countries are in force).

What are the benefits of Bilateral Investment Treaties (BITs)?

First, BITs provide security against arbitrary actions of sovereign Governments. This enhances confidence of investors. Thus **BITs have a potential to attract Foreign Direct Investment (FDI)**.

Second, BITs generally provide a **mechanism for settling disputes** between investors and the country of investments. The most preferred mode of settling such disputes is **arbitration**, where parties agree to have their dispute decided by a neutral person (the arbitrator) instead of going to Court.

Third, BITs encourage the **adoption of market-oriented domestic policies** that treat private investment in an open, transparent, and non-discriminatory manner.

Fourth, BITs support the development of international law standards consistent with the objectives of trade and investment promotion.

What are the issues with India's Approach to Bilateral Investment Treaties (BITs)?

First, the review of the then existing Model BIT texts and the formulation of the Model BIT of 2016 was a knee-jerk reaction to the White Industries case, instead of an initiative to promote foreign investment.

Second, the Model BIT of 2016 has a very narrow definition of 'investment' and creates high thresholds for what can be considered as breach. There are several 'vague' phrases. The definition of investment is full of vague terms like 'certain duration' and 'investment...operated in good faith'. There are uncertainties related to how long is the duration of investment or what constitutes good faith. Such ambiguities in the text and the lowering of protection standards may act as a deterrent to foreign investment.

Third, the Model BIT has **omitted the well-recognized doctrines of 'fair and equitable treatment' standard and Most-Favored Nation (MFN)** etc. It sends a wrong signal to the investors creating fears that their investments might not be safe in India.

Fourth, The Model BIT insists that investor must exhaust domestic remedies (for at least 5 years) before commencing arbitration under the BIT. This will entangle the investors in prolonged disputes given pendency and slow dispensation of justice in India.

Fifth, Indian companies investing abroad will also have similar limitations on protections and be subjected to the local judicial bottlenecks.

Sixth, BITs signed prior to 2015 were asymmetric in the sense that they didn't impose much obligations on foreign investors. Model BIT of 2016 partially addresses this asymmetry by requiring the investors to **voluntarily adopt corporate social responsibility principles** addressing issues like labour, environment, human rights, community relations and anti-corruption. However, the provision falls under the 'best endeavour clause', which means that they are enforceable. Absence of mandatory obligations means that Government can't press counter-claims on foreign investor on grounds that the investor has violated local law, human rights obligations, environmental obligations etc.

What corrective steps should be taken?

The **Parliamentary Standing Committee on External Affairs** had reviewed India's Model BIT 2016 and BIT Agreements with other nations and submitted its report ('India and Bilateral Investment Treaties') in September 2021. It has made several noteworthy recommendations.

First, It recommended timely settlement of investment disputes through pre-arbitration consultation or negotiations.

Second, the Committee has observed that there is scope of improvement in the Model BIT (2016). New Model of BIT should: **(a)** Be suitably amended in light of new experience gained in disputes arising out of BITs; **(b)** Be reviewed continuously to ensure that it is balanced and comprehensive; **(c)** Incorporate **best practices** and provisions from BITs adopted by advanced countries after studying in detail the implementation and outcome of such treaties.

Third, New BITs should be **drafted without any ambiguity**, so as to avoid: **(a)** Overbroad interpretation by arbitrators and tribunals; **(b)** Investment disputes or claims against India; **(c)** The abuse of certain provisions by investors.

Fourth, The report calls for **developing local expertise**. It recommended developing panels of domestic lawyers (and law firms) with: **(a)** The **requisite expertise in investment arbitration** to represent India; **(b)** Experience in investment treaty law to ensure good drafting of BITs. It also recommended **training government officials in the field of investment treaties**, and promoting the **New Delhi International Arbitration Centre** as a world-class arbitration centre.

The UN Bodies have also made some recommendations in this regard.

First, The **UNCITRAL Working Group III on ISDS** (Investor-State Dispute Settlement) reforms has suggested that **including binding investor obligations** in the BITs would provide host Governments with a legal basis to raise counter-claims. This would remove the uncertainties and arbitral discretion.

Second, The UN Working Group on human rights, transnational corporations and other businesses, stresses the need to include **binding and enforceable investor obligations concerning human rights and environment**.

In addition, several other steps can be taken.

First, the Government should focus on reforming domestic judicial system. While a few steps have been taken in the right direction through the **Commercial Courts Act, 2015** and the amendments to the **Arbitration and Conciliation Act, 1996**, there are a number of administrative and substantive aspects that need a complete overhaul.

Second, The model BIT and the domestic legislation should be aligned to ensure a consistency in commitments as well as the dispute resolution processes.

Conclusion

The Government is in pursuit to make India a US\$ 5 trillion economy by 2025 and a developed nation by 2047. Robust international trade and stable investments will be a vital factor in the success of this pursuit. The Government has pursued the negotiations of FTAs with a renewed vigour. This must be complemented by review and suitable corrections to the approach to Bilateral Investment Treaties (BITs). BITs remain a critical lever in attracting long term and consistent foreign investment. This will help in achieving multi-fold increase in trade and investments, paving way for rapid growth of the Indian economy.

Syllabus: GS II, Effect of policies and politics of developed and developing countries on India's interests; Bilateral agreements involving India and/or affecting India's interests; GS III, Indian Economy and issues related to growth;

Source: [Indian Express](#), [PRS](#), [The Diplomat](#)

Nasal Vaccine for COVID-19: Working and Benefits – Explained, pointwise

Introduction

India's first nasal vaccine for COVID-19, iNCOVACC, will be available as a booster dose for persons above 18 years of age. The nasal vaccine will be delivered through the nose. Those individuals who have already received a heterologous booster dose of either Covishield or Covaxin can now receive the nasal vaccine. The vaccine has been developed by the Bharat Biotech, the makers of Covaxin, in collaboration with Washington University at St Louis, US. The nasal vaccine is a **recombinant replication-deficient adenovirus vectored vaccine** with a pre-fusion stabilized spike protein. The vaccine has been approved by the Central Drugs Standard Control Organisation. The nasal vaccine for COVID-19 will further strengthen the level of preparations to fight the possible rise in infections in India, given the surge in COVID-19 cases in China.

