



## 7 PM COMPILATION

**September, 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

The UN Treaty on High Seas – Explained, pointwise

**Topic:- International Relations**

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

Issues in the Real Estate Sector in India and the RERA Act – Explained, pointwise

**Topic:- Economic development**

**Sub topic:- Infrastructure: Energy, Ports, Roads, Airports, Railways etc.**

The Electricity Amendment Bill, 2022: Provisions, Benefits and Concerns – Explained, pointwise

**Topic:- Governance**

**Sub topic:- Government policies and interventions for development in various sectors and issues arising out of their design and implementation.**

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**Topic:- Indian Constitution and Polity**

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ESG Framework In India – Explained, pointwise

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Precision Farming: Technologies, Benefits and Challenges – Explained, pointwise

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Road Safety in India – Explained, pointwise

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Urban Floods: Causes, Impacts and Remedies – Explained, pointwise

**Topic:- Disaster Management**

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Managing Climate Change: A Strategy for India – Explained, pointwise

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

Need for a Global Pandemic Treaty – Explained, pointwise

**Topic:- Social Justice**

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

[Kurukshetra September Summary] Tribal Development Strategies – Explained, pointwise

**Topic:- Social Justice**

**Sub topic:- Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes.**

India Japan Relationship – Explained, pointwise

**Topic:- International Relations**

**Sub topic:- Bilateral, regional and global groupings and agreements involving India**

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**Topic:- Environment and Bio-diversity**

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Draft Ports Bill 2022 and Port Infrastructure in India – Explained, pointwise

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[Yojana September Summary] Counter-Terrorism Scenario in J&K – Explained, pointwise

**Topic:- Security Issues**

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The Lancet Commission Report on COVID-19 Pandemic: Lessons for the Future – Explained, pointwise

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[Kurukshetra September Summary] Education for Tribals – Explained, pointwise

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Dispute Settlement System of the WTO: Challenges and Solutions – Explained, pointwise

**Topic:- International Relations**

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

Issues in Urban Planning in India – Explained, pointwise

**Topic:- Indian Society**

**Sub topic:- Urbanization, their problems and their remedies**

Logistics Sector in India and National Logistics Policy – Explained, pointwise

**Topic:- Economic development**

**Sub topic:- Infrastructure**

Tourism Sector in India – Explained, pointwise

**Topic:- Economic development**

**Sub topic:- Infrastructure**

[Yojana September Summary] Ushering Investments (in J&K) – Explained, pointwise

**Topic:- Economic development**

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



## The UN Treaty on High Seas – Explained, pointwise

### Introduction

Delegates from 168 countries were involved in negotiating a legally binding treaty to conserve biodiversity in the high seas or the areas beyond national jurisdiction. However, no consensus was reached as the negotiations ended on August 26. Environmental campaigners have called it a “missed opportunity”. The UN Treaty on High Seas is being considered crucial to protect the marine biodiversity amidst rising threats due to anthropogenic activities. It is expected that the treaty will also help mitigate the impact of climate change on oceans. At present, only 1.2% of international waters fall under protected areas. In June 2022, the UN Secretary General had declared an “Ocean Emergency” at the UN Ocean Conference in the backdrop of alarming rate of extinction of marine species.

### What is the current International framework regarding management of oceans?

The United Nations Convention on the Law of the Sea (UNCLOS) lays down a comprehensive regime of law and order in the world’s oceans and seas establishing rules **governing all uses of the oceans and their resources**. The convention was signed in 1982 and at present it has 168 parties. The 1982 Convention was built on the works of earlier **UNCLOS I** held in 1956 at Geneva. It had resulted in signing of 4 treaties: **(a)** Convention on the Territorial Sea and Contiguous Zone; **(b)** Convention on the Continental Shelf; **(c)** Convention on the High Seas; **(d)** Convention on Fishing and Conservation of Living Resources of the High Seas.

However, the 1956 Convention couldn’t decide on the issue of breadth of territorial waters, different countries had adopted different limits (3 mile to more than 12 miles). The 1982 Convention settled the issue with comprehensive coverage of number of associated aspects like setting limits, navigation, archipelagic status and transit regimes, exclusive economic zones (EEZs), continental shelf jurisdiction, deep seabed mining, the exploitation regime, protection of the marine environment, scientific research, and settlement of disputes. The convention set the limit of various areas which include:

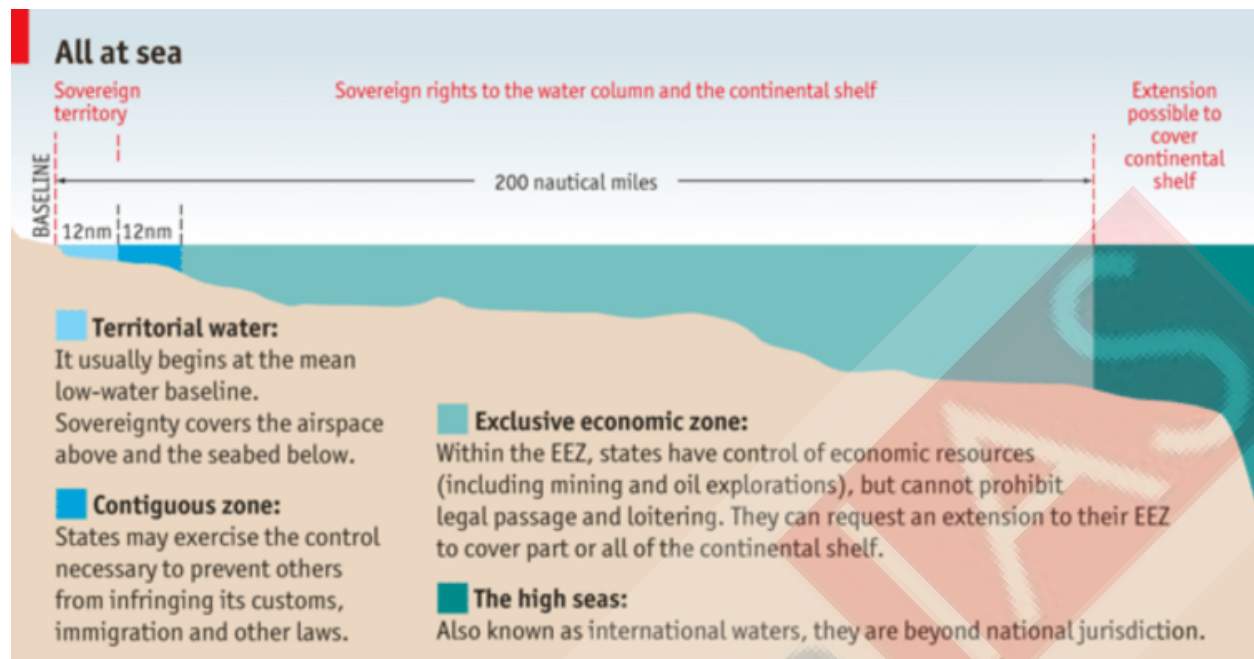
**Internal Waters:** Covers all water and waterways on the landward side of the baseline. The State is free to set laws, regulate use, and use any resource. **Foreign vessels have no right of passage within internal waters.**

**Territorial Waters:** Extend up to 12 nautical miles (22 kilometres; 14 miles) from the baseline, the coastal state is free to set laws, regulate use, and use any resource. Vessels have the right of innocent passage through any territorial waters (Passage is not prejudicial to the peace or security of the coastal State, Fishing, polluting, weapons practice, and spying are not innocent).

**Contiguous Zone:** Extends further 12 nautical miles beyond the territorial waters. The state can enforce laws in four specific areas – customs, taxation, immigration, and pollution.

**Exclusive Economic Zones (EEZs):** EEZs extend up to 200 nautical miles (370 km; 230 mi) from the baseline. Within this area, the **coastal nation has sole exploitation rights over all natural resources.**

There is no formal definition of International Waters or High Seas in international law, but seas beyond EEZ are called as High Seas.



Source: *The Economist*

The UNCLOS helped in creation of regulating authorities; (a) The International Tribunal for the Law of the Sea; (b) The Commission on the Limits of the Continental Shelf; (c) The International Seabed Authority. It has also outlined general responsibilities towards limiting marine pollution and preserving marine resources.

### What is the proposed UN Treaty on High Seas?

The treaty is being referred to as the '**Paris Agreement for the Ocean**'. It is being negotiated under the UNCLOS.

In 2015, the United Nations General Assembly (UNGA) had passed a resolution to develop an **international legally binding instrument** under UNCLOS on the **conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction**. In 2017, the UNGA, decided to convene an intergovernmental conference (IGC), with a view to develop the instrument as soon as possible. The negotiations have been going on since 2018 through a series of intergovernmental conferences.

The new treaty will establish a **global framework to conserve and manage biodiversity of the High Seas**. High seas constitute ~65% of surface and ~95% of volume of oceans.

The treaty is focused on key areas: (a) The conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction (BBNJ); (b) **Marine Genetic Resources** (MGRs: biological material from plants and animals in the ocean that can have benefits for society, such as pharmaceuticals, industrial processes and food), including questions on benefit-sharing; (c) Area Based Management Tools (ABMT), including **Marine Protected Areas** (MPAs); (d) Environmental Impact Assessments (EIA); (e) Capacity-building and the Transfer of Marine Technology (CB&TMT) (ensuring less-industrialized countries can meet treaty objectives through a mechanism for sharing marine technology and knowledge).

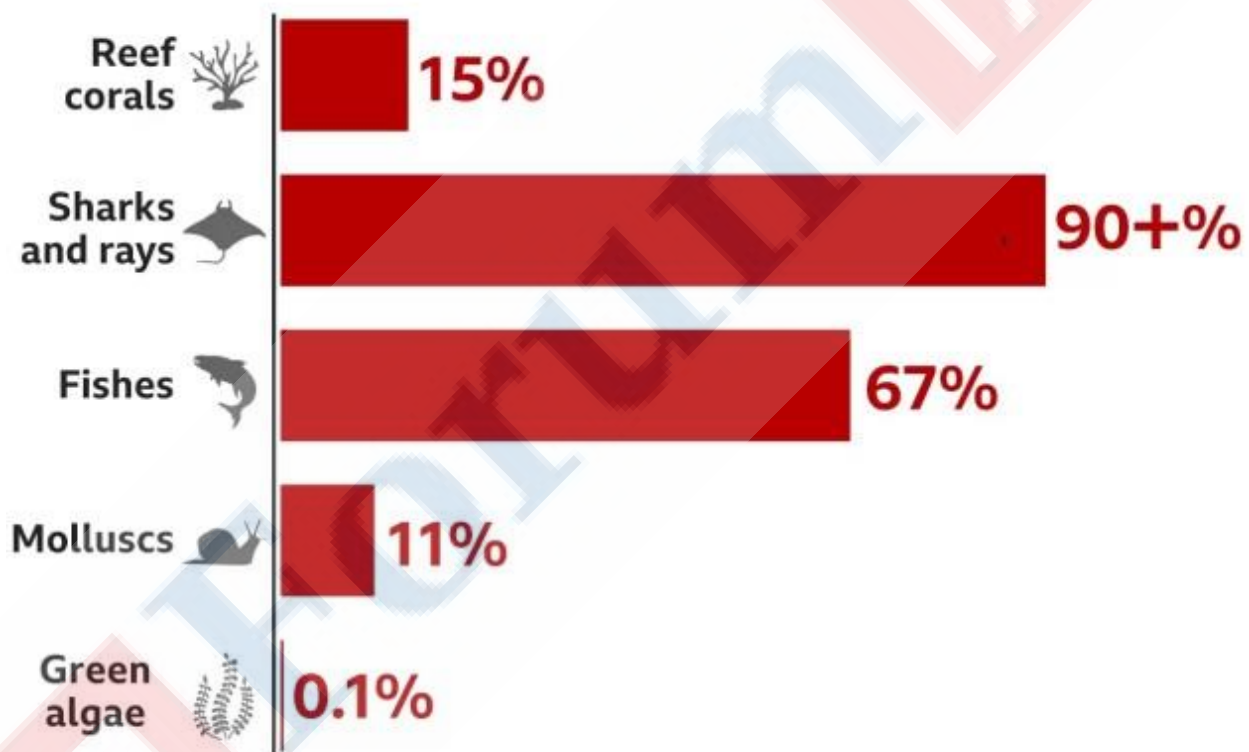
### What is the need for the Treaty on High Seas?

Part XII of UNCLOS (1982) contains special provisions for the protection of the marine environment. However, there are many governance gaps and shortcomings that do not address contemporary challenges e.g., there is no comprehensive, agreed-upon **framework governing resource extraction or conservation in the international waters** (high seas).

The oceans are facing several challenges: **(a)** Technological advances enabling greater access to high seas resources are exposing marine ecosystems to severe impacts from fisheries and other extractive industries; **(b)** Marine life living outside of the 1.2% of protected areas are at risk of exploitation from the increasing threats of **climate change**, **acidification**, **overfishing** and **shipping traffic**; **(c)** Chemical, noise and plastic pollution is rising unabated in the seas; **(d)** According to NASA, 90% of global warming is occurring in the oceans.

The greatest threat is to the marine biodiversity. According to a study commissioned by the National Oceanic and Atmospheric Administration, between 10% and 15% of marine species are already at risk of extinction. Sharks and rays are among the species set to lose out from the failure to pass the treaty. According to the IUCN they are facing a global extinction crisis – and are one of the most threatened species groups in the world. Many migratory species such as turtles and whales move through the world's oceans interacting with human activities like shipping which can cause them severe injuries and death.

## Global species assessed for extinction threat

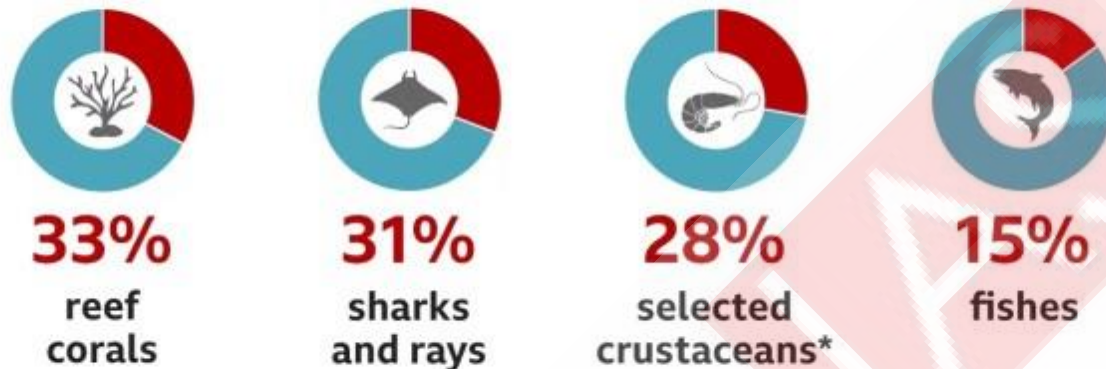


\*Assessed species include lobsters, freshwater crabs, freshwater crayfishes and freshwater shrimps



# One in ten marine species are at risk of extinction

Share of species at threat of extinction



\*Assessed species include lobsters, freshwater crabs, freshwater crayfishes and freshwater shrimps

Source: BBC

There are concerns that without this treaty, not only will marine species not be protected but also **some species will never be discovered before they become extinct**.

A legally binding treaty would put limits on how much fishing can take place, restrict the routes of shipping lanes and exploration activities like deep sea mining. It will help in slowing down the pace of deterioration of marine ecosystems and restore their capacity to self-stabilization.

## What are the major impediments to the High Seas Treaty?

The negotiations have failed to reach consensus on several contentious issues like: **(a) Ensuring fair access to marine resources (MGRs)** for all. Industrialized nations have technology to access deep sea resources which less-industrialized nations lack. Just 10 industrialized countries account for 71% of fishing catch value and 98% of patents on genetic sequences of marine life in the high seas. Several Latin American nations have criticized richer nations' rigidity and continued focus on their own narrow economic interests; **(b) Principles and procedures to establish Marine Protected Areas (MPAs)**: They are global common that belong to all countries. No single country can claim exclusive right over high seas and its resources. There has been lack of consensus on framing an **overarching mechanism for implementing and managing MPAs**, how to integrate them with existing fisheries management policy or how the environmental impacts of planned activities should be assessed; **(c)** There are also differences regarding **funding and support for developing countries**. Arctic is another undecided issue. As Arctic ice melts due to climate change and shorter winters, it will open up new area of extraction. But countries are divided over the activities to be permitted and their impact on Arctic ecosystem.

## What are the various marine resources?

Generally, marine resources are divided into three categories; **(a) Biotic resources**: They include phytoplanktons (algae and diatoms), zooplanktons, fishes, crustaceans, molluscs, corals, reptiles and mammals etc.; **(b) Abiotic resources (mineral and energy)**: They include **(i) Mined Minerals** such as salt, sand, gravel, phosphate, diamonds, manganese, copper, nickel, iron, and cobalt;

(ii) **Drilled Minerals** such as crude oil and gas hydrates; (iii) Minerals present in the deep sea waters such as Manganese nodules, Cobalt crusts and Massive sulphides; (c) **Commercial resources**: This includes navigation, aviation, trade and transport, tourism, livelihood support etc.

### Deep Sea Mining

Deep-sea mining is the process of extracting/excavating mineral deposits from the deep seabed. The deep seabed is the seabed at ocean depths greater than 200m, and covers about two-thirds of the total seafloor. Research suggests deep-sea mining could severely harm marine biodiversity and ecosystems.

Despite this, there is growing interest in the mineral deposits of the seabed. This is said to be due to depleting terrestrial deposits of metals such as copper, nickel, aluminium, manganese, zinc, lithium and cobalt. Demand for these metals is also increasing in technologies like smartphones, wind turbines, solar panels and batteries.

### What should be the approach going ahead?

The timeline of next round of negotiations is not clear yet, but the deadline has been set for the end of the year.

There is a need to facilitate greater participation to allow all countries and communities (especially coastal state, small island and Landlocked developing countries) to have a say in how marine resources existing outside of national jurisdiction should be shared.

Additionally, adjacent coastal states should have a role in decision-making mechanisms pertaining to activities in areas beyond national jurisdiction that affect them.

There is a need to have an effective, reliable mechanism to build capacity and transfer marine technology to the developing nations. It is essential to the success of the treaty.