How does the immune system fight pathogens?

The immune system has **two distinct components: Mucosal and Circulatory.**

The Mucosal Immune System provides **protection at the mucosal surfaces of the body.** These include the **mouth, eyes, middle ear, the mammary and other glands,** and the **gastrointestinal, respiratory and urogenital tracts.**

Sticky secretions cover these mucosal surfaces. Various **Antibodies** and **anti-microbial proteins** are present in these secretions. **Immune Cells** are also located in the **lining of these surfaces.** Together they attack the invading pathogens.

The **Circulatory Immune System** generates antibodies and immune cells that are **delivered through the bloodstream** to the internal tissues and organs. These circulating antibodies do not usually reach the mucosal surfaces in large enough amounts to be effective.

The **Mucosal and Circulatory compartments of the immune system are largely separate and independent.**

What are the key players in Mucosal Immunity?

Proteins known as **Antibodies** or **Immunoglobulins** are the most well-known immune components. Antibodies are produced by the immune system in **response to invading agents** that the body recognises as 'non-self' (or foreign) such as viruses and bacteria.

Antibodies bind to specific antigens. **Antigen is a substance that enters the body and starts a process that can cause disease.** The presence of antigens in the body generally triggers an

immune response. Antibodies that bind to antigens can **either inactivate them**, as they do with toxins and viruses, or **kill bacteria with the help of other immune proteins or cells**.

The Mucosal Immune System generates a **specialized form of antibody called Secretory IgA, or SIgA**. SIgA is **located in mucosal secretions**, such as **saliva, tears, nasal and intestinal secretions**, and **breast milk**. It is **resistant to digestive enzymes** that readily destroy other forms of antibodies. It is also **superior to most other immunoglobulins** at neutralizing viruses and toxins, and at preventing bacteria from attaching to and invading the cells lining the surfaces of organs.

There are also many other key players in the mucosal immune system, including different types of **anti-microbial proteins** that kill pathogens, as well as **immune cells** that generate antibody responses.

How does the COVID-19 virus enter the body?

The vast majority of infectious diseases that affect humans are **contracted through the mucosal surfaces** of the body, such as through the act of breathing, eating, or sexual contact. Important exceptions include infections that originate from wounds as well as pathogens transmitted by bites from insects or ticks.

The virus, that causes COVID-19 (SARS-CoV-2), can enter the body through the nose, mouth, or eyes if droplets or aerosols come into contact with these areas. If the virus travels deep into the lungs and triggers an overactive and inflammatory immune response, it has the **potential to cause severe disease**.

Evidence indicates that the **COVID-19 virus most likely makes its initial contact with the immune system through the mucous membranes** that line the surfaces of the mouth, nose, and throat. This is supported by the presence of SIgA antibodies (against the SARS-CoV-2) in the secretions of infected people, including their saliva, nasal fluid and tears. These locations, especially the tonsils, have specialized areas that specifically trigger mucosal immune responses.

Research suggests that if these SIgA antibody responses form as a result of vaccination or prior infection, or occur quickly enough in response to a new infection, they **could prevent serious disease by confining the virus to the upper respiratory tract until it is eliminated**.

Intranasal SARS-CoV-2 Vaccines



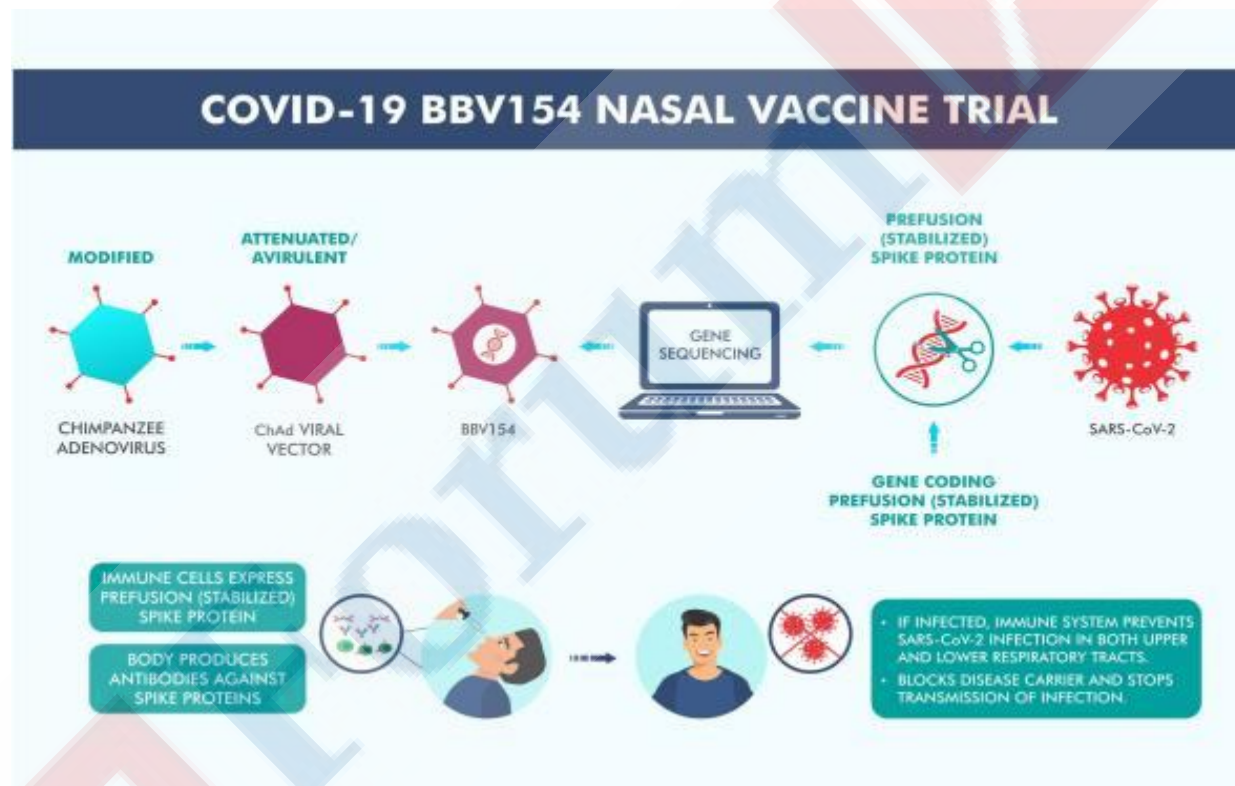
Source: Bharat Biotech

How do Nasal Vaccines for COVID-19 work?