### Conclusion

The marine ecosystems are facing dangers of unprecedented level. Ocean systems are a vital buffer against global warming. They provide a primary protein source for more than 3 billion people, and support the livelihoods of almost 600 million people. Just like atmospheric warming; the window to take actions to protect marine ecosystems, before irreversible catastrophic damages happen, will be limited. The countries must act with urgency to reach consensus to protect marine ecosystems in the earnest.

**Syllabus:** GS II, Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests; GS III, Conservation, Environmental pollution and degradation.

**Source:** [Indian Express](#), [Down to Earth](#), [BBC](#), [Foreign Policy](#)

## Issues in the Real Estate Sector in India and the RERA Act – Explained, pointwise

### Introduction

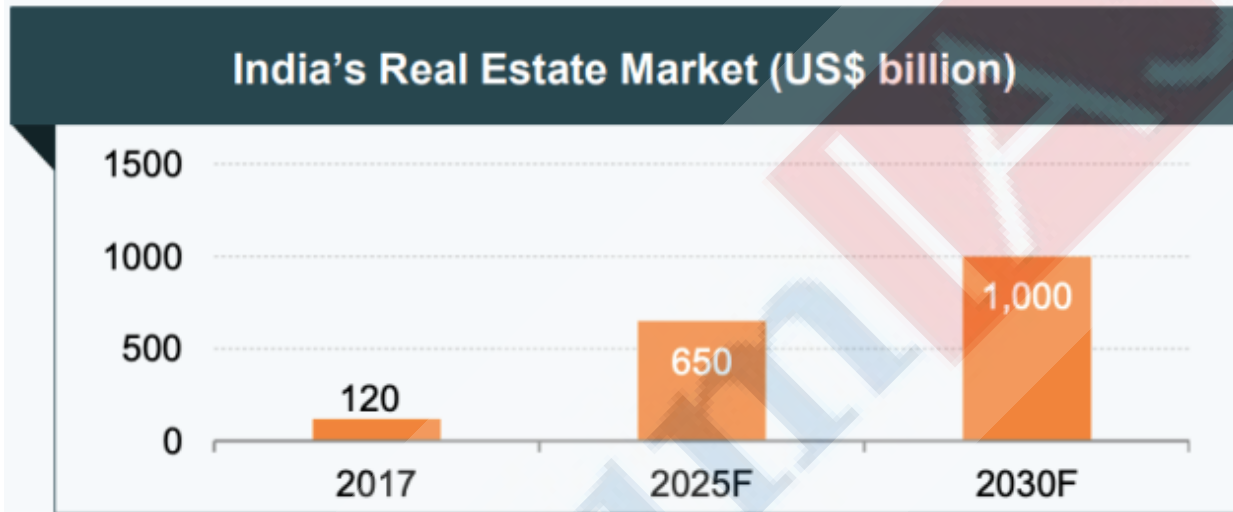
The controlled demolition of Supertech towers in Noida grabbed media headlines all over India. The towers were demolished after a prolonged legal battle of almost a decade. In 2021, the Supreme Court had upheld the 2014 Judgment of the Allahabad High Court that had ordered the demolition. The Court had held that the towers were built in violation of building and city planning norms. Several experts have remarked that the demolition is symptomatic of the ills affecting the Real Estate sector in India. They contend that while the demolition is being celebrated as the law catching up with the culprits, the rot run by nexus of corrupt government officials, political leader and builders is too deep to be cured by one corrective action. The Government has enacted the Real Estate (Regulation and Development) Act in 2016 to regulate

the sector. While there have been some positive impact, but more efforts are required to address the gaps.

#### About the Real Estate Sector in India

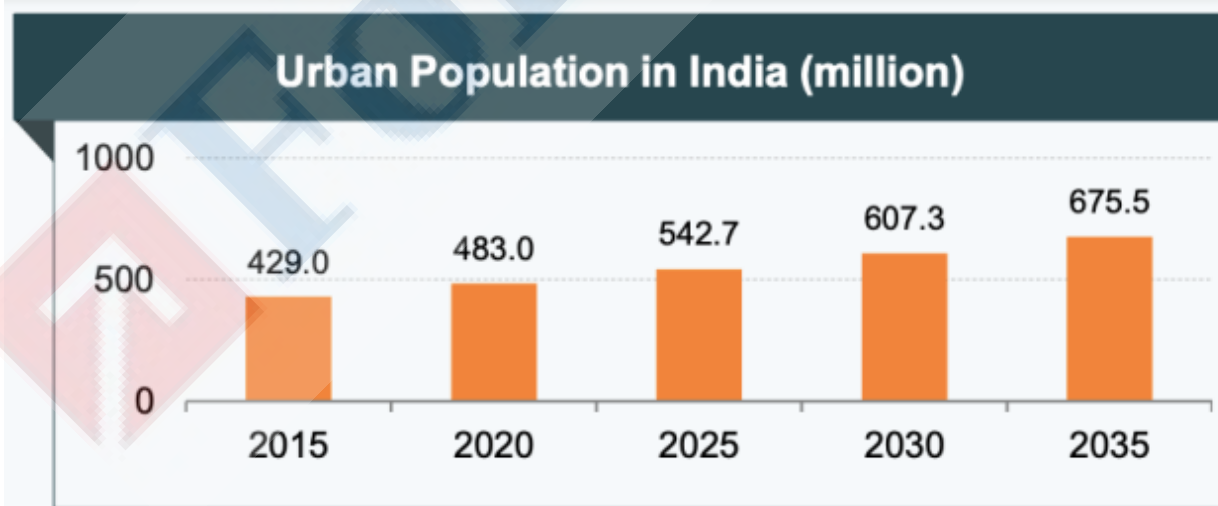
The real estate sector is one of the most globally recognized sectors. It comprises of four sub-sectors: Housing, Retail, Hospitality, and Commercial. The construction industry ranks third among the 14 major sectors in terms of direct, indirect and induced effects in all sectors of the economy. In India, the **real estate sector is the second-highest employment generator, after the agriculture sector.**

According to NITI Aayog, by 2030, the Indian real estate market is predicted to be worth US\$1 trillion from US\$ 200 billion in 2021 and will contribute 13% of the country's GDP by 2025.



Source: India Brand Equity Foundation

The sector will be driven by rapid urbanization as Indian cities grow over the decade. According to the Economic Times Housing Finance Summit, the current shortage of housing in urban areas is estimated to be ~10 million units. An additional 25 million units of affordable housing are required by 2030 to meet the growth in the country's urban population.



Source: India Brand Equity Foundation



In addition, the rapidly expanding digital economy will create demand for real estate as well. According to Savills India (Real Estate Consulting Agency), real estate demand for data centres is expected to increase by 15-18 million sq. ft. by 2025.

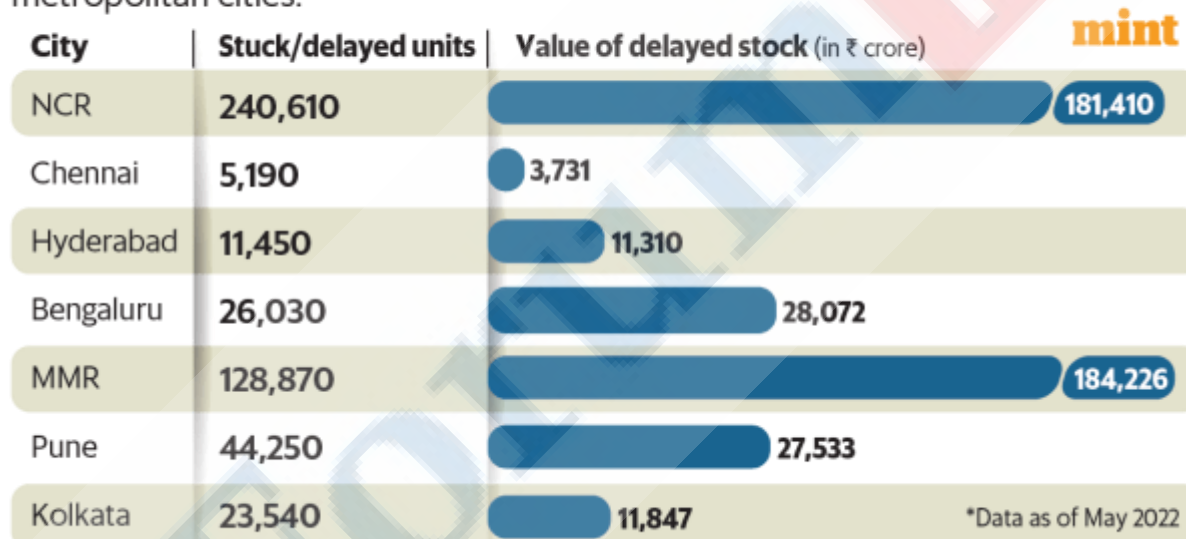
### What are the major issues in the Real Estate Sector in India?

**Affordability, Inflation and Volatility in financial market:** Urban housing is characterized by high prices. It is nearly impossible for majority of Indians to buy a house in major urban areas. The surge in global commodity prices has increased the cost of construction substantially. Rise in cost of living and interest rates on home loans further reduce affordability. Apart from this, inflation and volatility in the financial markets remain key concerns for the real estate sector.

**Lack Of Efficient Project Management:** It remains a major impediment. The requirement of multiple clearances from multiple Government departments, delay in grant of approval by civic authorities, a lack of funding sources, and budget overruns due to significant delays lead to delays. According to an estimate by a realty consultancy firm, the construction of about 240,000 homes remains stalled in the National Capital Region (NCR) alone

## Hanging fire

Projects worth about ₹5 trillion are stuck or delayed across key metropolitan cities.



NCR is national capital region; MMR is Mumbai metropolitan region.

Source: Anarock Property Consultants

Source: Mint

**Lack of Transparency:** Though the real estate agents and projects are registered, all of them are not necessarily verified. This reflects the drop back of authorities in action.

**Corruption:** There is a nexus between corrupt government officials, builders and local political leadership. Often, there is blatant violation of laws and rules in terms of land-use norms, FSI or fire and safety compliance etc. For instance, the Supertech towers were built on land initially earmarked for a public park. The plan was changed to allow construction of 9-storey towers. Eventually, towers were built with 40 floors. Similarly, the commercial building in Mundka, Delhi, where fire tragedy occurred in May 2022, was operating without Fire NOC.

### What steps have been taken to resolve the issues in the Real Estate Sector in India?

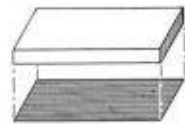
The Government's focus has been towards **making housing affordable** for everyone. Changes in floor space index (FSI) rules have made land hoarding unsustainable. Similarly, the

Government's push for '**Housing for All**' fuelled the demand for affordable housing and in turn generated much-needed liquidity in the sector.

## Floor Space Index

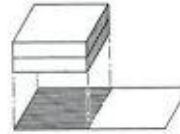
- It means the ratio between the **area of covered floor** (Built up Area) to the **area of the plot** (land) on which the building stands.
- FSI indicates the total amount of area (on all floors) which can be built upon a plot.
- Higher the FSI, **greater the number of floors** that can be constructed in the building.
- Thus, higher FSI results in **vertical urbanization**.

### FSI 1.0



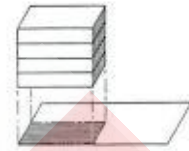
100 % LOT COVERED

If all the plot area is covered under built-up area, only **1 floor** can be constructed.



50 % LOT COVERED

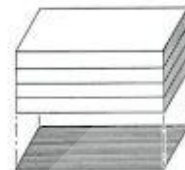
If 50% of the plot area is covered under built-up area, **2 floors** can be constructed.



25 % LOT COVERED

If 25% of the plot area is covered under built-up area, **4 floors** can be constructed.

### FSI 4.0



100 % LOT COVERED

If all the plot area is covered, **4 floors** can be constructed.



50 % LOT COVERED

If 50% of the plot area is covered, **8 floors** can be constructed.

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The Government has also tried to make the sector more transparent with the enactment of **Real Estate (Regulation and Development) Act, 2016 (RERA)**. It has improved the availability of information on project approvals. It has enhanced investors' confidence.

Other initiatives by the Union Government include: **(a)** Revival of stalled projects through **Special Window for Affordable & Mid-Income Housing (SWAMIH) fund**; **(b)** Creation of **affordable housing fund** with an initial corpus of about INR 10,000 crore to fund housing finance companies (HFCs) in the priority sector; **(c)** Real estate debt restructuring; **(d)** Moratorium benefits during COVID-19 pandemic (moratorium on interest payments on loans).

### What are the salient provisions of the RERA, 2016?

The Real Estate (Regulation and Development) Act, or RERA, was enacted to **regulate the real estate industry**, protect buyers' interests, and encourage developers to provide more professional and timely services.

## Objectives of the RERA, 2016

- **Ensure accountability** towards buyers and protect their interests.
- **Enhance transparency**, ensure fair-play and reduce frauds and delays.
- **Introduce professionalism** and pan-India standardization.
- Establish **symmetry of information** between the builder and buyer.
- Establish a **regulatory oversight mechanism** to **enforce contracts**.
- Establish a fast-track **dispute resolution mechanism**.

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The salient provisions of RERA, 2016 include:

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**Regulatory Authorities:** The Act provides for State Governments to create regulatory authorities (Real Estate Regulatory Authority, RERA) with a mandate to **register and maintain a database of real estate projects**; and to **protect the interest of buyers**. All projects with plot size of minimum 500 sq.mt or eight apartments need to be registered with Regulatory Authorities. Real Estate Agents also need to register with the Authority.

**Grievance Redressal:** Regulatory Authorities have power to address grievances of buyers. If buyer is not satisfied with the decision, they can challenge it to the **Appellate Tribunal** established in each State.

**Penal Provisions:** The Authorities can send show cause notices to developers, brokers and promoters if they violate their obligations under the RERA. If they are unable to justify their acts or omissions, they can be subjected to heavy fines. There are **provisions of imprisonment** of up to 3 years for developers and up to 1 year in case of agents and buyers for violation of orders of Appellate Tribunals and Regulatory Authorities.

**Timely Completion:** 70% of the funds collected from buyers need to be deposited in a separate dedicated account (escrow account) meant for that project only. The deposited money can be used only for the construction of that project. The provisions has been added to prevent diversion of funds by developer to some other project as was the common practice earlier. It will ensure timely construction.

In case of delays, builders have to refund buyers or pay interest on their money for delays.

**Transparency:** At the time of registration of project, the developer has to furnish specific details related to project like the Sanctioned plan, time period or completion etc. The Act defines terms like **Carpet Area, Common Area** etc. Buyers will be charged for the carpet area and not super built-up area. Developers can't do alteration or addition in the sanctioned plans and specifications of project layout, without the written consent of 2/3rd of allottees/homebuyers.

**Protecting Buyer's Interest:** The **developer is liable to repair any structural defects** that occur within 5 years of purchase. Similarly, a builder cannot take more than 10% of the cost of the project from the buyer as advance or application fees.

### **What has been the impact of RERA on Real Estate in India?**

The impact of RERA is not fully evident yet. This is because real estate projects have long gestation period. Since RERA is not applicable to projects prior to 2016, very few RERA compliant projects have been completed so far.

However, according to a report by the Government, RERA has led to improved compliance to timelines by builders. A project that had faced prolonged delays in Gautam Buddh Nagar was completed through intervention of the UP Real Estate Regulatory Authority at the request of the buyers.

Real Estate Market experts have observed that the urban market is now becoming dominated by big real estate developers that are **more professional and transparent in their dealings** (Corporatization of Real Estate). This is going to be good for the buyers in the long run. Going ahead, there is going to be reduction in over-supply; as earlier, many developers used to undertake multiple projects without due clearances. Now, this will be kept in check.

### **What should be the approach going ahead?**

**First**, the RERA does not address the issue of delays in grant of approvals by the Government authorities. There is a need to **reform the approval process** and **make it more transparent**. The practice of violation of planning and building norms followed by subsequent regularization of illegal projects and buildings need to be strictly prohibited.

**Second**, as pointed out by several policy experts, the process of urban planning is poor in India. This has resulted in haphazard urbanization and creation of slums lacking basic amenities. The urban planning process should involve expertise of professional urban planners.



**Third**, several studies, including by the National Institute of Public Finance and Policy, have noted the link of the Real Estate Sector and Black Money. Government is taking steps to increase transparency in real estate transactions and curb use of black money (like rationalization of stamp duties). However, more steps are needed in this regard e.g., stricter implementation of Benami Transactions Act, 2016.

### Conclusion

India is poised to undergo rapid urbanization in this and the coming decade. The real estate sector has an important role to play. It is crucial to address the lacunae challenging this sector in order to achieve sustainable urbanization. RERA, 2016 is the first corrective step in this regard. The Government must undertake further reforms related to urban planning bodies and checking corruption to make the process of urbanization inclusive and equitable.

**Syllabus:** GS III, Indian Economy and issues related to growth, development; Infrastructure.

**Source:** [Mint](#), [Mint](#), [Business World](#), [Financial Express](#), [PIB](#), [Indian Express](#)

## The Electricity Amendment Bill, 2022: Provisions, Benefits and Concerns – Explained, pointwise

### Introduction

The Electricity (Amendment) Bill, 2022 was introduced in the Lok Sabha in the Monsoon Session (2022) of the Parliament. The Bill amends the Electricity Act, 2003. The 2003 Act regulates the electricity sector in India. Through this Bill, the Government intends to bring several reforms in the electricity sector through this Amendment Bill including the principle of open access. Some provisions of the Bill have been opposed by several stakeholders including the opposition political parties, some State Governments and a section of farmers. The Bill has been referred to the Parliamentary Standing Committee for further discussions.

### What are the major issues in the electricity sector?

**Financial Health of State Discoms (Distribution Companies):** Years of populist tariff schemes, mounting Average Technical and Commercial (AT&C) losses and operational inefficiencies have adversely affected the financial health of State Distribution Companies (Discoms). The AT&C loss in distribution was 21% (2019–20) and Discoms incurred a loss of INR 867 billion after accounting for support of INR 1.1 trillion from the government. As of August 2022, Discoms have accumulated overdue, unpaid bills of INR 1.37 trillion.

According to latest government data, Discoms of 3 states — Tamil Nadu, Maharashtra and Telangana – are yet to pay about 57% of the total dues owed to power generating companies

**Read More:** [DISCOM sector in India: Challenges & solutions – Explained, pointwise](#)

**Fuel Security Concerns:** Coal supplies by Coal India Limited is limited to ~65% of actual coal requirement by coal based thermal plants. It leads to increased dependence on imported coal (at higher price) with the cascading result of high power generation costs.

**Under-procurement of Power by States:** Increasing power generation costs due to limited fuel availability, poor financial health of State Discoms, high AT&C losses have contributed in suppressed demand projections by State Discoms.

**Higher Financing Costs:** Over the last few years, the leading rates (by banks) to power sector have increased significantly in comparison to the rates at the time of project conception and appraisal. This has resulted in project cost overrun and hence higher end tariffs.

The Government has tried to undertake reforms in the sector for quite some time. With this Amendment Bill, the Government has tried to reform both the demand (consumer end) and supply side (distributor end).

## The Electricity Act, 2003

- The Electricity Act was passed by the Parliament in 2003.
- It consolidated the laws related to generation, transmission, distribution, trading and use of electricity.
- The Act had several objectives:
  - ◊ Protect the interest of consumers.
  - ◊ Rationalisation of tariffs.
  - ◊ Transparent policies regarding subsidies.
- The Act resulted in privatisation of distributing companies.
- The Act was amended in 2007. The provisions for 'cross subsidy' (to ensure subsidy to poor households) were added.

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### What are the salient provisions of the Electricity Amendment Bill, 2022?

**Multiple discoms in the same area:** The Electricity Act provides for multiple discoms to operate in the same area of supply. It requires discoms to distribute electricity through their own network. The Bill removes this requirement. Discom must provide **non-discriminatory open access** to its network to all other discoms operating in the same area, on payment of certain charges.

**Cross-subsidy Balancing Fund:** Upon grant of multiple licenses for the same area, the State government will set up a Cross-subsidy Balancing Fund. Any surplus with a discom on account of cross-subsidy will be deposited into the fund. The **fund will be used to finance deficits in cross-subsidy** for other discoms in the same area or any other area.

The matters related to the operation of multiple discoms in the same area will be **regulated in accordance with the rules made by the Union Government** under the Act.

Cross-subsidy refers to the arrangement of one consumer category subsidising the consumption of another consumer category

**License for distribution in multiple states:** The Central Electricity Regulatory Commission (CERC) will grant licenses for distribution of electricity in more than one State.

**Payment security:** Electricity will not be scheduled or despatched if adequate payment security is not provided by the discom. The Union Government may prescribe rules regarding payment security.

**Contract enforcement:** The Bill empowers the CERC and State Electricity Regulatory Commissions (SERCs) to adjudicate disputes related to the performance of contracts (related to sale, purchase, or transmission of electricity).

**Renewable purchase obligation:** The Act empowers SERCs to specify renewable purchase obligations (RPO) for discoms. RPO refers to the mandate to procure a certain percentage of electricity from renewable sources. The Bill adds that RPO should not be below a minimum

percentage prescribed by the Union Government. Failure to meet RPO will be punishable with a penalty between 25 paise and 50 paise per kilowatt of the shortfall.

**Power procurement and tariff:** Under the 2003 Act, in case of multiple discoms in the same area of supply, the SERC is required to specify the maximum ceiling for tariff. The Bill adds that the SERC will also specify a minimum tariff for such cases.

#### **What are the perceived benefits of the Electricity Amendment Bill, 2022?**

**First**, the provision of open access allows consumers to **choose their electricity supplier**. This will **enhance competition** between discoms. Increased competition will prompt them take steps to be more efficient (like taking steps to cut down commercial losses by better metering). The ultimate beneficiaries will be the consumers.

**Second**, the focus of the Government has been shifting from providing electricity connections to **ensuring enhanced quality of supply**, particularly in terms of hours and predictability of supply and steady voltage level. This Electricity Amendment Bill with its focus on discoms competition will help fulfil universal service obligations to provide last mile connectivity and supply.

**Third**, the Bill aims to **promote renewable energy** by requiring the SERCs to set the renewable purchase obligation of discoms within a new range set by the Union Government.

**Fourth**, the Bill makes provision for mandatory fixing of minimum as well as maximum tariff ceilings. This will help **curb predatory pricing** by power distribution companies and to protect consumers.

**Fifth**, the Electricity Amendment Bill has several provisions to ensure graded and **timely tariff revisions**. This will help provide discoms enough cash to be able to **make timely payments to power producers**. This move is aimed at addressing the recurrent problem of default by discoms in payment to generation companies.

**Sixth**, the payment security mechanism will ensure **power generators receive payments on time**. This will solve their cash flow problem (due to delay in payments by discoms). The producers can, in turn, make timely payments to Coal India for procurement of coal and avert power crisis that were witnessed recently.

**Seventh**, establishment of **cross-subsidy balancing fund** will ensure that the current subsidy mechanism is not disrupted (higher tariff for commercial sector and lower for domestic).

#### **What are the concerns associated with the Electricity Amendment Bill, 2022?**

The Bill has been opposed by opposition parties, several State Governments and some farmer bodies. The following are their concerns:

**First**, State Governments are concerned that certain provisions of the Bill encroach on their rights. Electricity is a subject under the **Concurrent List** (Item 38, List III (Concurrent) of Seventh Schedule), so the Union Government is well within its rights to enact a law. However, some concerns of the State Government are valid: **(a)** Power to CERC to grant license for distribution of electricity in more than one State. SERCs have better understanding of ground conditions; **(b)** The Union Government can give directions to the SERCs, **(c)** The Union Government will specify the minimum percentage of RPOs which was earlier decided by the SERCs; **(d)** The Bill makes changes in the the composition of the committee for selection of Chairperson/members of the SERCs. The Committee will now have a nominee of the Union Government.

**Second**, the Opposition parties have criticized the Bill arguing that that privatization will benefit private discoms at the cost of consumers.

**Third**, Farmers' organisations worry that the Bill will result in the **end of subsidies** to the farm sector.

**Fourth**, workers' union in the power sector [All India Power Engineers Federation (AIPEF)], fear loss of jobs and hence opposing the Bill.



**Fifth**, there is lack of clarity on certain aspects related to operations. It is not clear how maintenance and upgradation of infrastructure will be undertaken given that multiple discoms will be using the same infrastructure.

#### **What should be done going ahead?**

The Bill has been referred to the Parliamentary Standing Committee. There should be proper deliberations to incorporate views of all stakeholders. The concerns raised by the State Governments are valid and should be appropriately addressed.

The Government has taken several steps to alter the electricity mix and improve the share of renewable energy. However, there has been lack of effort in upgrading the infrastructure to ensure sustainable uptake of the electricity generated by the renewable sector. The lacunae must be addressed expeditiously.

#### **Conclusion**

The Electricity Amendment Bill, 2022 has brought in several welcome reforms in the sector. However, the concerns related to the Bill must be addressed. The Bill would help in achieving India's dream of providing 24\*7 electricity to all its citizens, achieving a 5 trillion economy, achieving sustainable development goals, and fulfilling their obligation of Intended Nationally Determined Contributions (INDC) under the Paris Agreement.

**Syllabus:** GS III, Infrastructure: Energy

**Source:** [Indian Express](#), [Indian Express](#), [The Hindu](#), [ORF](#), [Business Standard](#)

### **Issues in Electoral Funding in India – Explained, pointwise**

#### **Introduction**

The Association of Democratic Reforms (ADR) recently released an analysis report on Sources of Funding of National and Regional Political Parties. The report has provided some startling observations. The total income of national and regional parties from unknown sources for FY2020-21 stood at INR 690.67 crore. Between 2004-05 and 2020-21, the national political parties have collected more than INR 15,077 crore from unknown sources. Political experts rue that the opacity in electoral funding is the single biggest factor in political corruption in India. Money is central to the issue of political corruption and political parties are suspected to be the largest and most direct beneficiaries. Corruption in elections reduces accountability, distorts representation, and introduces asymmetry in policymaking and governance. Critics say that reforms in the electoral fundings are not forthcoming as all political parties, irrespective of their ideology, benefit from the current opaque set-up.

#### **What is the meaning of Electoral Funding?**

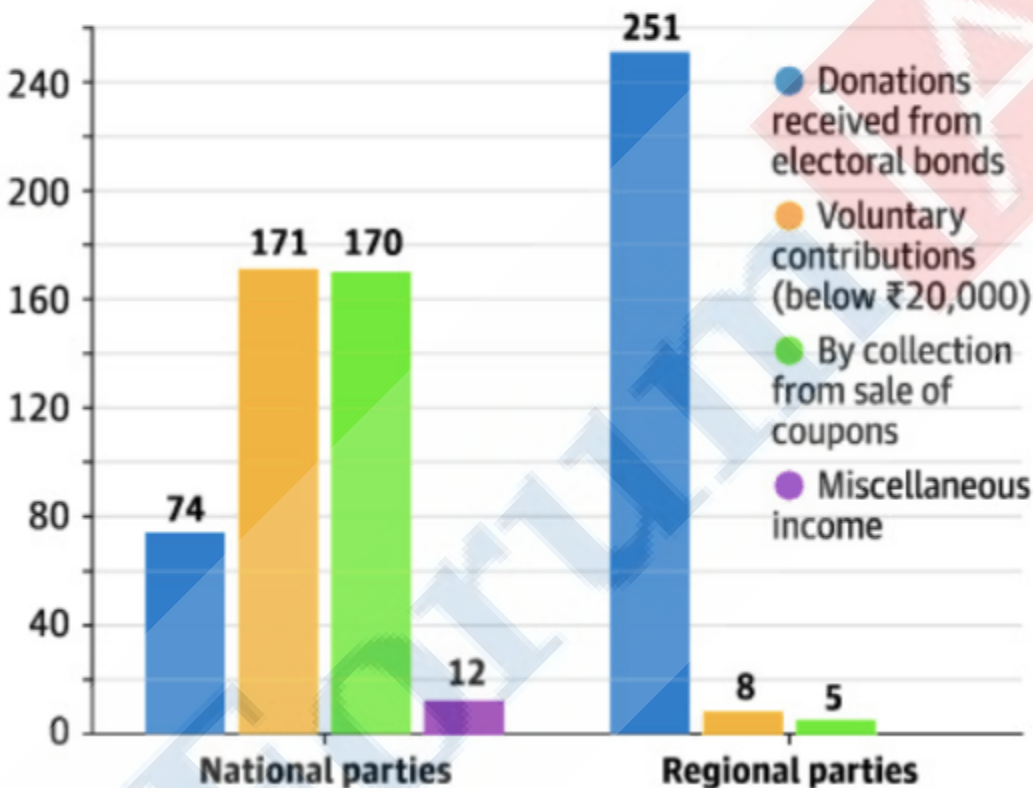
Money received by the political parties and the expenditure done by them in the process of election (directly or indirectly) come under the ambit of Electoral Funding/Financing. Laws governing these financial aspects are known as electoral funding/financing law. Electoral financing law can be studied under three broad sub-groups: **(a)** Limits on political contributions and party and candidate expenditure; **(b)** Disclosure norms and requirements; **(c)** State funding of elections.

Electoral funding in India is broadly governed by the provisions of the **Representatives of People Act (RoPA), 1951; the Conduct of Election Rules, 1961; the Companies Act, 2013; and the Income Tax Act, 1961.**

**What are the findings of the ADR Report on Electoral Funding?**

For the FY2020-21, 8 national political parties have declared INR 426.74 crore income from unknown sources. 27 regional parties received INR 263.928 crore income from unknown sources.

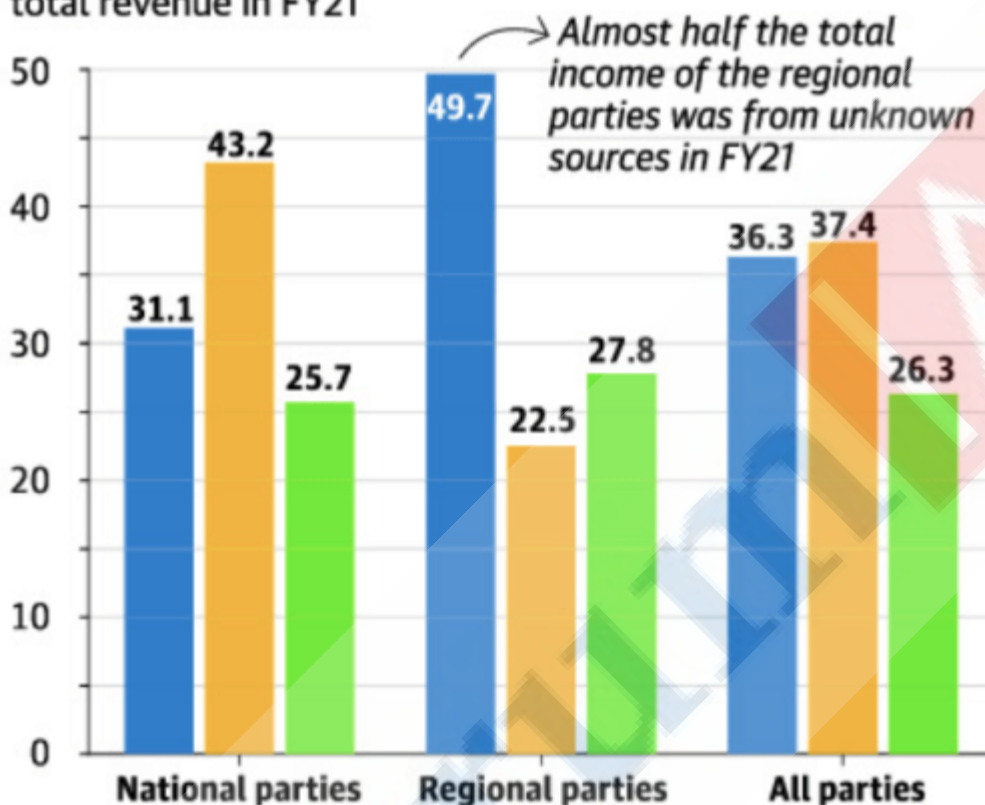
**1 Undisclosed sources** | The graph shows the amount of funding (in ₹ crore) received in FY21 through unknown sources. The national parties and regional parties received ₹427 crore and ₹264 crore worth of funds, respectively, from unknown sources. A split:



Source: The Hindu

31% income of national parties and ~50% income of regional parties have come from 'unknown resources'. The report has treated unknown income as the income declared in the IT returns without giving source of income for donations below INR 20,000.

**2 Share of revenue** | The graph shows the donations from unknown sources ●, donations from known sources ● and income from other known sources such as sale of assets, membership fees ● as a share of total revenue in FY21



Source: The Hindu

Overall, the combined income of national and regional political parties from unknown sources amount to 36%.

Sources of Income of National and Regional Parties for FY 2020-21				
Political Parties	Income from Unknown Sources (as per IT Returns) **	Income from Known Sources (donations details declared to ECI)	Income from Other Known Sources*	Total Income
National Parties	426.742	593.748	353.293	Rs 1373.783 cr
Percentage share	31.06%	43.22%	25.72%	100%
Regional Parties	263.928	119.395	147.38	Rs 530.703 cr
Percentage share	49.73%	22.50%	27.77%	100%
Grand Total	690.67	713.143	500.673	Rs 1904.486 cr
Percentage share	36.30%	37.40%	26.30%	100%

Source: ADR

ADR has also scrutinized the IT Returns of the political parties and found that between FY2004-05 and 2020-21, the National Parties have collected INR 15,077.97 Crore from unknown sources.

### What are the issues with Electoral Funding in India?

**Lack of Transparency:** Large proportion of electoral funding comes from unknown sources. This is basic violation of transparency principles as electorate has a right to know whether the funds



are being raised through legitimate means. The electoral bonds also suffer from this lacuna, and citizens are unaware about who is funding the political parties.

**Corruption and 'Regulatory Capture':** Activists argue that the unknown 'donors' include large corporate houses, or corrupt local businessmen who fund local political leaders. This makes the political leadership amenable to business interests. The current system tolerates **lobbying and capture**. The industry / private entities use money to ensure less stringent regulation, and the money used to finance elections eventually leads to favourable policies.

According to American political activist, Lawrence Lessig, even legal (but large) campaign donations, amount to '**institutional corruption**' which compromise the political morality norms of a republican democracy. Instead of direct exchange of money or favours, political candidates alter their views and convictions in a way that attracts the most funding. This change of perception leads to an erosion of public trust, which in turn affects the quality of democratic engagement.

**No Limit on Funding:** Earlier there was a cap on how much funds a corporate can donate to a political party out of the profits it earns. That upper limit has been removed. This has opened an avenue for corporates to increase funding to political parties and consequently increase their influence on the political system.

**Lack of Fairness:** Access to **large financial resources translates into electoral advantage**. Richer candidates and parties have a greater chance of winning elections. This distorts the level playing field. The Supreme Court has also supported this view in the **Kanwar Lal Gupta v Amar Nath Chawla**.

**Contravention of Laws:** Lack of disclosures contravenes various laws and ECI notifications. In spite of the Central Information Commission (CIC) ruling, all political parties have refused to submit themselves to the transparency that comes with Right to Information. There is widespread prevalence of black money, bribery, and quid pro quo corruption. The Supreme Court, affirmed the conclusions of the 2002 report of the National Commission to Review the Working of the Constitution, recognized this reality in **PUCL v Union of India**.

## Electoral Bonds

- Electoral bonds were introduced through the Union budget in 2017.
- Electoral bonds are an instrument through which **anyone can donate money to political parties**.
- The bonds are sold in **multiples denominations** of INR 1,000, INR 10,000, INR 1 lakh, INR 10 lakh, and INR 1 crore, can be bought from authorised branches of the State Bank of India.
- A donor is required to pay the amount (say INR 10 lakh) via a cheque or a digital mechanism (**cash is not allowed**) to the authorised SBI branch. The donor can then give this bond (just one, if the denomination chosen is Rs 10 lakh, or 10, if the denomination is Rs 1 lakh) to the party or parties of their choice.
- The **political parties can choose to encash such bonds** within 15 days of receiving them and fund their electoral expenses.