Nasal Vaccines can be **administered via mucosal routes such as the mouth or nose**. This induces an immune response by **stimulating the mucosal immune system**, causing mucosal secretions to **produce SIgA antibodies**. Antibody Immunoglobulin A (Ig A, SIgA in its secretory form) plays an important role in the immune function of mucous membranes. The amount of IgA produced in association with mucosal membranes is greater than all other types of antibody combined.

In nasal vaccines, the viral antigens intended to stimulate the immune system would be **taken up by immune cells within the lining of the nose** or tonsils. Researchers believe nasal vaccines work analogously to oral mucosal vaccines. **Antigens in the vaccine induce B cells in mucosal sites to mature into plasma cells that secrete a form of IgA**. The IgA is then **transported into mucosal secretions throughout the body, where it becomes SIgA**.

If the SIgA antibodies in the nose, mouth or throat target SARS-CoV-2, they could **neutralize the virus before it can drop down into the lungs and establish an infection**.



Source: Bharat Biotech

What advantage do Nasal Vaccines have against COVID-19?

First, it **provides local immunity** (nose, where the virus first enters) and is expected to be more effective than other vaccines. This is because these Nasal vaccine will help **block the virus at its point of entry**, or at least to confine it to the upper respiratory tract, where it might inflict relatively little damage.

Second, Nasal vaccines are also **expected to limit the transmissibility of the COVID-19 virus**. Research has shown that COVID-19 spreads during normal breathing and speech, and is exacerbated by sneezing, coughing, shouting, singing and other forms of exertion. **Presence of SIgA antibodies** (due to vaccine) in nasal secretions will **limit the transmission** through above

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mechanisms. (Existing vaccines do not induce SIgA antibody responses. Injected vaccines primarily induce circulating IgG antibodies, which are effective in preventing serious disease in the lungs).

Third, It is **easy to administer** with no need for syringes and trained manpower.

Fourth, it will be **practical and affordable**. Nasal vaccines are expected to have **lower costs, easy distribution**, etc. Nasal vaccines for COVID-19 **will not require cold chain infrastructure** with very low temperature.

Fifth, iNCOVACC could be developed as a multivalent so as to cover a wider spectrum of the Sars-CoV-2 virus.

Sixth, Nasal vaccines may be a **useful supplement to injected vaccines** in hot spots of infection.

Conclusion

Nasal Vaccine for COVID-19 can prove to be very effective in dealing with the pandemic. They are easy to transport and administer. Simple administering procedure may also help in overcoming vaccine hesitancy. The uptake of booster dose has been very low, the introduction of Nasal vaccine may address the gap. It will help boost the immunity of the population and reduce the severity of any possible future spike in infections.

Syllabus: GS III, Science and Technology: Developments and their applications and effects in everyday life; Awareness in the fields of Bio-technology.

Source: [Down to Earth](#), [Indian Express](#), [Bharat Biotech](#)

India's Foreign Trade Agreements (FTAs): Approach and Challenges – Explained, pointwise

Introduction

The Government has pushed the pace of negotiations for the Free Trade Agreements (FTAs) with a new vigour in the last couple of years. Trade deals with Australia and the UAE were signed earlier this year. Similar deals with the UK, the EU and Canada are expected to be signed in the coming year. The Government has altered its approach to the FTAs and seems to have shed its earlier reluctance to bilateral trade deals. Several factors like the vision of the Government to enhance exports to achieve the US\$ 5 trillion economy status and the need to diversify supply chains amidst global geopolitical uncertainties may have induced this change. Several developments have negatively impacted global trade in the last few years. In addition, many issues like Climate Change, Environment, Labour Laws etc. have become contentious issues in the context of international trade. These add new challenges to India's FTA negotiation process.

What are Free Trade Agreements (FTAs)?

FTAs are arrangements between two or more countries or trading blocs that agree to **reduce or eliminate customs, tariff and non tariff barriers on substantial trade** between them. FTAs, normally cover **trade in goods** (such as agricultural or industrial products) and **trade in services** (such as banking, construction, trading etc.). FTAs can **also cover other areas** such as Intellectual Property Rights (IPRs), Investment, government procurement and Competition Policy, etc.