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**What are the issues with Electoral Bonds?**

**First**, Before electoral bonds were introduced, it was mandatory for political parties to make public all donations above INR 20,000 and no corporate entity was allowed to make donations amounting to more than 7.5% of the average net profits of a company in the preceding 3 years. The introduction of electoral bonds not only **increased the number of anonymous donors, but also the number of shell companies donating to political parties.**

**Second**, Electoral bonds lead to **information asymmetry**; only the ruling government can access the information on who lends and to whom, leading to **issues of moral hazard and adverse selection.**

**Third**, Since the identity of the donor has been kept anonymous, **it could lead to an influx of black money; and there is a threat to the spirit of democracy.** The Election Commission in April 2019 told the Supreme Court that **it did not approve of anonymous donations made to political parties**, though it was not against the Electoral Bonds Scheme.

**Fourth**, one of the arguments for introducing electoral bonds was to allow common people to easily fund political parties of their choice, **but more than 90% of the bonds have been of the highest denomination (Rs 1 crore).**

**What should be done going ahead?**

There is a need to bring reforms in electoral funding

**First**, the funding process should be made completely transparent. Rules regarding funding and expenditure need to be tightened by placing an absolute cap on anonymous donations. The ADR Report has recommended that full details of all donors should be made available for public scrutiny under the RTI. Some countries where this is done include Bhutan, Nepal, Germany, France, Italy, Brazil, Bulgaria, the US and Japan.

**Second**, There should be an upper limit on the amount that can be donated to parties (like the limit of 7.5% of profits set under Companies Act, 2013). This will restrict influence of big corporate houses.

**Third**, electoral rules should be amended to regulate political advertisements, outline permissible categories of expenditure, prevent foreign sources of donations and lay down a limited base for public funding. The Law Commission of India in its 255th Report has recommended to cap the entire donation received through anonymous sources at Rs. 20 crores or 20% of the total funding of a political party.

**Fourth**, the ADR Report has recommended that scrutiny of financial documents submitted by the political parties should be conducted annually by a body approved by CAG and ECI so as to enhance transparency and accountability of political parties with respect to their funding.

**Fifth**, the ECI has recommended that tax exemption be awarded only to those political parties which contest and win seats in Lok Sabha/Assembly elections. The Commission has also recommended that details of all donors who donate above INR 2,000 be declared in public domain.

**Sixth**, violation of rules and transparency provisions should be stringently penalized. The Election Commission must be provided with greater powers in this regard.

**Seventh**, some provisions of the Electoral Bond scheme has been questioned in the Supreme Court. The Court must adjudicate on the issue quickly and bring more clarity.

## Law Commission's Recommendations on Electoral Finance (255th Report)

- Extend regulation of election expenses from date of nomination to **date of notification**.
- Authorization of political funding by a corporate should be done at the Annual General Meeting (AGM) and not Board of Director (BoD) meeting.
- Extension of norms of disclosures by candidates about their election expenses including funding received from non-Government corporate or a person and from the parent political party.
- **Public disclosure of electoral expenses documents** submitted by the candidates.
- Submission of **audited annual reports** by Political Parties detailing all the funds received and the expenditure incurred which shall be **disclosed publicly** by the ECI.
- **Disclose contributions** less than INR 20,000 if such contributions exceed INR 20 crore or 20% of the party's total contributions, whichever is less.
- Failure to disclose expenses results in disqualification for 3 years. This should be **extended to 5 years** to render the candidate ineligible for next election.
- **Penalty of 5 times the contribution received**, if such contribution is received from an ineligible donor under Companies Act and RoPA.
- **State funding of elections not feasible**. In-kind subsidies should be provided.

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### What are the global best practices?

European countries such as France and Belgium have curtailed private spending on elections through a series of legislations since the 1990s, thereby successfully negating the influence of rich corporates in elections. France banned all forms of corporate funding in 1995 and capped individual donations at 6,000 Euros.

Brazil and Chile have banned corporate donations after a series of corruption scandals emerged related to corporate funding.

### Some Important Reports/Commission related to Electoral Reforms

Law Commission 170th Report (1999) 'Reform of the Electoral Laws'.

Law Commission 255th Report (2015) 'Electoral Reforms'.

Election Commission of India (2004) 'Proposed Electoral Reforms'.

The Goswami Committee on Electoral Reforms (1990).

The Vohra Committee Report (1993).

The Indrajit Gupta Committee on State Funding of Elections (1998).

The National Commission to Review the Working of the Constitution (2001).

### Conclusion

Former Judge of the US Supreme Court Justice Louis Brandeis once wrote, "*We can have democracy in this country, or we can have great wealth concentrated in the hands of a few, but we cannot have both*". A clean, transparent electoral funding process is vital to ensure a fair electoral democracy. Most developed countries in the West have robust mechanisms to ensure transparency in their political systems. As India aspires to emulate the West by setting the ambition of achieving developed country status by 2047, it must aspire for similar standards of transparency in the political sphere. Cleaning up electoral finance can be the first step in this regard.

**Syllabus:** GS II, Salient features of the Representation of People's Act

**Source:** [The Hindu](#), [The Hindu](#), [ADR](#), [ORF](#)



## ESG Framework In India – Explained, pointwise

### Introduction

People are now becoming more conscious of the harm brought on by unfriendly social and environmental decisions by private (or public) corporations. The term 'ESG', which stands for all environmental, socioeconomic, and governance concerns, is consequently gaining traction in the business and corporate sector. ESG is about pursuing responsible and ethical business practices with attention to social and environmental equity along with economic development. **ESG is fast becoming synonymous with sustainability.** Investors and regulators have also increased their scrutiny in evaluating businesses that **employ sustainable business practises** and the ESG framework. In India's corporate ecosystem, there have been two major developments in the context of Sustainability/ESG Framework. The first was Corporate Social Responsibility (CSR) reporting and spending being made mandatory under the Companies Act, 2013. The second is the Securities and Exchange Board of India (SEBI) making the Business Responsibility and Sustainability Report (BRSR) mandatory for the top 1,000 listed companies by market capitalisation. This is a step forward in widespread adoption of ESG framework in corporate decision-making and business practices.

### What is the meaning of ESG?

The practice of ESG investing began in the 1960s. ESG investing means **investing based on** not just traditional financial factors (like potential Return on Investment (RoI)) but also **non-financial environmental, social and governance factors**. ESG investing evolved from Socially Responsible Investing (SRI), which **refrained from investing in business operations such as tobacco, guns, or goods from regions in conflict** (like imports of diamonds from some African countries under military dictatorships). The term ESG was coined in 2004 by the former UN Secretary-General Kofi Annan.

### Environmental (E), Social (S) and Governance (G) Measures



ESG is a set of standards for a company's operations that **socially conscious investors use to choose potential investments**. Environmental criteria consider how the operations of a

company impact the environment (e.g., emissions or air/water pollution). Social measures examine how it manages relationships with employees, suppliers, customers, and the communities where it operates. Governance deals with a company's leadership, executive pay, audits, internal controls, and shareholder rights.

### True ESG is consistent with a company's well-considered strategy and advances its business model.

#### Description and examples<sup>1</sup>

##### Environmental

Addresses impact on the physical environment and the risk of a company and its suppliers/partners from climate events

- Climate change and greenhouse-gas emissions (GHG)
- Air pollution (non-GHG)
- Water and wastewater management
- Waste and hazardous-materials management; circularity
- Biodiversity and ecosystems; rehabilitation

##### Social

Addresses social impact and associated risk from societal actions, employees, customers, and the communities where it operates

- Labor practices
- Health and safety
- Community engagement; diversity and inclusion
- Community relations, local economic contribution
- Product and service attributes

##### Governance

Assesses timing and quality of decision making, governance structure, and the distribution of rights and responsibilities across different stakeholder groups, in service of positive societal impact and risk mitigation

- Business ethics, data security
- Capital allocations, supply chain management
- Governance structure and engagement; incentives
- Policies; external disclosures; position and advocacy

*Source: McKinsey, 'Does ESG really matter—and why?', August 2022.*

#### What is the need for an ESG Reporting Framework?

**First**, Businesses have the power and resources to take good climate action, create a more sustainable, resilient future, and spend their money for this cause. ESG Reporting norms will create visibility to investors about such sustainable actions/practices by companies. The clarity will help the investors to channel their investments in sustainability-conscious companies.

**Second**, Globally, the landscape of sustainability reporting is evolving quickly as a result of the push for the Sustainable Development Goals and the growing momentum of the climate action movement. ESG is becoming more important in this situation.

**Third**, Consumers are now demanding high standards of sustainability and quality of employment from businesses. Regulators and policy makers are more interested in ESG because they need the corporate sector to help them solve social problems such as environmental pollution and workplace diversity. The investor community has also become much more interested in it.

#### How have the ESG Reporting Norms evolved in India?

ESG reporting in India started in 2009 with the Ministry of Corporate Affairs, Government of India, issuing the **National Voluntary Guidelines on Corporate Social Responsibility (NVGs)**. In 2012, SEBI mandated that the top 100 listed companies by market capitalisation file the **Business Responsibility Report (BRR)** based on NVGs along with annual reports. BRR was extended to the top 500 listed companies by market capitalisation in 2015 and to the top 1,000 listed companies in 2019.

**CSR activities** have been made **mandatory** under **The Companies Act, 2013** for companies falling under the prescribed category.

**Integrated Reporting (IR)** was introduced by SEBI in 2017 voluntarily for the top 500 companies required to prepare BRR.

The **National Guidelines on Responsible Business Conduct** (NGRBC) came in 2019. **Business Responsibility and Sustainability Report** (BRSR) was introduced in 2021 on a voluntary basis and made mandatory from FY2022-23.

#### Voluntary frameworks available for disclosures<sup>8</sup>

##### Global Reporting Initiative (GRI)

Global non-profit organisation which guides reporting of ESG parameters through sector standards and guidelines. Provides disclosures that are widely employed due to their ease-of-use nature and a myriad of key performance indicators

##### Sustainability Accounting Standards Board (SASB)

Industry-specific standards sustained under the auspices of the Value Reporting Foundation, established to guide identification of financially material ESG topics and reporting of value creation, preservation, and erosion.

##### World Economic Forum (WEF): Measuring stakeholder capitalism

Represents universal and harmonised set of metrics. It contains a set of 21 Core and 34 Expanded metrics under the four Pillars of:

- Principles of governance
- Planet
- People
- Prosperity

##### Task Force on Climate Related Disclosures

Climate focused disclosures in the four key areas of:

- Governance
- Strategy
- Risk Management
- Metrics and Targets



Source: KPMG. Some Global ESG Reporting Norms include Global Reporting Initiative (GRI), Sustainability Accounting and Standards Board (SASB), Integrated Reporting (IR) among others.

#### What steps have been taken by the Government to promote ESG in India?

Sustainable investments in India are primarily being promoted by the Ministry of Corporate Affairs, with support from the capital market regulator SEBI. They have introduced various **guidelines for corporations to implement the Principles of Responsible Investment**. Government of India also formed the **Impact Investors Council** (IIC) to drive the impact of investments in the country.

India is witnessing innovative instruments by investors to finance social and environmental initiatives. **India's first green bond was issued by the Ghaziabad Municipal Corporation, also listed on the Bombay Stock Exchange (BSE)**. The Corporation raised a capital of INR 150 crore to partially fund the water treatment plant and tertiary sewage.



The Finance Minister of India, recently announced that the government will float a sovereign green bond. The proceeds will be deployed in public sector projects that reduce carbon intensity in the economy.

### What are the salient features of SEBI's BRSR Guidelines?

BRSR is a standardised reporting format that will provide a basis to compare environmental, social and governance goals across companies and sectors.

The BRSR guidelines are more elaborate and stringent than the existing BRR norms. BRSR incorporates metrics of international frameworks on par with global ESG reporting trends. It is a significant step towards **bringing sustainability reporting at par with financial reporting**.

Some of the key disclosures sought in the BRSR are: **(a)** Sustainability related goals & targets and performance against the same; **(b) Environmental disclosures** related to resource usage (energy and water), air pollutant emissions, greenhouse (GHG) emissions, transitioning to a circular economy, waste management practices, extended producer responsibility, biodiversity etc.; **(c) Social disclosures** covering the workforce, value chain, communities and consumers, that include: **(i) Employees/workers: Gender and social diversity** including measures for differently-abled employees and workers, turnover rates, median wages, welfare benefits, occupational health and safety, training etc.; **(ii) Communities:** Disclosures on Social Impact Assessments (SIA), Rehabilitation and Resettlement, Corporate Social Responsibility etc.; **(iii) Consumers:** Disclosures on product labelling, product recall, consumer complaints in respect of data privacy, cyber security etc.

The **9 principles of National Guidelines of Responsible Business Conduct** (NGRBC) are aligned in the BRSR report.

### 9 Principles of National Guidelines on Responsible Business Conduct

1. Businesses should conduct themselves with integrity, and in a manner that is **ethical, transparent, and accountable**.
2. Businesses should provide goods and services in a manner that is **sustainable and safe**.
3. Businesses should **promote the well-being of all employees**, including those in their value chains.
4. Businesses should respect the interests of and be **responsive to all its stakeholders**.
5. Businesses should respect and **promote human rights**.
6. Businesses should respect and make efforts to **protect and restore the environment**.
7. Businesses, when engaging in **influencing public and regulatory policy**, should do so in a manner that is **responsible and transparent**.
8. Businesses should **promote inclusive growth and equitable development**.
9. Businesses should engage with and **provide value to their consumers** in a responsible manner.

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The BRSR report serves as a single comprehensive source of information on non-financial sustainability measures to all the relevant key stakeholders of the business, i.e., shareholders, regulators, investors, and the public at large.

### What are the benefits of ESG Norms?

**First**, ESG reporting norms (like BRSR Guidelines) are likely to play a bigger role in how companies are assessed, not only by investors but by consumers and stakeholders.

**Second**, the ESG frameworks are heading towards standardisation, which would reduce the scope of misrepresentation and greenwashing.

### Greenwashing

Greenwashing is the act of giving a false image or giving false information about how an organisation's products are more environmentally friendly. It is the practise of making unsupported claims about the environmental friendliness of a company's products in order to mislead customers.

**Third**, Global acceptance of the ESG mandate is increasing. For instance the participation percentage for assessing the ESG performance of organisations on a global scale increased, going from 19% in 2019 to 33% in 2021, according to the DJSI (Dow Jones Sustainability Index) of the US. According to Bloomberg, it is estimated that by 2025, investments with high-performing ESG metrics will reach US\$ 53 trillion. In India, the assets of ESG-based market funds (equity and debt) have risen to over INR 12,300 crore in November 2021, from INR 2,630 crore, in November 2019.

**Fourth**, BRSR Guidelines will bring in more transparency in ESG reporting. This will attract greater investments in socially-responsible and environmentally-sustainable companies. This will prompt corporates to adopt sustainable measures.

#### What are the challenges in adoption of ESG Norms?

**First**, there is reluctance among corporates to adopt sustainability measures as they increase costs (e.g., installation and operating costs of an effluent treatment plant that reduces efflux of harmful pollutants to rivers/water bodies). ESG measures enhance sustainability but at the same time impact financial viability, which is against interests of shareholders.

**Second**, there are **no universally recognized ESG reporting standards**. The investors and corporates have been using different frameworks like Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB), Task Force on Climate Related Financial Disclosures (TCFD) etc. Lack of uniformity in standards may lead to mis-selling. This poses potential risks to investor protection, transparency and capital allocation in markets, among others.

**Third**, the **impacts of ESG measures are difficult to quantify**. While the financial performance of companies can be measured accurately by defined financial metrics (like profits after tax, return on assets/investments), such metrics are difficult to be defined for ESG measures. This make it **difficult to measure comparative performance of corporates on sustainability measures**.

**Fourth**, some critics argue that **ESG Standards are against climate equity**. There are concerns over the workability of universal ESG norms. Different countries have different environmental standards based on their Nationally Determined Contributions (NDCs). These NDCs depend upon the stage of development of a country. To mandate environment standards' reporting under ESG framework that goes beyond a country's commitments would amount to negating the efforts made for **equity and climate justice**.

#### What should be done going ahead?

**First**, there is a need to bring in uniformity across various reporting standards and create a standard ESG Reporting Framework. Multilateral institutions like G20 can take a lead here to undertake consultation with representation from both developing and developed countries.

**Second**, the corporate sector should take initiatives to develop robust internal ESG Frameworks. In this context, an expert has suggested five guiding principles.

## Guiding Principles for Corporates to design Robust ESG Framework

1. **Go Beyond the Environment:** Environment sustainability is priority areas but businesses will also have to focus on social and governance issues.
2. **Develop tools for ESG Data Management:** At present, disclosures serve as the primary source of ESG information. Going forward, robust databases would be useful to identify data-driven ESG risks and opportunities and curb transparency issues.
3. **Prepare for ESG Reporting:** Corporates should become more transparent. Regulatory bodies across the globe are emphasising improvement in transparency around financial decision-making.
4. **Measuring and Managing Emissions:** According to a report by the Carbon Disclosure Project Climate-related risks can cause Indian companies a loss of INR 7,138-billion. To stay globally competitive, Indian companies need to go beyond mapping their carbon dioxide pathways and take action.
5. **Use ESG Communication to Gain Competitive Advantage:** External communication enhances stakeholder relationships and public perception. This will attract greater investments.

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**Third**, there is a need to **enhance compliance** of sustainability norms gradually. SEBI had made the BRSR norms voluntary for FY2021-22 and made them mandatory from FY2022-23 (top 1000 companies). The compliance norms should be gradually expanded to all listed and unlisted companies.

**Fourth**, there is a need to increase awareness about the ESG norms in investors. This will influence the businesses to adopt sustainability measures.

### Conclusion

Robust ESG framework and responsible ESG investing are very important for an emerging economy like India as it provides an opportunity for all stakeholders to **build an economy that is financially, socially and environmentally sustainable**. SEBI has facilitated the achievement of the United Nations Sustainable Development Goals and the Paris Agreement on Climate Change by way of mandatorily requiring ESG reporting by Indian companies. Going forward, the norms can be extended in their scope and applicability to include the unlisted companies as well.

**Syllabus:** GS III, Inclusive growth and issues arising from it; GS IV, Corporate Governance.

**Source:** [The Times of India](#), [Economic Times](#), [Bloomberg](#), [Financial Express](#)

## Precision Farming: Technologies, Benefits and Challenges – Explained, pointwise

### Introduction

India has one of the highest arable lands globally with over 155 million hectares and is one of the key agricultural producers. In 2019, the agricultural sector generated approximately INR 19 lakh crores (US\$ 265 billion) business comprising 18% of India's Gross Domestic Product (GDP) and employs more than half of India's population. However, there are structural challenges plaguing the agriculture sector including low productivity, uneconomic landholding size, sub-optimal input use efficiency, high biotic losses, and a low level of mechanisation. In the wake of climate change, depletion of natural resources and an imminent food crisis, India must move beyond aggressive farming and towards precision farming. According to estimates, the global precision farming market is forecasted to reach US\$ 14.6 billion by 2026 at CAGR of ~8%.



Precision farming, although at a nascent stage in India, can help the country become the top agricultural producer across the globe by maximising farm productivity and profitability.

### What is Precision Farming?

Precision farming is an approach **where inputs are utilised in precise amounts** to get increased average yields, compared to traditional cultivation techniques. It is the science of **improving crop yields using high technology sensor** and analysis tools. Precision Farming utilizes multitude of advanced technologies and tools to monitor several parameters and collect information related to crop growth (like soil moisture, pH etc.). The information is used for **targeted interventions**. It is referred to as 'precision' because it is focused on **performing the right intervention** (e.g., providing water to crops), in the **right place**, at the **right time**, responding to the **specific demands** of individual crops and **individual areas** of land with superior levels of precision.

The precise nature of targeted interventions help to improve efficacy of the inputs and hence increase the yields. Precision Farming is being adopted throughout the world to increase production, reduce labor time, and ensure the effective management of fertilizers and irrigation processes. It uses a large amount of data and information to improve the use of agricultural resources, yields, and the quality of crops.

### What technologies are used in Precision Farming?

**Global Positioning System:** GPS is used to identify the location of farm equipment in the field. It provides an accurate positioning system necessary for field implementation of variable rate technology in agricultural input management. The internet enables the creation of a system for efficient remote sensing-based agricultural management.

**Grid sampling:** It is a technique for segmenting fields into small units (~0.5–5 hectares). Soil samples from those grids are used to calculate the proper application rates for crop inputs. Each grid has many samples collected, combined, and delivered to the lab for evaluation.

**Variable-rate technology:** Variable-rate technology (VRT) consists of farm field equipment with the **ability to precisely control the rate of application of crop inputs** that can be varied in their application including fertilizers, irrigation, tillage, insect control etc.

**Yield monitors:** Crop yield measuring tools fitted on harvesting machinery are called yield monitors. Along with the positioning data from the GPS device, the yield data from the monitor is recorded and saved. Utilizing the yield data, GIS software creates yield maps. The data helps in decisions related to the requirement of targeted intervention.

**Remote sensors:** Remote sensing (in agriculture terms) means viewing crops from overhead (from a satellite or low-flying **aircraft/drone**) without coming into contact, recording and displaying the image. This technique provides the map to pinpoint the field problems more effectively. Remote sensors can be categorised as aerial or satellite sensors.

**Proximate sensors:** Proximate sensors can be used to measure soil parameters (Nitrogen content, pH etc.) and crop properties as the tractor passes over the field.

**Computer hardware and software:** Computer support is required to analyse the data gathered by other components of precision farming technology and to make it accessible in formats such as maps, graphs, charts, or reports.

### What are the benefits of Precision Farming?

**Increase agriculture productivity:** Precise agriculture inputs (like fertilizers, water) determined scientifically through analysis of data captured by sensors enhances the agriculture output and promotes the yield.

**Reduction of chemical application in crop production:** Amount of input is determined based on requirement. Fertilizers are supplied only where specific nutrients are missing. Similarly

weedcides are used at location of weeds. **Drones can be used for targeted delivery** of chemicals with desired precision. This reduces unnecessary usage and cuts down waste.

Source: [aces.edu](https://aces.edu) (Alabama A&M University, US)

**Prevents soil degradation:** Since over-use of chemicals is avoided, prevents the leaching of undesired chemicals into soil, preventing their harmful impact on soil.

**Efficient use of water resources:** Targeted delivery of water through techniques like **fertigation** reduces water usage. Fertigation is the process of directly applying fertilizer to a crop through the irrigation system.



Source: [aces.edu](https://aces.edu) (Alabama A&M University, US)

**Improvement in Farm Incomes:** Increase in productivity, reduction in use of inputs and wastage improves farm incomes and helps in raising the socio-economic conditions of farmers.

**Job creation:** Precision farming has potential to create a lot of employment opportunities e.g., operating drones is a specialised skillset. Youth in rural areas can be trained and employed as certified drone operators. According to one estimate, these new-age technologies have a potential to create 2.1 million jobs in rural areas.

Moreover, it leads to **dissemination of modern farm practices** which are more **sustainable and climate-friendly**.

#### What are the challenges in Precision Farming?

**High Cost:** Precision farming is dependent on technologies like GPS, drones, and sensors. All these technologies are capital intensive and require large investments in the beginning. Spending the requisite amounts is beyond the capacity of small and marginal farmers.

**Lack of technical expertise knowledge and technology:** Deploying and using the technologies, interpreting the captured data require high level of awareness and skills.

**Not viable for small land holdings:** Precision farming require high investments. Moreover, proximate sensors (say to capture information/samples of soils) are generally deployed on farm



machinery like tractors. Thus precision farming is more conducive with mechanized farming. **High investments and mechanized farming are viable only in large holdings.** Return in small landholding are too little (due to low absolute output even though yield may be high) to justify high investments required in precision farming.

Furthermore, technology behind the practices is creating opportunities for extremists, terrorists and adversarial governments to attack farming machinery, with the aim of **disrupting food production**. For example, in 2021 a ransomware attack forced ~20% of the beef processing plants in the U.S. to shut down, with one company paying nearly US\$ 11 million to cybercriminals.

#### **What steps have been taken to promote use of Technology in Agriculture in India?**

**'Digital Agriculture Mission 2021-2025'**. The initiative aims to leverage a wide range of technologies from AI, blockchain along with drone technology to improve the sector's overall performance.

At present, ICRISAT (International Crop Research Institute for Semi-Arid Tropics) is working with **Microsoft to develop an AI Sowing App** to send sowing advisories to farmers for telling the optimal date to sow. The sowing date is very critical when it comes to ensure the best yield and this app aims to eradicate the guesswork from the process.

**Crop yield prediction model using AI:** In May 2018, **NITI Aayog partnered with IBM** to develop a crop yield prediction model using AI to **provide real-time advisory to farmers**. The partnership aims to provide insights to enhance crop productivity, increase soil yield, and control agricultural inputs with the goal of improving farmers' income. It aims to identify systems of crop monitoring, early warning on pest and disease outbreak based on advanced AI innovations. It also includes deployment of weather advisory rich satellite and enhanced weather forecast information along with IT and mobile applications with a focus on improving the crop yield and cost savings through better farm management.

**AI sensors for smart farming:** The Government of India, in collaboration with **Microsoft**, has begun empowering small-holder farmers in India to increase income through higher crop yield and greater price control **using AI sensors**. Microsoft is engaging with multiple stakeholders including farmers, State Governments, the Ministry of Electronics and Information Technology (MeitY) and the Ministry of Agriculture and Farmers Welfare to create an ecosystem for AI into farming. Microsoft is also engaging with Escorts (Farm equipment manufacturer) to enable precision agriculture capabilities.

**Drones to monitor crop and soil health:** The project entitled '**SENSAGRI: Sensor-based Smart Agriculture**' is being undertaken by the Indian Council of Agricultural Research (ICAR) along with 6 partner institutes. Its objective is to develop indigenous prototype for **drone based crop and soil health monitoring system** using remote sensors. This technology could also be integrated with satellite-based technologies for large scale applications.

#### **What should be the approach going ahead?**

Precision farming can be promoted for specific progressive farmers who have sufficient risk bearing capacity as this technology may require capital investment. The agriculture research institutes can provide technical back-up to farmers to develop the models. The learnings can then be utilized to replicate the models at a larger scale.

Given the current status of agriculture in India, precision farming is not viable on an immediate basis. In the meantime, the Government can encourage the farmers to **adopt more judicious water-use practices**. Micro level irrigation systems and water saving techniques can be promoted among the farmers.

### Conclusion

The main objective of precision agriculture is to obtain a maximum yield with a minimum input while also reducing environmental harm. Better preparation of the roadmap in this sphere would be helpful for India to enhance farmers' income, be able to produce enough food to support the rising population, and also able to fulfil the commitments under SDGs.

**Syllabus:** GS III, Different Types of irrigation and irrigation systems, Conservation.

**Source:** [Indian Express](#), [Down to Earth](#), [The Hindu BusinessLine](#), [The Conversation](#)

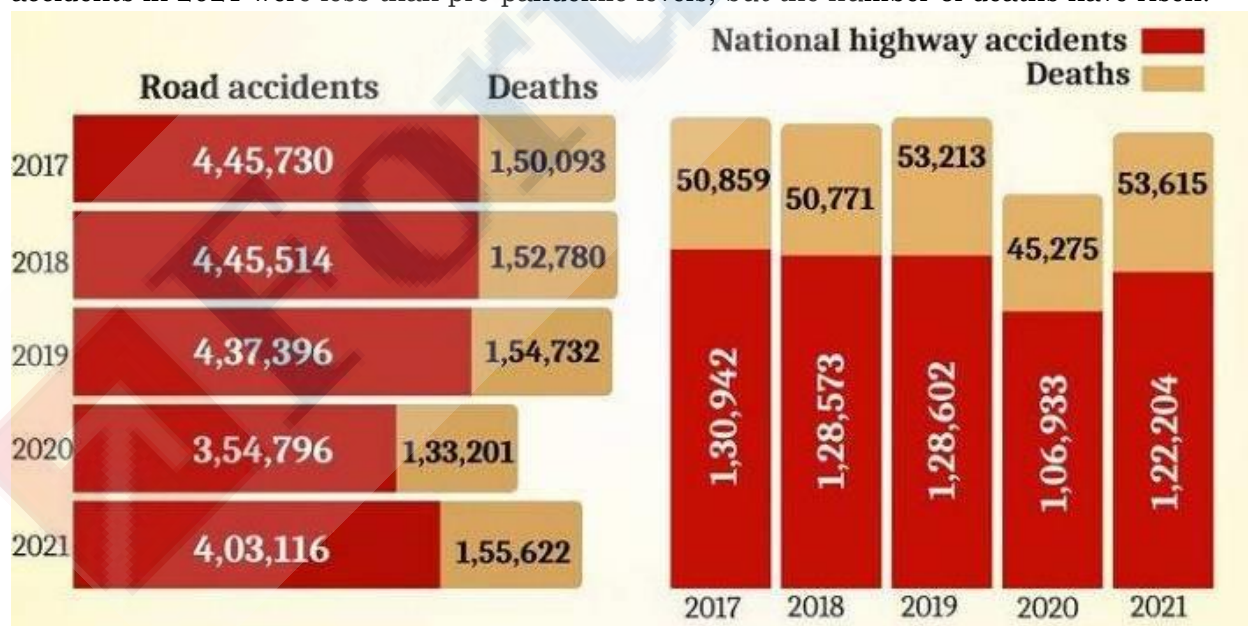
Road Safety in India – Explained, pointwise

### Introduction

The National Crimes Records Bureau released the report on Accidental Deaths in India (2021) in the last week of August 2022. The Report highlighted that the number of fatalities due to road accidents, 155,622 in 2021, had reached the highest level since 2014. As concerns were being raised on the spike in the number of death, came the sad news of demise of industrialist Cyrus Mistry along with a fellow passenger, in a road accident. Police sources were quoted as saying that the passengers were not wearing their seat belts. These developments have brought the issue of road safety to limelight. The tragic and avoidable accident indicate lack awareness about the car safety deployments and their enforcement by road safety authorities. Despite the innumerable road safety campaigns and awareness drives, the road safety remains poor in India. India is ranked among the top countries in terms of accident related deaths. ~430 lives are lost daily due to road accidents.

### What are latest data numbers on Road Accidents in India?

According to the NCRB data, over 1.55 lakh lives were lost in road crashes across India in 2021 or 18 deaths every single hour. This is the highest death in any year. The number of accidents and deaths had decreased in 2020 due to lockdowns and travel restrictions. The number of accidents in 2021 were less than pre-pandemic levels, but the number of deaths have risen.



Source: Indian Express

States of Tamil Nadu (57,000), Madhya Pradesh (49,500), Uttar Pradesh (36,500), Kerala (33,000) and Maharashtra (30,000) reported high number of accidents. Deaths per 100 km of National Highways have come down from 44 in 2018 to 40 in 2021.



**Two-wheelers are most susceptible to fatalities** due to road accidents. Of the total deaths in road accidents, 44.5% were riders of 'two-wheelers' followed by cars (15.1%), trucks/lorries (9.4%) and buses (3%).

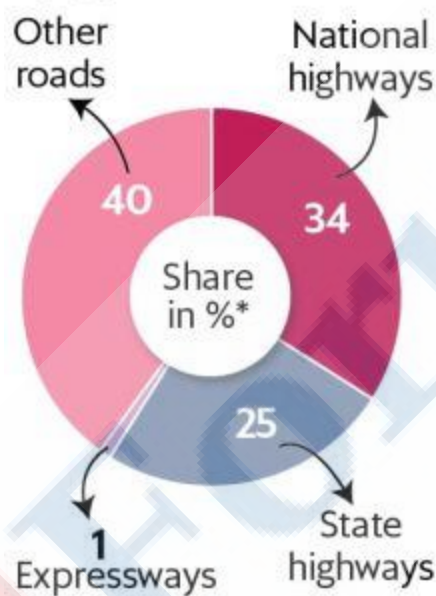
According to World Bank report (*'Traffic Crash Injuries And Disabilities: The Burden on India Society'*) India accounts for 11% of the global death in road accidents despite having just 1% of the world's vehicles. The road accidents costs INR 6 lakh crore or 3.14% of Gross Domestic Product (GDP). (However, the Ministry of Road Transport and Highways (MoRTH) estimates the socio-economic costs of road crashes at INR 1.5 lakh crore, or ~0.77% of the GDP).

The report pointed out that there is a distinct correlation between socio-economic status and road use patterns in low- and middle-income countries like India and **'poor people are more likely to be involved in a road traffic crash'**.

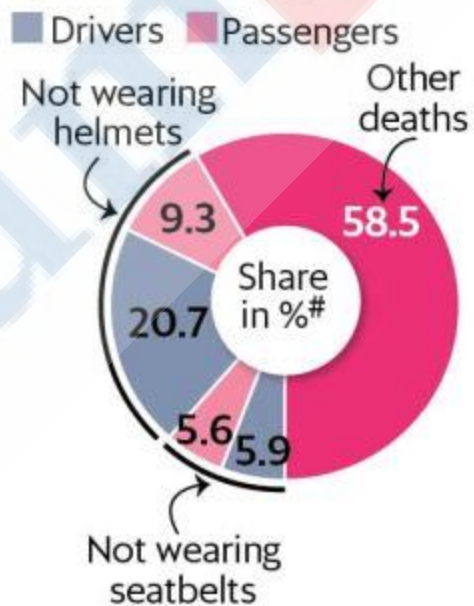
According to an IIT Delhi report, while the national highways constitute only 2% of the total length of roads in India, they account for ~35% of the fatalities.

## The anatomy of road accidents: where they happen and who they kill

### By type of roads



### By use of safety gear



Source: National Crime Records Bureau; Ministry of Road Transport and Highways

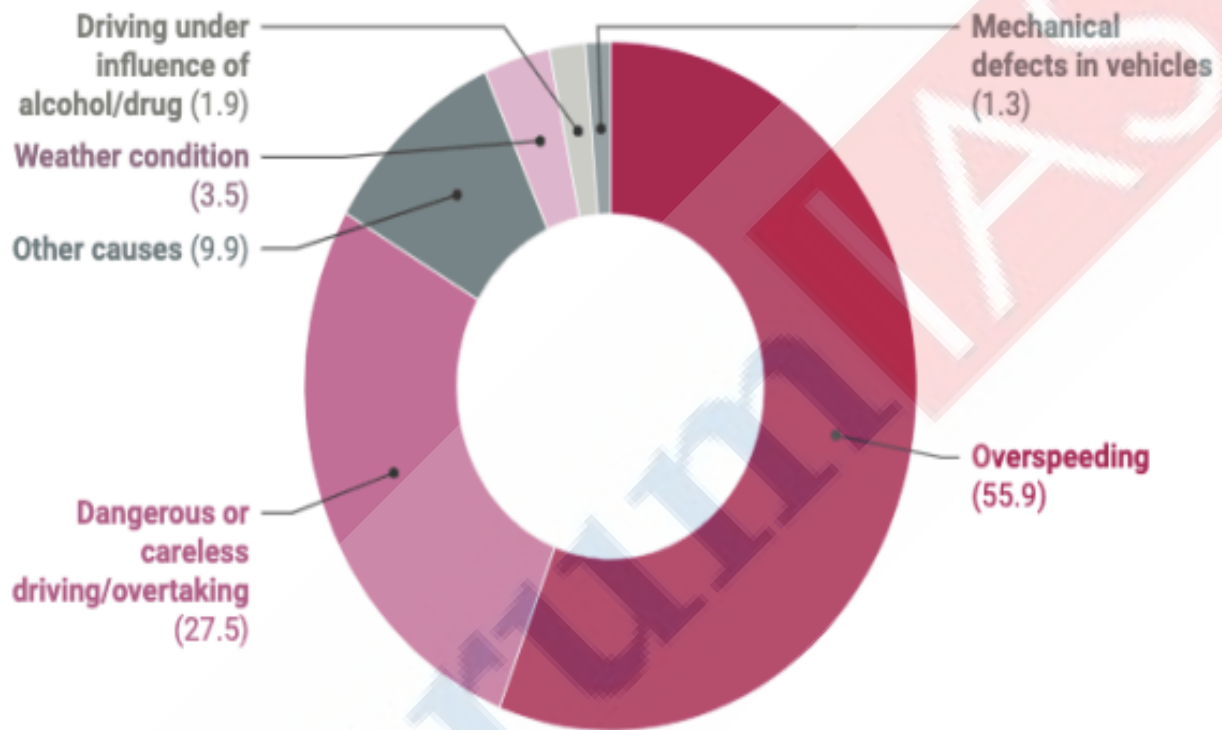
Source: Mint

### What are the reasons behind high number of road accidents and fatalities in India?

**Human Factors:** According to the NCRB report, most of the accidents and fatalities are attributable to human factors. These include (a) Over-speeding, (b) Careless driving like jumping a red light, driving or overtaking on the wrong side of the road, talking on the mobile phone while driving etc.; (c) Neglecting safety measures like not wearing helmets or seat belts; (d) Driving under influence of alcohol or drugs.