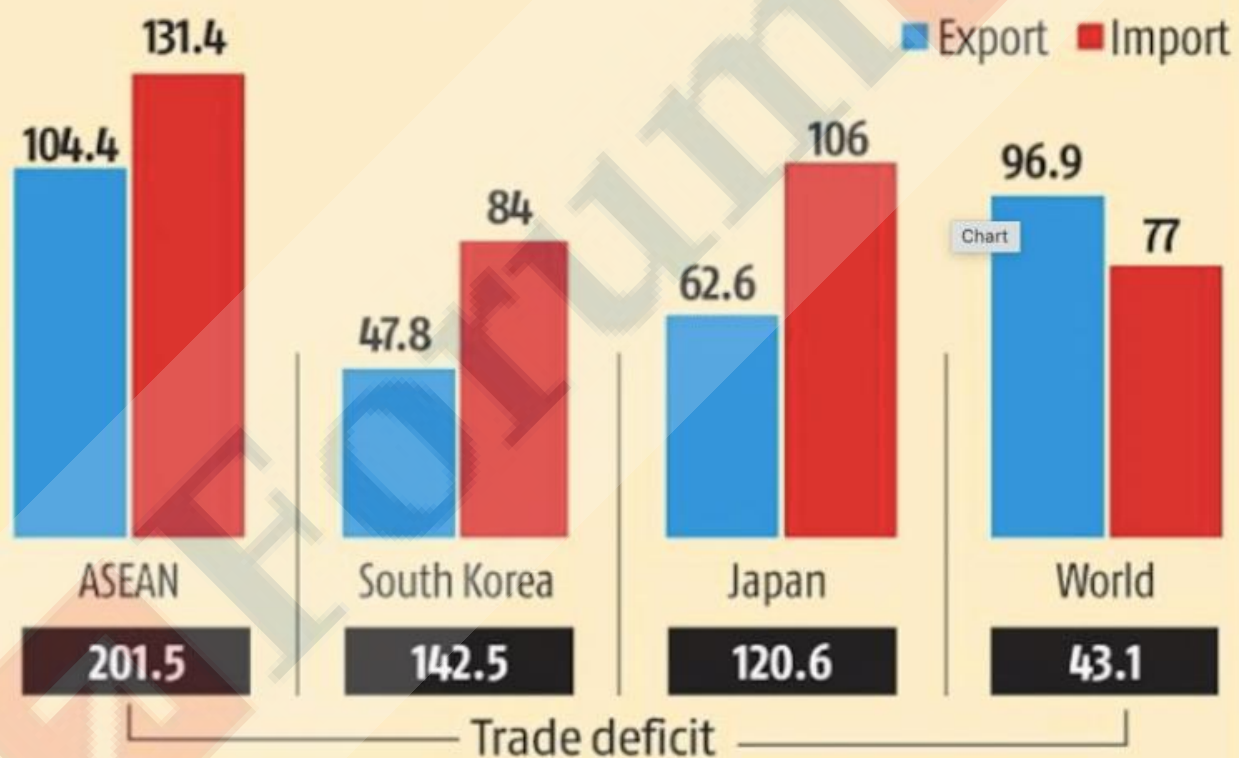
India's FTAs

India had signed its first Trade Agreement in 1975. It was a Preferential Trade Agreement (PTA, *tariffs are lowered but not eliminated, preferential access to goods from participating countries*) known as Bangkok Agreement (renamed Asia-Pacific Trade Agreement in 2005). India signed the India-Sri Lanka FTA in 1998. This was the first time duties were eliminated on substantial tariff lines/goods. After the 'Look East Policy' was announced, several agreements were signed with East Asian countries. This includes Agreements with Japan, South Korea and the ASEAN.

However, the outcomes of these FTAs were not favorable. While the trade with the FTA partner countries grew, the growth rate of imports was much greater than exports leading to rise in trade deficit. FTAs benefited India's trade partners more than Indian firms. As a result, the Government became wary of signing more FTAs. India withdrew from RCEP in 2019. The fear was that the agreement included inadequate safeguards for Indian industries and that Indian market will be flooded with Chinese goods.

TRADE-OFFS

Growth in India's cumulative merchandise trade deficit, and exports and imports between 2007-09 (pre-FTA) and 2019-21 (%)



Source: Global Trade Research Initiative (GTRI)

Source: Business Standard. India's imports with FTA partner countries (South Korea, Japan, ASEAN) grew at a much faster rate than exports.

However, there seems to change in Government's approach post COVID-19 pandemic. The Government is now seeking more investment, technology and potential markets for Indian goods in exchange for access to India's domestic market to foreign goods.

What is the relationship between Multilateralism under the WTO Regime and the FTAs?

Article 1 of GATT (General Agreement on Tariffs and Trade) deals with the **Most Favoured Nation (MFN) principle of the WTO**. It states that “any advantage, favour, privilege, or immunity granted by any contracting party to any product originating in or destined for any other country shall be accorded immediately and unconditionally to the like product originating in or destined for the territories of all other contracting parties”. This means that if tariffs are lowered or eliminated on a particular good from the US, they must be lowered/eliminated for the same good from the EU or the UK or any other country.

However, derogations (**exemptions**) from this MFN principle are permitted for forming FTAs under specific conditions of the WTO Agreements. Article XXIV of GATT for goods and Article V of GATS (General Agreement on Trade in Services) deal with these exemptions.

The specific conditions (Article XXIV of the GATT) permitting FTAs are: **(a)** FTA members shall not erect higher or more restrictive tariff/non-tariff barriers on trade with non-members than existed prior to the formation of the FTA; **(b)** Elimination of tariffs and other trade restrictions be applied to “*substantially all the trade between the constituent territories in products originating in such territories*” i.e., if FTA is signed between two countries, the **trade barriers should be eliminated for nearly all goods**; **(c)** Elimination of duties and other trade restrictions on trade within the FTA to be accomplished “*within a reasonable length of time*” meaning a period of no longer than 10 years (i.e., if FTA has been signed, trade barriers should be removed within

The ‘Enabling Clause’ allows developing countries to form preferential trading arrangements without adhering to the conditions under Article XXIV.

Early Harvest Scheme

Early harvest scheme is a precursor to a Free Trade Agreement (FTA) between two trading partners. This is to help the two trading countries to identify certain products for tariff liberalisation pending the conclusion of FTA negotiation. It is primarily a confidence building measure. A good example of an EHS is between India and Thailand signed in October 2003, and implemented in wherein 83 products were identified to be reduced to zero in a phased manner.

What are the benefits of FTAs?

Enhanced Trade: The process of imports, exports and investments among the member countries is made much smoother after an FTA is signed. Import duties and tariffs are all reduced or eliminated, and subsidies may be introduced to facilitate trade.

Growth Opportunities: FTAs can help domestic companies enter new markets in FTA partner countries and compete in those markets. This includes bidding for/providing goods to Governments (Government procurement) of partner countries. FTA support **stronger people-to-people and business-to-business links**.

Cheaper Goods and Services: The reduction of duties and tariffs on imported goods will give access to a more extensive selection of imported goods and services at lower prices to domestic consumers.

Employment Opportunities: Enhanced trade and growth opportunities in new markets abroad will lead to expansion of domestic economy and create new livelihood opportunities.

Product Standards: FTAs generally involve product standards related to trade. This provides opportunities for domestic firms to upgrade their products to meet international standards.

Investments: FTAs can also help attract more foreign investments.

What are the challenges associated with FTAs?

Policy Challenges: The **2020 WTO Trade Policy Review of India** noted that India makes extensive use of trade policy instruments such as tariffs, export restrictions, export taxes, anti-dumping duties, and import licensing. According to economist Arvind Panagariya, such tools **create uncertainties and induce distortions** in the international trading system. This is evident from Government's restrictions on exports of wheat and rice in 2022.

Poor Utilisation of the existing FTAs: The reasons range from the cumbersome process of getting a certificate of origin and the related manual verification process to low awareness about FTAs in the domestic Indian industry.

Protectionist Fears: There are fears that FTAs will lead to influx of cheaper goods from abroad and will prove detrimental to India's domestic industry. These protectionist fears forced the Government to withdraw from RCEP.

New Issues: Developed countries have brought new issues like the labour standards, environment, climate change within the ambit of trade and FTA negotiations. Inclusion of such issues will add additional costs and make Indian goods uncompetitive. e.g., According to a report by Global Trade Research Initiative, the **US has brought up the issue of carbon emissions in the process of manufacturing melted steel** as a non-tariff related issue. While India mostly produces steel generated from iron ore, which in turn comes from mining, most developed countries have resorted to methods to generate it from scrap, which results in lower carbon emissions. If conditions related to emission standards are made part of FTA, India's steel industry will lose its competitive edge. Similarly, the EU has also proposed a **Carbon Border Adjustment Mechanism** (CBAM) to tax carbon-intensive products, such as iron and steel, cement, fertiliser, aluminium and electricity generation, from 2026.

India-South Korea CEPA and Zinc Trade

The India-South Korea Comprehensive Economic Partnership Agreement came to force in January 2010. At that time, India used to export considerable amount of Zinc to South Korea (Refer graph). Korea had low production and India had a weak domestic demand. As part of CEPA, the duties on zinc trade were eliminated.

Since 2010, South Korea has increased its manufacturing and smelting capabilities. It has also lowered logistical costs. In addition, it was also helped by the 'smart free trade agreement negotiations'.

Zinc trade between two countries has completely reversed since then. South Korea now contributes 52% of India's Zinc imports. This has adversely impacted India's domestic zinc smelting firms, especially in the MSME sector.

South Korea does not possess zinc reserves/mines. It exports zinc from abroad, processes it and re- exports. Experts feel if India had a minimum 35% value addition clause under Rules of Origin, the zinc trade would not have distorted. This shows that India must be very careful and **consult industry at every stage while signing new FTAs**. Clauses, such as related to say Rules of Origin, should be carefully negotiated.

The India-Korea zinc story

Our bilateral trade with the Republic of Korea has seen a huge increase in zinc and zinc-alloy imports after duties were phased out.



Source: Export-Import Databank, Ministry of Commerce

Source: Mint. India's zinc trade with South Korea reversed in 2013-14 when India's trade balance in Zinc became negative, i.e., India became a net importer of zinc.

Rules of Origin

Rules of Origin (RoO) are the criteria needed to determine the national source of a product. Their importance is derived from the fact that a number of trade policy measures are applied on the basis of source of imports. RoOs have become vital because of globally integrated supply chains, where value addition occurs across different nations (e.g., manufacturing of a component in Vietnam and Taiwan, assembly in India etc.). Restrictions like tariffs and duties are applied on the basis of country of origin, e.g., India may want to restrict imports from China but Chinese goods may find their way into Indian markets through indirect route via another country. Hence, it becomes necessary to have clearly defined rules of origin.

What should be India's approach regarding the FTAs?

Remove Restrictions: The Government must remove some of the restrictions on foreign direct investment and lower tariffs. Else negotiating countries may offer a lower level of liberalisation than what they offered to their other FTA partners. In that case India's exporters will be at a disadvantage even after the agreement.

Trade Facilitation Reforms: There is also a need to improve the efficiency of Ports, Shipping, Customs Clearances etc. via automation, which can also be a big boost for participation by MSMEs.

Involve Industry: The Government must involve industry representatives in FTA negotiation process. This can help Government identify Industry's comparative advantage and negotiate the agreement accordingly.

Hybrid Models: The existing value chains are being disrupted due various geopolitical factors. Most nations feel the need to develop alternative sources of supply in which all the components are available in the vicinity or within the country's own economy. Therefore, India must look at a hybrid model to source from the most efficient suppliers, including domestic players.

Adjust to New Paradigms: Trade in services, e-commerce, labour, climate/environment, digital trade, public procurement will become central issues in international trade in future. Government must be prepared to adjust to this new paradigm rather than avoiding these issues.

Building Digital Capabilities: The Government must work on building its digital capabilities and infrastructure in key export sectors through a '**Digitally Informed Foreign Trade Policy**', with a focus on **enhancing India's trade competitiveness**. This can be achieved by developing digital infrastructure for trade, building digital skills in trade-able sectors, increasing the share of technology content in exports, and leveraging advanced technologies (Big Data Analytics, IoT, and Blockchain) for evidence-based and informed trade policy decisions.

WTO Plurilateral Negotiations: India could further increase its exports by participating in the major plurilateral negotiations on services, environmental goods, and government procurement now taking place at the WTO.

Conclusion

As the global economy is feared to go into a phase of slowdown, various analysts have noted India as a bright spot in the global economy. The economy is expected to reach US\$ 5 trillion in the next 3-4 years. To achieve this status, all growth levers have to be engaged, including trade. FTAs can provide vital boost to foreign trade, provided they are negotiated keeping the domestic capabilities in mind. India-Australia trade agreement is being praised for careful negotiations undertaken by the Government that complements strengths of India's industry. This approach should be adopted in other FTA negotiations as well. With the [WTO losing its relevance](#), FTAs may be the way to go in near future.