## Over speeding is responsible for a majority of lives lost on roads

Road accident deaths, by cause (in %)



Source: Mint

In addition, there is **low awareness/adherence to safety norms** e.g., in a survey it was found that only 7% of respondents wore rear seat belts. Only 28% of the respondents were aware that use of seat belt is mandatory. A WHO report (2022) noted that safety belts can reduce death and serious injuries to passengers in the back seat by 25%.



## WHY WE ALL NEED TO BUCKLE UP INSIDE A CAR

In a country that accounts for 10% of all road deaths in the world, the fatal car crash which killed former Tata Sons chairman Cyrus Mistry has once again drawn attention to the scanty use of seat belts. Government agencies say they plan to create more awareness for new licence applicants to ensure cars are not driven until all occupants, including those in the rear, have buckled up. Mistry and his friend Jehangir Pandole, who also died in the crash, were in the rear seat and not strapped in.

Somit Sen & Dipak Dash report

### SEAT BELT LAW

Central Motor Vehicle Rule 381(3) mandates occupants of front seats and those occupying front-facing rear seats must wear seat belts while vehicle is in motion. Rule came into effect from 2002.

### PUNISHMENT/FINE

Motor Vehicle Amendment Act specifies a fine of ₹1,000 for violation, but states notify their own rates. In Maharashtra, fine for not wearing seat belts and helmets is ₹500. Transport activists have demanded a hike in fines.

### ACTION TAKEN

> Mumbai traffic police have been fining car drivers for not wearing seat belts. But no case or challan is filed for not wearing seatbelts in the rear.

> Transport commissioner Avinash Dhakne told TOI fines have been imposed near toll nakas when passengers are found in the rear without seatbelts. However, no data is maintained by govt on such offences.



### ADVANTAGES OF HAVING SEAT BELT FASTENED

Reduces risk of a fatal injury up to 50% in case of front seat passengers.

In front row, buckling up protects passengers from impact of expanding airbags.

Experts say airbags and seat belts are designed to complement each other.



Belts save lives sometimes even in old cars which don't have airbags.

Airbags are designed to cushion the impact while the belt serves to restrain movement. Without belt, airbags are ineffective.



### PAST STUDIES ON REAR-END SEATBELTS

2019 study by SaveLIFE Foundation, a non-profit involved in road safety, found

only 7% respondents across 11 cities said they used rear seat belts.

only 28% were aware that use of seat belts was mandatory.

WHO study says use of rear seat belts can cut probability of death by

25%

Seat belts also prevent excess injury or death for the front seat passenger.

Local Circles survey done recently showed 7 out of 10 Indians do not wear a seatbelt when seated in the rear of a vehicle.

### IMPACT OF A CRASH

> Purpose of belt is to restrain you so that you stop with the car. Without the belt, inertia continues to move the body forward at the same velocity until it hits an object inside the car.

> Experts said even if a person is strapped in and airbags cushion the impact, person may still suffer some injuries.

depending on the force of the impact. It could prevent fatalities, but result in abrasions, fractures of the jaw, neck and sometimes, the spine.

> Belts keep you in your seat, prevent person from being thrown against the windshield, or flung inside or outside the vehicle, which is fatal in most cases, police officials said.

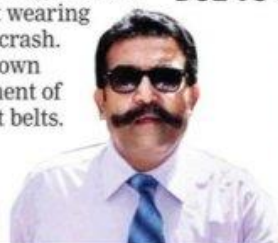
> In a high-speed crash, an unbuckled passenger can turn into a heavy projectile and hurt/kill other vehicle occupants wearing belts.

> Though seat belts prevent deaths by reducing head injuries, they can still damage by the impact associated with the force of restraint on a passenger.



**“** I had made it mandatory in Kerala and fined people in rear seats for not wearing seat belts in 2013. Those on rear seats not wearing belts can face maximum impact during a crash. Despite several crashes involving well known personalities, there is no proper enforcement of the law nor awareness about rear end seat belts. It is high time we implement the law and save lives.

—Rishi Raj Singh,  
Former Kerala transport commissioner



### INDIA: INJURIES, DEATHS DUE TO NOT WEARING SEAT BELT



Source: MoRTH

Source: The Times of India

Fewer deaths are attributable to external or weather conditions or mechanical defects in vehicles e.g., the highest number of road accidents and deaths are recorded between 6 pm and 9 pm on average on a given day, and in the months of January and December in a given month (due to low visibility due to fog).

**Road Design:** Many roads are not designed from the perspective of safety and accident prevention. Many roads have multiple **black spots**. Black spots are road locations that have a high number of crashes e.g., sharp corners in a straight road, a hidden junction on the fast road, etc. A survey found out that, these black spots are the prime location for 90% of the road accidents.

Similarly, there are no separate lanes for 2-wheelers or very heavy vehicles. Urban areas lack separate lanes for pedestrians.

Additionally, roads often have potholes or uneven surfaces due to poor upkeep which are cause of crashes and fatalities.

**Poor Quality of Vehicular design:** Vehicles in India lack safety features of global standards e.g., most low end cars don't have airbags e.g., In 2014, the Global New Car Assessment Programme (NCAP) revealed that some of India's top-selling car models have failed the frontal impact crash test. Car manufacturers argue that price conscious Indian consumers are more focused on mileage rather than safety norms. So there is a compromise on safety features to keep the cost low.

According to a road safety report prepared by the Transportation Research and Injury Prevention Centre, IIT Delhi, in November 2021, estimated that 'air-bag deployment reduced mortality by 63%; lap-shoulder-belt use reduced mortality by 72%, and combined air-bag and seatbelt use reduced mortality by more than 80%'.

**Post-accident factors:** Absence of quick response (like immediate information to medical authorities) and lack of emergency medical facilities increase the number of fatalities. In addition, possibility of harassment by law-enforcement agencies (like accident related investigations) deter by-passers to respond.

#### **What steps have been taken to address issues related to Road Safety?**

The Government formulated the **National Road Safety Policy (NRSP)** in 2010 based on the recommendations of S Sundar Committee. The Government is committed to to raise awareness about safety issues and extend assistance to the State Governments and local administrations in ensuring road safety. Under the policy, the Government reviewed standards that govern road design and the maintenance of vehicles. **National Road Safety Council** has been created to supervise matters related to road safety.

**District Road Safety Committees (DRSC)** have been established in each district under the Section 215 of the Motor Vehicle Act of 1988. The DRSCs are tasked with conducting an ongoing analysis of the district's traffic collisions and gathering information on incidents, their causes, accident sites, and victim information. They are also in-charge of creating a **district road safety plan**, an **emergency medical plan**, and making sure that ambulances were accessible and connected to hospitals.

The Government amended the **Motor Vehicles (Amendment) Act, in 2019** and enhanced the road safety measures: **(a)** Creating a **National Road Safety Board** to advise the government on road and traffic management (Notified in September 2021); **(b)** Higher fines for traffic crimes; **(c)** Recalling defective vehicles, dangerous for the environment and people; **(d)** Creating a **Solatium Fund for victims** of hit-and-run accidents; **(e)** Punishment to the owner for violations committed by Juvenile; **(f)** Regulated corruption by Automated testing for driver's licence and fitness certificate (FC).



The Act also protects **Good Samaritans from civil and criminal liability**. In October 2021, the Ministry of Road Transport and Highways (MoRTH) issued Guidelines for the Scheme for **grant of Award to the Good Samaritans** who save the life of a victim from a fatal accident involving a motor vehicle. A Good Samaritan is a person who **voluntarily comes forward to administer emergency care to a person injured in an accident**, or crash, or emergency situation. In 2016, the **Supreme Court of India gave “force of law” to the guidelines** for the protection of Good Samaritans issued by the Ministry of Road Transport and Highways. **Good Samaritan Law protects Good Samaritans from harassment** e.g., Police should not involve the Good Samaritans for investigation or the Hospitals should not refuse to treat the accident victims and should not charge for First Aid.

Apart from this, the Government has taken several other steps like: **(a) Front and side crash tests** for new car models came into force in 2017; **(b) New cars are required to have airbags fitted as standard**; **(c) The government notified the guidelines for road safety audits** on National Highways; **(d) Installation of Roadside Safety Crash barriers and speed warning boards**; **(e) A mobile app ‘Sukhad Yatra 1033’ has been launched** which enables highways users to report potholes and other safety hazards on National Highways including accidents; **(f) Efforts are on for rectification of identified Black spots**; **(g) Road Safety Audits are being carried out** at all stages of development of the highway i.e. design, construction and operation stages; **(h) Facilities such as Foot Over bridges & underpasses are being provided** wherever required for safe crossing of pedestrians and other road users; **(i) Road Safety Week is observed every calendar year** for spreading awareness about safer behavior of road users on National Highways.

The Ministry has formulated a multi-pronged strategy to address the issue of road safety based on 4 E's **Education, Engineering** (both of roads and vehicles), **Enforcement** and **Emergency Care**.

#### **What more steps can be taken going ahead?**

**First**, There is a need to enhance vehicle safety features in India. Vehicles in India must conform to global best standards e.g., The European Union's **General Safety Regulation** requires new vehicles to incorporate **advanced emergency braking technology** that launches automatically when a collision is imminent and intelligent speed assistance to reduce speed. Such standards must be incorporated in India too.

**Second**, The Government can implement the important recommendations of the **KS Radhakrishnan panel on Road Safety**. The important recommendations were: **(a) State Governments to perform a compulsory Audit on road safety** to ensure adequate safety standards in the design, construction, and maintenance of roads; **(b) Creating awareness among people** on road safety rules, insurance policies, etc.; **(c) Providing enough compensation to victims on time**.

**Third**, There is a need to review standards pertaining to safety in the **design of rural and urban roads** and bring them into consonance with international best practices, keeping in view traffic conditions in India. There can be separate lanes for 2-wheelers and heavy vehicles. Rules related to lane-driving must be implemented stringently with heavy fines for violations.

**Fourth**, there is a need to **create greater awareness among the general public regarding road safety**. Rash driving, lack of respect for traffic rules, low awareness about safety measures (like wearing seat belts) are symptomatic of casual attitude of Indians towards safety (self as well as of the others). Apart from this enforcement of rules must be made more stringent with revocation of driving license in case of multiple violations of rules.

#### **Conclusion**

Road accidents have remained a silent killer in India. Despite high number of accidents, road safety has remained low policy priority for the Governments. Perhaps the recent developments

can nudge the Government and the general public in the right direction. The Government has already announced strict penalties for not wearing rear seat belts. However, **the approach to road safety has to be proactive, rather than reactive**. The public has as much role to play as the Government. A concerted and focused effort can help bring down road accidents and help save precious lives. **SDG target 3.6** calls to halve the number of global deaths and injuries from road traffic crashes. **SDG target 11.2** calls for improving road safety and access to public transport. The Government must take all possible steps to meet the targets.

**Syllabus:** GS III, Infrastructure – Roads

**Source:** [Indian Express](#), [The Hindu](#), [The Times of India](#), [ORF](#), [Mint](#)

### Urban Floods: Causes, Impacts and Remedies – Explained, pointwise

#### Introduction

The city of Bengaluru witnessed several spells of heavy rainfall in the last week. The city received > 130 mm of rainfall on September 05, 2022 which led to inundation of most parts of the city. Over the last few years, similar incidents of urban floods have occurred in Mumbai, Chennai, Patna and several other major cities. In fact, urban floods seem to have become an annual phenomena in most urban centres in India. While heavy rainfalls are a significant factor in urban floods, a major cause is poor planning, inadequate infrastructure, unauthorized construction and encroachment of river and lake beds.

#### What are Urban Floods?

Floods are a result of both **meteorological** and **hydrological** factors. Meteorological factors include rainfall frequency and intensity, storms, temperature etc. and hydrological factors are associated with groundwater levels, extent of impervious surface etc. When combined with **anthropogenic factors in urban centres**, events of inundation of large areas by water are classified as urban floods. Anthropogenic factors like land-use changes, exploitation of floodplains by construction and similar activities, poor solid waste management, and destruction of drainage complicate the system.

According to NDMA, Urban flooding is significantly different from rural flooding as urbanization leads to developed catchments, which increases the **flood peaks from 1.8 to 8 times** and **flood volumes by up to 6 times**. As a result, **flooding occurs very quickly** due to faster flow times (in a matter of minutes). Urban areas are densely populated and thus the economic impact can be much higher than floods in rural areas.

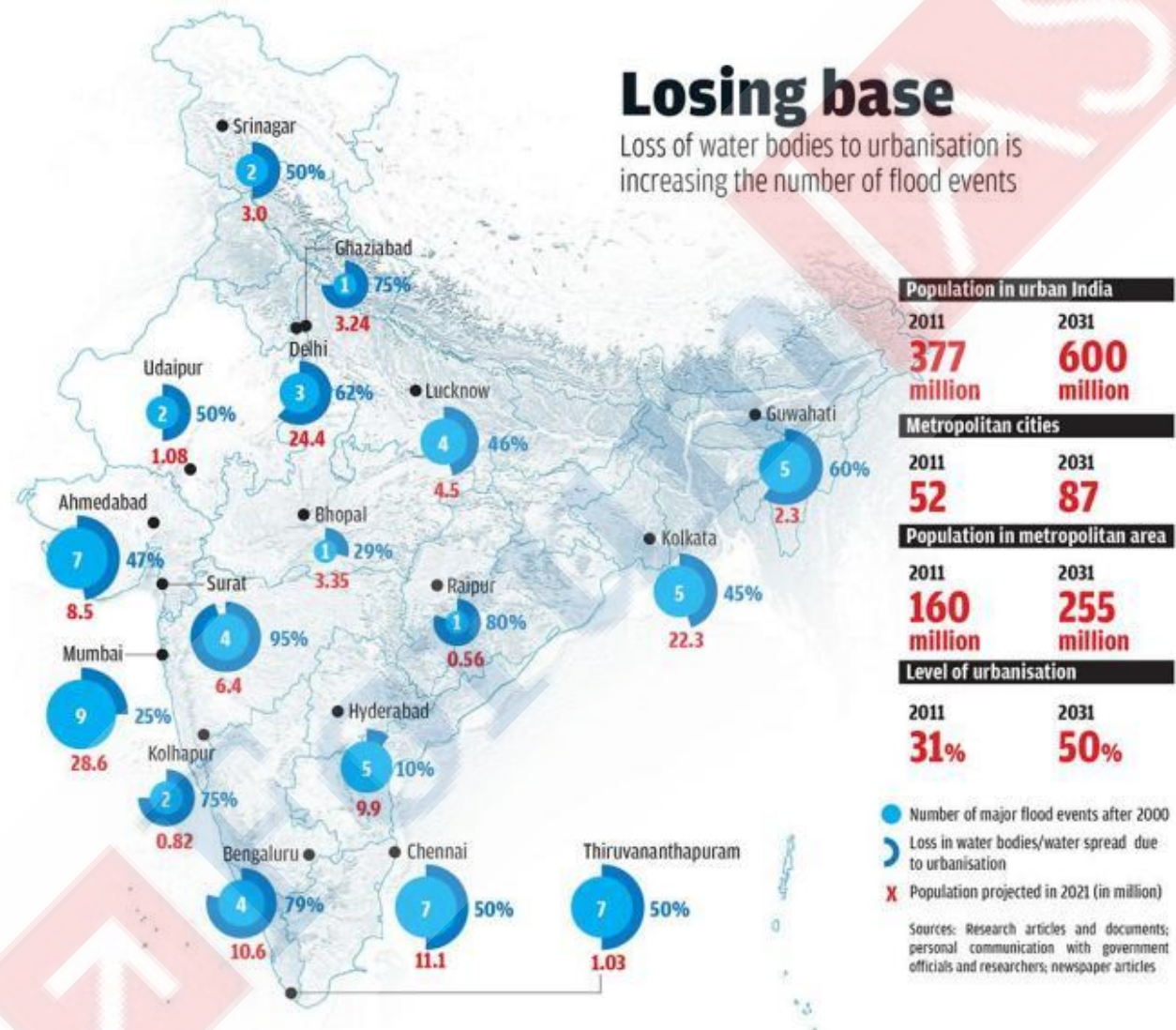
#### What are the reasons behind Urban Floods?

Urban floods are caused by a wide variety of factors, but they typically result from a combination of natural and human influences.

**Meteorological Factors:** Most Indian cities receive heavy rainfall during monsoons. The extreme weather events with concentrated heavy rainfall are becoming more frequent due to climate change (increased cyclonic activity in Arabian Sea and Bay of Bengal due to warming). Most urban floods in recent times were consequent to episodes of heavy rainfall e.g., Bengaluru witnessed > 130 mm rainfall in one day, against average rainfall of ~4.5 mm/day in this time of the year. Similarly Mumbai recorded ~950 mm of rainfall on July 26, 2005.

**Hydrological Factors:** Flood risk arises when the **surface runoff is greater than the infiltration rate** during The infiltration rates depend upon the type of soil, their respective water retention capacities, vegetation cover (reduces speed of water and increases infiltration) etc. Urbanization reduces rate of infiltration due to paved roads and lack of vegetation cover. Lower infiltration leads to higher run-off and flooding.

**Anthropogenic/Human Factors:** The risk of urban flooding has increased as a result of human interference in the natural environment. Urbanization has led to **encroachments on water bodies** and construction on beds of rivulets/rivers and lakes. This **obstructs natural flow of water**. Consequently, such areas are inundated with water during events of heavy rainfall e.g., in Bengaluru, the *Dakshina Pinakini* river had been dry for three decades and was considered extinct. With heavy rainfall it was flooded and damaged buildings in its path. In 2021, a Comptroller and Auditor General report had highlighted that the *Bruhat Bengaluru Mahanagara Palike* (BBMP), had not removed 714 encroachments out of the 2,626 identified near water bodies.



Source: Down to Earth. Number of Urban Flood Events in major cities since 2000 and the loss (in %) of water bodies due to urbanization. Bengaluru has witnessed an unprecedented 79% loss of water bodies.

Similarly, the number of water bodies in Gurugram has decreased from 644 in 1956 to 123 in 2018 and the green cover is only 9%. Delhi's Commonwealth Games Village (CWG) has been built right next to Yamuna's floodplain. The secondary runway of Chennai International Airport has been built right over the Adyar river. Many projects in Andhra Pradesh's Amaravati Capital City Project, have been proposed to be built on the floodplains of the Krishna river.



In addition, most Indian cities have undergone **haphazard urbanization**. The infrastructure has not been commensurately upgraded with rising population e.g., storm water drainage lacks capacity to adjust for loss of natural run-off due to construction. The Karnataka State Action Plan on Climate Change (2013) had noted that drain infrastructure of Bengaluru is not enough to handle even moderate rainfall event. Yet, the infrastructure has not been upgraded. Also, lack of regular cleaning and upkeep of drains leads to clogging and flooding.

In many cases waste water from cities is drained in rivers and lakes. This causes **siltation** and **reduces the capacity of natural drains**, causing urban floods.

### What causes urban floods?

#### Meteorological factors

- Unprecedented rainfall
- Influence of urban microclimate

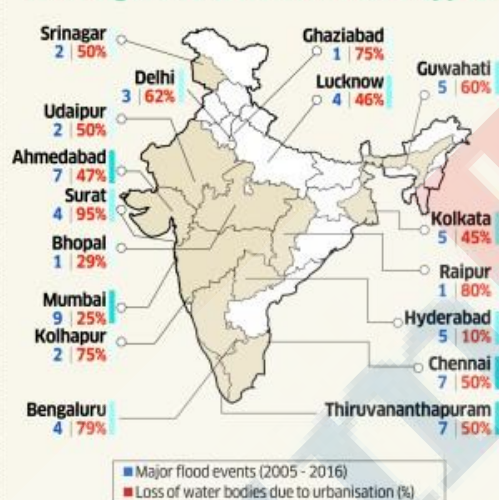
#### Hydrological factors

- Change in the course of rivers
- Presence of high tide
- Synchronisation of runoffs of various parts of the watershed

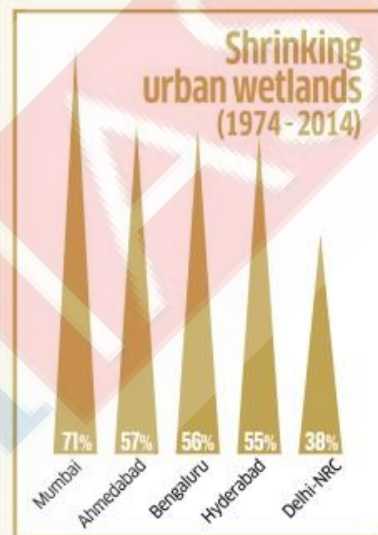
#### Human factors

- Rapid urbanisation and deforestation
- Loss of waterbodies
- Encroachment of floodplains and low lying areas
- Damage to drainage channels
- Buildings designed without regard to flood risk
- Lack of water conservation infrastructure

### Flooding occurs as waterbodies disappear



### Shrinking urban wetlands (1974-2014)



### CITIES AND THE YEAR THEY SAW MAJOR FLOODS

Mumbai: 2005 - Present; Bengaluru: 2005, 2007, 2015, 2020; Chennai: 2002, 2004, 2005, 2006, 2007, 2015; Ahmedabad: 2017; Kolkata: 2007, 2017; Hyderabad: 2020

Source: Deccan Herald

### What are the impacts of Urban Floods?

Urban regions are **hubs of economic activity** and contain critical infrastructure that require round-the-clock security. Damage to critical infrastructure in major urban centres has an impact at both the State and National level e.g., 2005 flood in Mumbai led to disruption of operations of Stock Exchanges (BSE and NSE) and shut down financial services, resulting in losses exceeding US\$ 100 million.

Disruptions in power and transportation impact day-to-day life of residents. Extreme events cause **loss of life and property**.

Additionally, flood waters from industrial facilities or storage locations may disperse dangerous chemicals and fuels into water. Toxic chemicals and untreated sewage can both pose serious risks to the general public's health and the water supply.

Spread of infection post flood event can cause **spread of epidemics**.

For lower income groups, the major challenge is the ability to earn a livelihood, which is directly affected by urban flooding. The urban poor are at more risk, because in most cases the slums in which they live are most vulnerable to urban floods.

### How can the issue of Urban Floods be addressed?

The most critical need is to increase the resilience of the communities and adaptive capacity of the infrastructure.

**First, Water-sensitive urban design and planning techniques** are most critical. These methods take into consideration the topography, types of surfaces (pervious or impervious), natural

drainage, and have very little impact on the environment. Vulnerability analyses and risk assessments should be mandatory in city master plans.

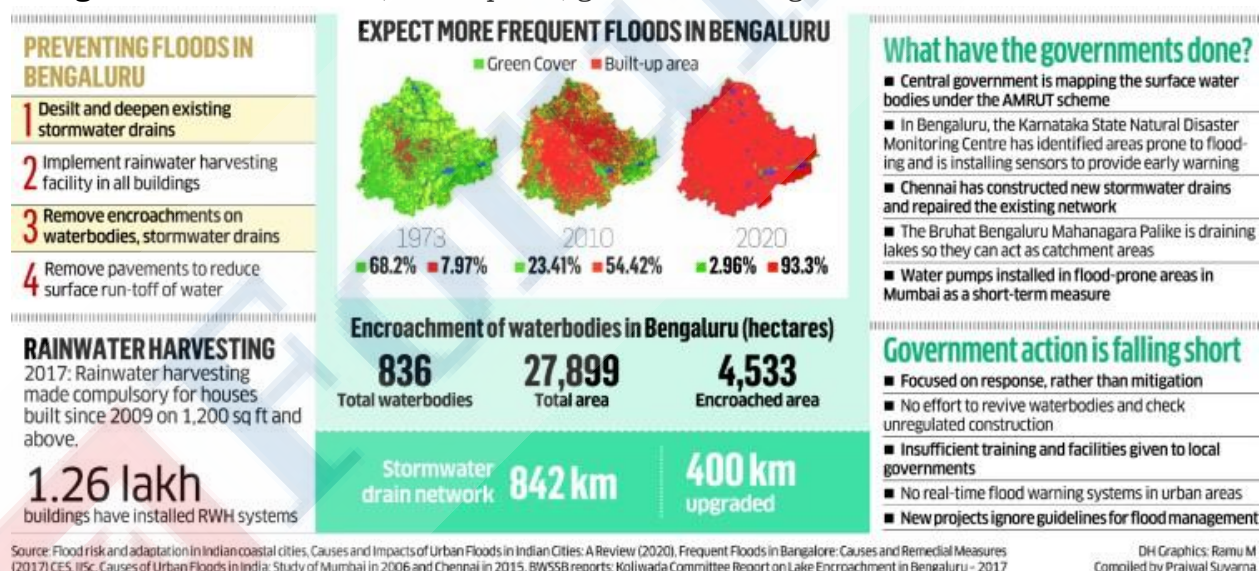
**Second**, a comprehensive **database of all wetlands and water bodies** in urban areas should be established. Protected areas for river, lake, and other water channel catchments must be identified and **freed from encroachments**. Flood plains and natural water bodies must be restored.

**Third**, there is a need to adopt scientific management measures to deal with urban floods. Risk reduction should start with a **mapping of flood vulnerability**. Hydraulic and hydrological models must be used to analyse the flood pattern. The findings must be in urban master plans. Land use in urban areas should be strictly regulated.

**Fourth**, the **urban infrastructure must be upgraded**, including construction of new storm water drains and expansion of existing sewerage infrastructure. Moreover, the pavement cover must be reduced and vegetation/green cover should be expanded to reduce storm water run-off.

**Fifth**, there is a need for **improved coordination between various institutions** especially between water resources and disaster management authorities for **integrated approach towards flood management**. Engagement with grassroots organisations is necessary to promote awareness on holistic flood risk management. **Participatory approach** for early action coordination among stakeholders can help mitigate flood risks.

**Sixth**, as recommended by the draft New National Water Policy there is a need for renewed thrust on **protection and revival of traditional local water bodies** in both urban and rural areas. These water bodies would form part of **urban blue-green infrastructure** for improved water levels and quality, as also flood mitigation, through specifically curated infrastructure such as **rain gardens** and **bioswales**, urban parks, green roofs and green walls etc.



Source: Deccan Herald

**Seventh**, some countries are experimenting with concept of **Sponge Cities**, and initial experience has shown promise. If the solution is successful and scalable, same can be adopted in India in the new upcoming urban expansions. Sponge cities can solve the problem of urban flooding as well as scarcity of water during the summer season.

### Sponge City

Sponge City is a type of city which is designed in such a way that it acts like **a sponge for rainwater**. The water is absorbed and **allowed to naturally filter through the soil to reach the aquifers**. The aquifer recharge helps fulfill the water needs of the city.



The Sponge city has **contiguous open green spaces, interconnected waterways and channels** and ponds across neighborhoods to **naturally detain and filter water**. City buildings have green roofs that can retain rainwater and naturally filter it before it is recycled. There are also porous design interventions across the city including construction of bioswales, porous pavements that **allow water to be absorbed and permeate to recharge the groundwater**.



Source: British Business Council

### Conclusion

A Climate Change Assessment Report (2020) of the Ministry of Earth Sciences has noted that the increased frequencies of heavy rainfall has enhanced flood risk all over India, particularly in the urban areas. This requires an urgent fix. Addressing the challenge of urban floods requires a concerted effort of Union, State and Local Governments along with the citizens.

**Syllabus:** GS III, Disaster and disaster management.

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



**Managing Climate Change: A Strategy for India – Explained, pointwise****Introduction**

Climate Change is a clear and present danger. The latest IPCC Assessment Report has warned that if nothing is done, global warming is likely to reach at least +2.8°C by the end of the century. Developing countries will be most seriously impacted by the impending disasters. Globally, there is a concerted effort to address the challenge under the aegis of the UN Framework Convention on Climate Change (UNFCCC). At the latest Conference of the Parties (COP) in Glasgow (COP26), many countries including India accepted a long term commitment to reduce carbon emissions to Net Zero. This is a departure from the position in 2015 (Paris, COP21) when most countries had committed only to reducing the emissions intensity of their GDP. India has set a target to achieve Net Zero by 2070, while most developed countries intend to achieve the target by 2050. There are several challenges in achieving these targets. A research paper titled 'Managing Climate Change: A Strategy for India' authored by a noted economist has suggested several measures to achieve these targets.

**About India's Climate Targets**

India had submitted its first pledge in 2015 that had three primary targets. The revised climate targets (or INDCs, Intended Nationally Determined Contributions) were officially submitted in August 2022. The new targets are: **(a)** Reduction in emissions intensity of the GDP by 45% by 2030 (compared to 2005 level); **(b)** Total non-fossil fuel electricity generation capacity to be raised to 500 gigawatts (GW) by 2030.

The long term target is to achieve Net Zero emissions by 2070.

The targets are contingent on transfer of technology and low-cost international finance including Green Climate Fund (GCF).

**Read More:** [India's New Climate Targets \(INDCs\) – Explained, pointwise](#)

**What suggestions have been provided by the Working Paper?**

The longer-term objective of getting to Net Zero can be achieved by a combination of both **demand side** and **supply side** actions.

Demand Side actions include: **(a) Increased energy efficiency** through adoption of energy-efficient technologies, combined with **lifestyle changes**; **(b)** Shifting from **direct use of fossil fuels** to electricity as the final energy source wherever possible.

Supply side actions include: **(a)** Shifting away from electricity generation using fossil fuels (coal, diesel and gas) to **Renewable Energy** (RE, mainly solar and wind); **(b)** Development of **green hydrogen** as a substitute for fossil fuels in key areas; **(c) Expanding forest area** to increase natural carbon sinks; **(d) Developing CCUS techniques** (Carbon Capture Utilization and Storage) to make them commercially viable to offset CO<sub>2</sub> emissions from residual use of fossil fuel that may remain.

The Report has provided sector-wise action points for promoting decarbonization.

**Decarbonising Power Sector**

**Need:** This is a top-priority sector because it accounts for roughly half of total CO<sub>2</sub> emissions in the economy. Also decarbonising other sectors of economy will entail shifting from direct use of fossil fuels to use of electricity as the final source of energy (e.g., shift from oil based vehicles to electric vehicles in transportation), increasing the share of electricity as the major energy carrier. To meet the 2030 target, annual capacity addition must increase to 38 GW over the next 8 years, up from an average of about 11 GW in the previous 4 years.

## Challenges in Decarbonization of Power Sector

- **Intermittency:** Grid management is difficult because of intermittency of solar and wind power.
- **Cost Competitiveness:** Solar and wind power generation has become cost competitive over the last decade and cost almost same as coal-fired plants. However, **cost of battery storage** (to smooth the supply) is high. It would raise the cost by 60-100% rendering them uncompetitive.
- **Poor financial status of DISCOMs:** Most DISCOMs are making losses and are under huge debt primarily because of populist policies. This impacts **investments and adoption of Renewable Energy (RE)**. Potential private investors in RE feel that **DISCOMs may default** on payments.
- **Transmission Infrastructure:** RE power generation is largely concentrated in the South and West India. This power will require to be transported to other region, needing expansion of transmission infrastructure.
- **Phasing out coal** is crucial to achieve Net Zero, but India still has a very high dependence on coal.
- **Land Acquisition:** Large amount of land would be required to expand RE. According to an estimate, generating 50% of electricity through solar by 2050 would require 23,800 sq. km of land (~0.8% of India's land area).

Source: Managing Climate Change: A Strategy for India

Created by | ForumIAS®

### Suggestions

**Intermittency:** It can be handled by **(a)** Pairing RE generation with gas-based power plants or with pumped-hydro storage; **(b)** Use of grid-scale battery storage. Each of these methods entails additional costs, and will make RE costlier.

**Risk cover to RE Producers:** Improving the financial status of DISCOMs should be a top priority but will take time. In the mean-time, **special risk-mitigation measures** can be undertaken to encourage private investments in RE. The Union Ministry of Power, State Governments and the RBI can sign a **tripartite agreement**. Under the agreement, RE power generators will be reimbursed by the RBI in case they are not paid on time by the DISCOMs. RBI will debit the account of State Government and recover the amount from them. There is evidence that private sector generators prefer to invest if they are offered such protection.

**Read More:** [DISCOM sector in India: Challenges & solutions – Explained, pointwise](#)

**Expanding Transmission Infrastructure:** Power Grid Corporation (under Central Government) has to step-in as it better equipped to handle environment clearances etc. Government can provide initial investment. As these transmission lines become operational and start earning revenues, they could be privatised to raise capital for further investments.

**Phasing-out Coal:** A recent study had recommended that **~50 GW of coal capacity in India can be considered for early retirement** provided supportive finance is available. The Ministry of Power has recently announced phasing down of 81 units of coal power plants to 40–55% of their capacity, to replace with approximately 30 GW of solar power by 2025–26. The Governments of **Gujarat, Maharashtra, Karnataka and Chhattisgarh** have announced that they will **not fund any new coal power plants in their States**. Shift away from coal will have economy wide impacts like loss of livelihoods in the coal mining sector, loss of income to coal producing State Governments, loss of transportation revenue to Indian Railways among others. Hence, retirement of functioning coal plants should ideally be incentivised by **provision of international concessional financing**. Here, India must keep on pressing for financial support from the developed countries to fulfil their commitments.

**Carbon Tax:** At present, the Government levies a cess of INR 400/tonne of coal. This translates to a **carbon tax of US\$ 3.5/tonne of CO<sub>2</sub>**. IMF has recommended a carbon tax of US\$ 25/tonne of CO<sub>2</sub> for India, (US\$ 75/tonne for the US/EU). Increasing carbon tax on coal to the recommended level will increase costs of coal-based electricity by ~40% leading to early phase out. Oil products are already heavily taxed by the Governments. The introduction of carbon taxation can accelerate the transition to RE, as well as generate revenues to help **finance other elements of the climate management plan**.

**Production Base for RE:** According to an estimate, achieving Net Zero will require the RE capacity to reach 7400 –8400 GW by 2070. India must meet its demand for Solar cells/modules, wind turbines etc. domestically as well as export for global demand. The Union Government has already launched PLI Schemes for manufacturing Solar PV Cells, batteries etc. The Government should avoid high import tariffs and instead foster innovation by domestic industry to make them competitive. The Government has rightly encouraged partnerships with leading international companies. The trade policy required for this objective has to be carefully designed, recognising the importance of openness to innovation. Domestic R&D efforts by the industry should also be encouraged.

**Land Acquisition:** State governments would need to be proactive. They can acquire the land with appropriate compensation to landowners, and passing it on to private solar power developers on a fixed/long-term lease basis. The process must be transparent. Focus should also be on utilizing wasteland for solar power generation to minimize impact on agriculture. In addition, agriculture productivity can be enhanced by sustainable practices to negate any impact of diversion. There is a need to actively pursue reduction in methane emissions from agriculture sector.

#### Decarbonising Industries

**Need:** The Industrial sector accounts for ~33% of India's CO<sub>2</sub> emissions. Almost 50% of the emissions from the industrial sector are contributed by Steel, oil-refining and cement production. The rest are emitted by mining and quarrying, brick manufacturing, pulp and paper, fertilisers, textiles and petrochemicals, and other non-specific industries. Decarbonizing industrial sector will be crucial to achieve the climate change targets.

#### Suggestions

**Shift to Electricity:** Many industries use fossil fuels to generate heat required in their operations. They can be shifted to use electricity for this purpose.

**Shift to Green Hydrogen:** Industries like steel, fertilizers, cement, petrochemicals etc. use fossil fuels as feedstock in chemical processes (shift to electricity not possible). They can be decarbonized through use of Green Hydrogen (H<sub>2</sub>). India's H<sub>2</sub> demand is expected double over the next 10 years. Green Hydrogen Policy is geared towards increasing adoption. Government should provide appropriate incentives to increase R&D and adoption of Green Hydrogen.