Syllabus: GS III, Indian Economy and Issues related to Growth

Source: [Business Standard](#), [The Hindu BusinessLine](#), [Indian Express](#), [Economic Times](#), [IBEF](#), [EPEC](#)

[Kurukshetra December Summary] e-Governance in Healthcare Services Delivery – Explained, pointwise

Introduction

According to the Ministry of Electronics and Information Technology, Government of India, e-Governance is the application of e Information and Communication Technology to promote 'Simple, Moral, Accountable, Responsive and Transparent' (SMART) governance. The Government has launched various initiatives for e-Governance in healthcare sector. For instance, the National Health Portal serves as a single point of access to health-related information for citizens and e-Hospital Management System tracks the delivery of patient care and diagnostic services. Mobile-based Applications have also been launched like TB Missed Call initiative and *Kilkari* App. Healthcare sector faces several challenges in India. Technology can be a game-changer in delivery of healthcare services. Government must scale-up the use of technology to make healthcare affordable and inclusive.

Policy Measures for e-Governance in Healthcare

Over the last few years, the Government has announced several policy measures to usher in a new era of technology-enabled healthcare delivery.

National Health Policy, 2017 envisions a digital health ecosystem and recognises the integral role of technologies such as eHealth, mHealth, Internet of Things (IoT), wearables and cloud, among others, in the delivery of health services.

In 2018, NITI Aayog released a proposal on **National Health Stack** with the objective of providing a framework for the country's futuristic digital health system.

National Digital Health Mission (NDHM) aims to create a management mechanism to: **(a) Process digital health data** and facilitate its seamless exchange; **(b) Develop registries** of public and private facilities, health service providers, laboratories and pharmacies; **(c) Support clinical decision-making** as well as offer services like telemedicine.

The NDHM has the potential to make the **health system more evidence based, transparent and efficient**. Operationalising a **single health ID** and profile for every citizen, as envisaged under the NDHM, is an important reform for optimising health information systems.

Challenges to e-Governance in Healthcare in India

Fragmented Sector: It is estimated that nearly 98% of the country's health facilities employ 10 people or less. The fragmentation of the sector creates hurdles for digitisation.

Isolated Systems: A lot of information including patient records are scattered across disparate manual or IT systems with limited or no possibility of interoperability. In addition there are issues related to **lack of shared standards for health records** as well as the absence of a common and consistent healthcare design

Importance of eGovernance in Healthcare: Health Information Systems

Informed Decision-making: Operationalising a single health ID and profile for every citizen can **minimize the need for repeat investigations** and facilitate more informed decision-making by doctors.

Enable Data Analytics: Digital health records can also enable data analytics at the population level to identify treatments which are **likely to evoke a better response from patients**.

Monitoring: A system-wide electronic health profile can **enable monitoring of diseases and efficient analysis of patient data**. It can facilitate geographical, demographical and risk-factor based monitoring of health, followed by the design of **targeted interventions**. e.g., in context of COVID-19 pandemic, an analysis of comprehensive digital health profiles of a substantial part of the population, can give a head start in identifying people with comorbidities and implementing preventive health interventions expeditiously.

Avoid Duplicity: An effective IT infrastructure linking public and private healthcare establishments, through information exchanges, will ensure data consistency across systems, eliminate duplication and minimize the reporting burden.

Accurate Information: Digitization will enable access to accurate information about the credentials and pricing of services offered by various health facilities, providers and diagnostic laboratories.

Eliminate Geographical Barriers: The concept of connected care where eICUs, neonatal ICUs and **remote operating centres** can be monitored by experts who are not present in same geographical location can eliminate geographical barriers and enhance access.

Research and Development: For researchers, access to this healthcare data can facilitate the evaluation of programme and policy effectiveness as well as accelerate innovation. Analytics of disease load and patient response can help in **drug/vaccine development**. The use of technologies like Artificial Intelligence (AI) for anonymised, aggregated health data can pave the way for **predicting the likelihood of a patient falling sick**.

Operational Efficiencies: Technology can improve operational efficiencies in the healthcare sector, **strengthening supply chain performance** and enabling skilling of health professionals at large scale. For skilling and up-skilling health professionals as well as delivering continuing medical education, digital education platforms can enable dissemination of information pertaining to the latest advancements in the field along with training modules for specific diseases.

Initiatives for e-Governance in Healthcare Services Delivery

e-Sanjeevani: It is a tele-consultation services initiative that employs Information Communication Technologies (ICT) to enable diagnosis, treatment and management of diseases.

Swasth: It is a coalition of over 100 healthcare specialists in the private sector to launch a **telemedicine application** which aims to deliver equitable and affordable healthcare to all Indians, by cutting across geographical and income barriers. It is an **open-source platform** built with inter-operability principles that comply with the Government's National Digital Health Mission. The application **facilitates seamless, remote interaction between registered medical practitioners and patients** through multiple modes of video and telephony. It also **deploys Artificial Intelligence based triaging** to determine the care required, culminating in a digitally signed prescription and treatment advice. It also **provides services like home quarantine assistance**, access to diagnostic laboratories and pharmacies as well as hospital bed discovery and booking assistance at a subsidised cost.

e-Hospital Management System tracks the delivery of patient care and diagnostic services.

The **Mera Aspataal** initiative captures **patient feedback for the services** received by them in hospital.

The **TB Missed Call initiative** is mobile service for providing **treatment and counselling to TB patients**.

Through the **Kilkari** application, the Government delivers **free messages every week pertaining to pregnancy and child care** between the second trimester of pregnancy until the child is one year old.

The **M-Cessation** application encourages people to quit tobacco use.

Numerous platforms have also been launched by the Government for tracking service delivery. These include the **Nikshay platform** for tracking TB patients, the **Mother and Child Tracking System** for monitoring pregnant women and children under five years of age and the **Ayushman Bharat – Health and Wellness Centre portal** for overseeing the delivery of comprehensive primary healthcare services through Health and Wellness centres across the country.

Inclusion of **telemedicine in the NDHM's digital suite** will help connect patients with doctors and specialists. It can help address lack of access to doctors and healthcare professionals in rural areas. A timely 5-minute consultation enabled by telemedicine can save lives and avoid huge downstream costs.

Aarogya Setu: It was launched during COVID-19 pandemic to facilitate effective contact tracing. It allows people to assess their risk of contracting the infection based on their location and interactions with others.

The **CoWIN Application** is a repository of COVID vaccination data. It is a platform to register for COVID-19 vaccine. It helped in tracking the pace of vaccination during the pandemic.

Electronic-Urban Primary Healthcare Centres (e-UPHCs): With a footfall of 12,000 on a daily basis, the program has touched 5.2 million lives over two years and has brought quality healthcare within the reach of all citizens, by significantly leveraging technology. This model can be replicated in other rural areas with private players. E-ICUs can also be set up in semi-urban and rural areas and connected to a central monitoring hub.

Changing Trends in Healthcare Services Post COVID-19 Pandemic

Earlier patients from Tier-2 and Tier-3 cities travelled to Tier-1 city for accessing healthcare services. Now they can access Tier-1 city services through digital platforms.

Online training and education of medical learning and the use of simulators is far more prevalent and acceptable nowadays.

New technologies in simulation like haptic feedback are enabling realistic online training. With haptic feedback, trainees can get an experience of touch to realistically simulate the jerks and vibrations which would otherwise be experienced by a surgeon during surgery.

Conclusion

The market size for telemedicine in India was around US\$ 830 million in 2019. It is projected to increase to US\$ 5.5 billion by 2025 growing at a CAGR of 31%. What is clear from these trends is that the healthcare sector is moving towards the digital transformation. In future, connected care may become a norm and patients may no longer be constrained by geography in accessing healthcare services. The Government should scale-up its efforts regarding e-governance in healthcare sector to equip doctors and hospitals to deliver accurate diagnosis and treatment to patients using the latest technologies.

Syllabus: GS II, Issues relating to development and management of Social Sector/Services relating to Health; e-Governance: applications, models, successes, limitations, and potential

Source: Kurukshetra December 2022

Collegium System and the NJAC: The Issue of Judicial Appointments – Explained, pointwise

Introduction

There has been an ongoing confrontation between the Government and the Judiciary regarding the issue of Judicial Appointments (of Judges to Higher Judiciary). The Government has issued concerns regarding the Collegium System, calling it opaque; and the invalidation of the National Judicial Appointments Commission (NJAC) by the Supreme Court in 2015. There has been disagreement between the Government and the Supreme Court regarding the names recommended by the Supreme Court Collegium for appointments of Judges to Higher Judiciary. The Government has reiterated the need for a National Judicial Appointments Commission (NJAC), prompting the Supreme Court to defend the present Collegium system. The friction between two organs of the State does not bode well for the functioning of the democratic set-up. Experts have pointed out benefits and shortcomings with both the systems. In this context, the Government and the Judiciary must resolve the differences amicably and arrive at a system that is a best fit between the two: NJAC and the Collegium System.

What is the current mechanism of Judicial Appointments?

At present, the Judicial Appointments and transfers (Higher Judiciary, Supreme Court and the High Courts) are undertaken through the 'Collegium System'.

The Collegium of the Supreme Court is a body of 5-Judge body, **headed by the Chief Justice of India**. It includes 4 senior-most Judges of the Supreme Court. The Collegium recommends the name of Judges to be appointed to the Court.

The Government also undertakes background checks of the candidates through its agencies like Intelligence Bureau (IB). The Government may raise objections to the choice and ask for clarification. The Government can **return the recommendations** of the Collegium for **reconsideration**. However, if the recommendations are **reiterated, the Government must accept them** (SC Judgment).

The Collegium System has not been mentioned in the Constitution. It has evolved through series of Judgments of the Supreme Court. These Judgments are **Gupta & Others v. Union of India, 1981** (First Judges Case), **Supreme Court Advocates on Record Association Vs. Union of India, 1993** (Second Judges Case) and the **In re Special Reference 1 of 1998** (Third Judges Case).

Constitutional Provisions regarding Judicial Appointments and the Evolution of the Collegium System



- **Article 124(2):** The Judges of the Supreme Court are appointed by the President. She should consult such a number of the Judges of the Supreme Court and of the High Courts in the States as she may deem necessary for the purpose.
- **Article 217:** The Judge of a High Court shall be appointed by the President in consultation with the Chief Justice of India and the Governor of the State. The Chief Justice of the High Court should also be consulted except in case of his/her own appointment.
- **First Judges Case (1981):** The SC said that consultation under Article 124 doesn't mean concurrence. The President is not bound by CJI's advice.
- **Second Judges Case (1993):** The SC overruled its previous decision and said CJI's advice is binding. The CJI is required to formulate its advice based on a collegium of judges consisting of CJI and two senior-most SC judges.
- **Third Judges Case (1998):** The SC expanded the collegium to a five-member body to include the CJI and the four senior-most judges of the court after the CJI.

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What are the concerns associated with the Collegium System?

Constitutional Status: The Collegium is **not prescribed in the Constitution**. Article 124 mentions consultation, which the **SC interpreted as 'concurrence'** in Second Judges Case (1993). During the hearing against the NJAC, the then SC Bar President had argued that the **Constituent Assembly** had considered a proposal for making **Judges' appointment 'in concurrence'** with the CJI but had eventually **rejected it**. The Collegium

Transparency There is no official procedure for selection or any written manual for functioning of the Collegium. The parameters considered for selection (or rejection) are not available in the public domain.

Accountability: The selections of Judges by the Judges is considered undemocratic. Judges are not accountable to the people or any other organ of the State (Legislature or Executive). It can add an element of arbitrariness in functioning.

Criticism by Judges: Many retired Judges have criticized the working of the Collegium, especially the lack of transparency. Several controversial appointments have been made despite objections by the member-Judges of the Collegium.

No Checks: There are no checks on the process. Nor has there been any review regarding the effectiveness of the process. Critics of the system argue the phenomena of '**Uncle Judges**' wherein near relatives, kith and kin of sitting Judges are appointed to the higher judiciary leading to **nepotism**. **Law Commission** in its **230th Report** (2012) had recommended that that the Judges, whose kith and kin are practicing in a High Court, should not be appointed in the same High Court. The absence of transparency, accountability and external checks creates **space for subjectivity** and **individual bias in appointments**. In some cases, the principle of seniority has been ignored.

No Reforms: The Supreme Court did not amend the contentious provisions of the NJAC Act or added safeguards to the Act. Instead it struck down the whole Act. The Supreme Court reverted to the old Collegium System. However, the Court did not take any step to address the concerns associated with the Collegium System.

No Global Equivalent: India is perhaps the only country where Judges appoint other Judges without involvement of any other organ of the State.

What was the National Judicial Appointments Commission (NJAC)?

The Parliament had passed the **99th Constitutional Amendment Act, 2014** and the **National Judicial Appointments Act, 2014** that proposed to create a National Judicial Appointments Commission (NJAC). The NJAC was **supposed to be an independent Commission to replace the Collegium System** to appoint Judges to the higher Judiciary.

The Commission would have consisted of 6 members: **(a)** The **Chief Justice of India** as the ex-officio Chairperson; **(b)** Two senior-most Supreme Court Judges as ex-officio members; **(c)** The Union Minister of Law and Justice as ex-officio member; **(d)** Two **eminent persons from civil society**. The eminent persons were to be nominated by a committee consisting of the Chief Justice of India, Prime Minister of India and the Leader of Opposition in the Lok Sabha. One of the eminent persons was to be nominated from SC/ST/OBC/minorities or women.

The **NJAC Act prescribed the procedure** to be followed by the Commission to appoint judges. The Act **empowered any 2 members of the NJAC to veto a recommendation** if they did not agree with it.

In 2015, the Supreme Court had declared the Amendment Act and the NJAC Act as **unconstitutional**, as it impinged on the **independence of the Judiciary** and undermined the **basic structure of the Constitution**

What were the issues associated with the National Judicial Appointments Commission (NJAC)? **First**, the two eminent persons to be part of the NJAC **need not have any expertise in Law** or related to the functioning of the Courts. This would create an avenue for the Government to appoint any person to the Commission.

Second, Certain terms were left unexplained and ambiguous in the Acts e.g., Section 5(1) of the NJAC Act required the NJAC to recommend the senior-most Judge of the Supreme Court as the Chief Justice of India "if he is considered fit to hold the Office". However the criteria for fitness has not been defined.

Third, the **veto power by any two members** could have resulted in overriding of the Judicial opinion.

Fourth, the **CJI had no Casting Vote**. The NJAC had an even number of 6 members but the Chairperson, the Chief Justice of India, had no casting vote. A casting vote could have been useful in avoiding a deadlock (due to split in the even number of votes).

Fifth, The Chief Justice and two senior-most judges of every High Court had to nominate persons to the NJAC for appointment as High Court Judges. Simultaneously, the **NJAC could also nominate persons** for appointment as High Court Judges. This could have **resulted in conflict** if the two set of nominees were different.

Sixth, The **NJAC had the power to frame regulations** laying down the criteria of suitability, and the procedure of appointing judges of the SC and the HCs. The **Parliament had the power to nullify these regulations**, thus giving **over-riding powers to the Legislature over Judiciary**.

What are the benefits of the Collegium System?

Checks Interference of the Executive: The system isolates Judiciary from the influence of Executive and Legislature. It **ensures independence of the Judiciary**. The interference of the Executive manifested during Emergency when several settled conventions were disrupted like appointment of senior-most Judge as the Chief Justice.

Executive as Main Litigant: The Government is the main litigant in Courts accounting for ~50% of the cases. Prominence to the Executive in appointments **may impact impartiality of the Judiciary** in adjudication.

Expertise: Executive may lack the expertise regarding requirements of a Judge. The Judiciary may be the best 'judge' in this regard.

Safeguarding the Constitution: Excessive Government control over Judiciary will make the Judges vulnerable to external influence. Judicial Independence is absolutely essential to safeguard the Constitution and underlying principles like Right to Life, Right to Privacy etc.

What should be done going ahead?

Revive NJAC: Many judicial experts, including former Judges contend that NJAC system can be a better alternative than the Collegium system, **provided the infirmities in the NJAC Act are rectified**. In this context, the NJAC can be revived. All stakeholders like Judiciary, Legislature, Bar Associations **should be consulted** before finalization of any proposal.

Ensure Smooth Functioning: Till a new system is established, the Government should adhere to the recommendations of the Collegium and make the appointments in a prompt manner. Delay in appointments and needless friction should be avoided.

Finalize MoP: The Government and Judiciary should cooperate to finalize the Memorandum of Procedure (MoP) regarding judicial appointments. The **MoP should have clear guidelines** like transparency, eligibility criteria, mechanism for complaints against candidates etc.

Bring Transparency: The Judiciary should bring more transparency in the process of appointments. Collegium must disclose the reasons for selection and rejection of a candidate.

All India Judicial Services (AIJS): Several experts have argued for establishment of All India Judicial Services (AIJS) to **improve the quality of judges in the lower Judiciary**. This should be consulted and implemented post consensus among all stakeholders.

Secretariat: Experts recommend that a well-resourced independent secretariat for judicial appointments should be established. There should be a comprehensive candidate database as well. It is necessary to be aware of vacancies in advance in order to facilitate quick judicial appointments.

Conclusion

The system of Judicial Appointments should be improved expeditiously. Judicial vacancy is one of the major reason for judicial pendency. All organs of the State should cooperate with each other with right citizen-centric spirit to ensure smooth functioning. Both the Collegium System and the NJAC have their pros and cons. The Government, the Parliament and the Judiciary should coordinate with each other to design the best possible system for Judicial Appointments.

Syllabus: GS II, Separation of powers between various organs; Structure, organization and functioning of the Executive and the Judiciary.

Source: [Indian Express](#), [Indian Express](#), [The Hindu](#), [The Hindu](#)