**Read More:** [Green Hydrogen Policy – Explained, pointwise](#)

**CCUS Measures for Cement Sector:** India is the second-largest producer and consumer of cement in the world. Cement manufacturing is very carbon-intensive. According to the IPCC, CCUS, through the reverse-calcination process, could be a feasible solution to decarbonise this industry as the costs become favourable

#### Decarbonising Transport

**Need:** The transport sector contributes 13% of India's emissions. The sector is heavily dependent upon petroleum and natural gas. This sector includes railways, road transport, inland shipping, and airlines.

#### Suggestions



**Electrification of Railways:** Indian Railways has the 4th largest rail network in the world. 80% of the broad-gauge track network is now electrified. However, > **33% of trains (both passenger and freight) are currently run by diesel locomotives.** The railways should put in place a plan for an accelerated shift to full electric traction over this decade and phase out diesel locomotives.

**Modal Mix of Freight Transport:** Focus should be on faster completion of Dedicated Freight Corridors (DFCs). Modal mix of India's freight should be shifted to Railways (from Roads) as Railways are more energy efficient.

**Electrifying Road Transport:** Electric Vehicles (EVs) are gaining popularity but at present account for less than 2% of the total automobile sales in the country (15% in China). Adoption can be improved through Government interventions to: **(a)** Reduce price of EVs; **(b)** Promotion of EVs for public transport; **(c)** Establishing a sustainable EV-Charging network; **(d)** Establishing a robust battery-swapping ecosystem.

**Read More:** [Battery Swapping Policy: Provisions, Benefits and Challenges – Explained, pointwise](#)

**Restructuring Manufacturing Capacity in Automotive Sector:** To achieve Net Zero by 2070, entire fleet of vehicles have to be EVs by 2050. So sale of fuel based vehicles has to be phased out by 2035. Automotive Manufacturing ecosystem has to shift to production of EVs. Auto component production is dominated by MSMEs, they will need to be assisted to restructure themselves to produce the new types of parts, including components for batteries. Government has to come-up with appropriate policy framework to aid this transition.

**Safety of EVs:** Statutory regulation for this sector needs special attention. The EVs need to be safe to build public faith and enhance adoption. Establishing standards for battery design suited to Indian conditions, standards for charging/recycling and their enforcement will be crucial. A close coordination between industry and the government will be necessary.

**Promoting Public Transport:** Increased capacity of Metro networks and use of EVs in public transport (electric buses) are initial steps. A large-scale shift towards public transport requires a 'system reform' of the urban passenger transport system.

**BOX 3: Promoting Public Transport**

The following are some of the measures that can be taken to promote public transport.

1. Behaviour change campaigns will be needed to break the perception of personal and social status associated with private car ownership.
2. A good way of encouraging public transport is to take steps to discourage private transport. High parking charges within city areas is a good strategy, as is the introduction of congestion charges. Both can be reduced for EVs to encourage electrification.
3. Disincentives must be accompanied by steps to improve the quality of the public transport experience. This is particularly important in developing countries, where poor quality often discourages many individuals in upper-income groups from using public transport.
4. Public transport should be accessible to senior citizens and differently-abled people. Women and child commuters also need assurances of greater safety in the last mile from public transport stops to home.
5. Dedicated lanes speed up the movement of buses and can reduce travel times, compared to private cars. This has been successfully introduced in some cities in India (e.g., Ahmedabad, Indore, and Bhopal), but was strongly opposed in some others (e.g., Delhi), where the effort was abandoned.
6. While the quality of public transport must be upgraded, fares should be kept low. Revenues from passenger fares can be supplemented by non-fare revenues from advertising and real-estate. Revenues from parking charges and congestion charges mentioned above, can be earmarked to provide cities with a source of revenue to cross-subsidise public transport. Special cess on properties along the public transport routes can also be considered.

*Source: Managing Climate Change: A Strategy for India, Centre for Social and Economic Progress*  
Emissions from Expanded Urbanization

**Need:** India's urban population is projected to increase from about 377 million (or about 31% of the population) in 2011, to over 875 million (53%) by 2050. With rising urbanization and higher incomes, demand for electricity will rise. This will contribute to increased emissions (till electricity mix has share of fossil fuels).

**Suggestions**

**Energy Efficient Appliances:** Commendable progress has been made in some aspects e.g., UJALA helped in bringing down the retail price of LED bulbs by 80% and has succeeded in distributing 370 million LED bulbs since 2015. This has effectively saved 48 billion units of electricity per annum, or avoided 386 mt of CO<sub>2</sub> emissions from electricity generation. Adoption of energy efficient appliances (like ACs, fans etc.) should be expanded through similar Government interventions.

**Energy Efficient Buildings:** Energy usage in buildings can be significantly reduced through better building design and construction materials. Regulatory mechanisms could enforce LEED/GRIHA standards for building design and construction, limit the use of glass facades for commercial building designs, promote rainwater harvesting, rooftop solar panels and construction materials suited to the Indian climate.

**Managing Intra-city Transportation:** Spatial planning has been ignored in Indian urbanisation, but it can help to **minimise transportation in private vehicles**, and maximise usage of public transport within cities. The IPCC estimates that demand-side measures of infrastructure use;

based on compact cities, rational spatial planning and high public transport usage, can potentially mitigate 30% CO<sub>2</sub> emissions by 2050. **Developing a 10-year action plan** for the 20 biggest metros in the country would be a good first step in elaborating a strategy for decarbonisation.

**Managing Urban Waste:** Rising amount of solid waste and sewerage generated in cities is a major source of non-CO<sub>2</sub> GHGs. Adopting sustainable measures for urban waste management can help cut down these emissions.

Afforestation and CCUS

**Need:** The IPCC has recognised that fossil fuels cannot be completely eliminated in hard-to-abate sectors (like air transportation). The resulting emissions will have to be dealt with by increasing the stock of forests providing a natural carbon sink, and through CCUS technology to mitigate climate change.

**Suggestions**

**Afforestation:** The Forest Survey of India (FSI, 2019) estimates that to create a 2.5 Gt-CO<sub>2</sub>e equivalent carbon sink, India would require the area under forest and tree cover to **increase by 18.7 million hectares** (~3.4% of the country's geographic area). Nearly 66% of this can be achieved through **restoration of impaired and open forests**. The FSI (2019) estimates the total cost of this to be 1.5% of the GDP. This will not only help in sequestering CO<sub>2</sub>, it will also have substantial co-benefits including ecological restoration and water management.

**Carbon Capture, Utilisation and Storage (CCUS):** CCUS refers to techniques of artificially capturing CO<sub>2</sub> from the atmosphere/large point-sources such as industries and sequestering it chemically into geological formations for long-term storage. The IPCC considers CCUS to be critical to achieving the +1.5°C target. The Ministry of Petroleum and Natural gas has recently published a draft policy document for CCUS in India, wherein geological sites with 393 Gt-CO<sub>2</sub> sequestration potential have been identified.

The technology for CCUS is still maturing and it cannot be currently deployed cost-effectively at industrial scale. However, advanced countries have a vital interest in this area and are heavily involved in developing the technology.

**Read More:** [Geoengineering Technologies: Applications and Concerns – Explained, pointwise](#)

Investment Requirement for the Transition

Implementing the mitigation strategy will require massive investments. These must be supplemented by investments aimed at adaptation to combat extreme weather events such as prolonged droughts and heavy floods. Several studies have attempted to quantify the additional investment India must plan for in future to mitigate climate change.



Table 1: Estimates of annual investments in energy and other sectors in India (2020 \$, billion)

Study	Sector coverage	Scenario	Total	Additional*	% of GDP (cumulative)	Period
McCollum et al., 2018	Energy	+1.5°C by 2100 (50%)	\$313	\$147	2.6%	2016 - 2050
CEEW, 2021 <sup>37</sup>	Electricity, EVs and H2 production	NZ by 2070	\$202	\$107	1.0%	2020 - 2069
IEA, 2022 <sup>38</sup>	Energy	NZ by 2070	\$160	\$107	3.1%	2022 - 2030
McKinsey, 2022 <sup>39</sup>	Energy and land-use systems	NZ by 2050	\$600	\$228	3.7%	2021 - 2050

\*Estimates of additional investment indicate the amount above a reference level, or business-as-usual projection, wherein investment as a percentage of GDP increases over time.

Source: *Managing Climate Change: A Strategy for India*, Centre for Social and Economic Progress. Estimates of additional investments required by India to combat Climate Change.

The additional investment needed has to come from the public and private sectors in some combination. Some of the investments e.g. in transmission infrastructure, agricultural R&D, water management in rural and urban areas will have to come dominantly from the public sector. This will impose a strain on already constrained government finances and efforts will have to be made to create fiscal space to accommodate these investments. For the rest, private sector should carry the burden.

The UNFCCC explicitly envisaged that developing countries would receive international financial assistance to help meet the demands of both mitigation and adaptation. The Paris Agreement of 2015 had promised additional international financial assistance of \$100 billion per year, to be achieved by 2020. This has not been achieved. The Glasgow Pact noted that it would now be achieved only by 2023. The Pact also called for a substantial increase in the amount of assistance thereafter. The new target for international financial assistance will have to be agreed in subsequent COP meetings.

Climate change negotiators have not emphasised flows from multilateral development banks (MDBs), such as the World Bank, the International Finance Corporation, the Asian Development Bank, the European Investment Bank and others, as important channels for international finance for climate change. They have instead favoured the UN Green Climate Fund as the preferred channel for this purpose. However, given the scale of financing needed, it is unlikely that the requisite amounts can be achieved without active involvement of the MDBs.

### Conclusion

IPCC has observed that actions announced by all nations in COP26 to fight climate change are insufficient to contain global warming to the desired level. The Glasgow Pact therefore called on all Parties to consider taking stronger action, to be announced by COP27. Since the consequences of exceeding +1.5°C are alarming, with India likely to be one of the worst sufferers, Government should take an active role in pushing all countries to do more. Domestically, the Government has done a commendable job in pushing for RE energy and EV adoption. The effort must be continued with same vigour for ensuring green transition of the economy as early as possible.

**Syllabus:** GS III, Conservation, Environment pollution and degradation

**Source:** [Mint](#), [Centre for Social and Economic Progress](#)

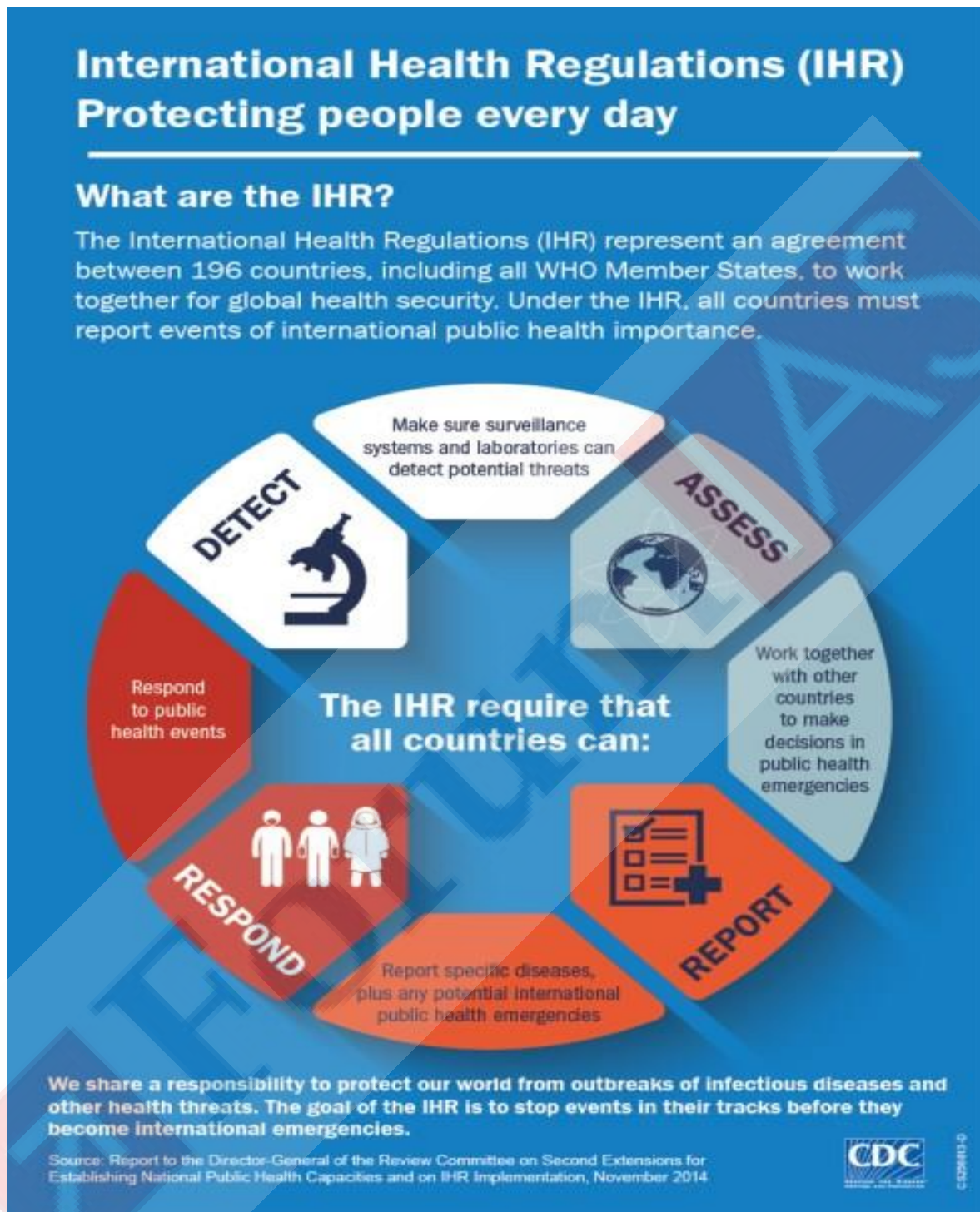
## Need for a Global Pandemic Treaty – Explained, pointwise

### Introduction

COVID-19 is being considered as the most severe pandemic the world has encountered in the last 100 years. As of September 2022, more than 603 million cases have been reported worldwide, with approximately 6.4 million deaths. The impact of the pandemic has been much beyond the loss of life. It has pushed an estimated 120 million people into extreme poverty. Economies across nations fell massively as the strict lockdowns virtually brought the economic activities to a standstill. No single Government or institution has a wherewithal to address such a crisis single-handedly. This has given rise to the larger perspective that 'nobody is safe until everybody is safe'. The world is now facing three global health emergencies (COVID-19, Monkeypox and Polio). COVID-19 pandemic exposed the deep cracks in the global health systems including the International Health Regulations (IHR). Members of the World Health Organization (WHO) are now working towards a Global Pandemic Treaty that will prepare the world to combat such pandemics in a better manner in future.

### What is the current framework to combat global pandemics?

At present Global public health responses are guided by the **International Health Regulations (IHR)**. The Regulations were adopted in 1969 and revised in 2005 after the SARS outbreak. The regulations provide an overarching legal framework that defines countries' rights and obligations in **handling public health events and emergencies that have the potential to cross borders**. The IHR are an **instrument of international law** that is **legally-binding** on 196 countries. They create rights and obligations for countries, including the **requirement to report public health events**. The Regulations also outline the criteria to determine whether or not a particular event constitutes a 'Public Health Emergency of International Concern' (PHEIC). The Regulations require countries to **improve their core capacities**, including legislation, coordination, and surveillance, to detect and respond to national health emergencies. The IHR also define the steps for reporting disease outbreaks to WHO and disease control measures. The IHR are based on 4 pillars: **Detect, Assess, Report** and **Respond**.



Source: [cdc.gov](https://www.cdc.gov)

IHR require countries to maintain core capacities for surveillance and response. Additional provisions address the areas of international travel and transport such as the health documents required for international traffic. The IHR are important for several reasons.



## INTERNATIONAL HEALTH REGULATIONS (IHR)

– from policy to people's health security

**What are the IHR?**

The IHR are legally binding and help countries work together to protect lives threatened by the spread of diseases and other health risks, including radiation and chemical hazards.



### 5 reasons why the IHR matter

 <p><b>HEALTH THREATS HAVE NO BORDERS</b></p> <p>The IHR strengthen countries' abilities to control diseases that cross borders at ports, airports and ground crossings</p>	 <p><b>TRAVEL AND TRADE ARE MADE SAFER</b></p> <p>The IHR promote trade and tourism in countries and prevent economic damage</p>	 <p><b>GLOBAL HEALTH SECURITY IS ENHANCED</b></p> <p>The IHR establish an early warning system not only for diseases but for anything that threatens human health and livelihoods</p>	 <p><b>DAILY THREATS ARE KEPT UNDER CONTROL</b></p> <p>The IHR guide countries to detect, assess and respond to threats and inform other countries quickly</p>	 <p><b>ALL SECTORS BENEFIT</b></p> <p>The IHR prepare all sectors for potential emergencies through coordination and information sharing</p>
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**World Health Organization**  
REGIONAL OFFICE FOR Europe

Until all sectors are on board with the IHR, no country is ready

[www.euro.who.int/ihr](http://www.euro.who.int/ihr)

Source: WHO

### What are the shortcomings in the existing framework?

The International Health Regulations are legally binding and signed by 196 countries. Hence they provide the most comprehensive framework to deal with a pandemic. Yet there are several lacunae.

**First,** The current IHR system has **little power to ensure governments comply with their responsibilities**. The Governments do not accurately report on their core capacities to prepare for and respond to health emergencies. Often, there is a delay in sharing information with the WHO regarding local outbreaks. This delays global response as happened in case of COVID-19. The gap can be attributed to lack of strict implementation mechanism.

**Second,** International Health Regulation (IHR) obligations are heavily tailored towards prevention and detection of pathogens, and **very limited on response stages to prevent transmission**.

**Third,** The IHR is governed by the Ministries of Health of the member States. The Health Ministries often have little influence on the underlying problem of a **lack of broader political will**, including to **commit resources that could improve core capacities** in accordance with the principles of IHR.

**Fourth,** The IHR primarily addresses capacities at a national level, which **does not improve global oversight and coordination**.

**Fifth,** despite attempts by WHO to devise improved methods of monitoring state compliance with IHR, there have been modest changes. These efforts under IHR do not appear to have had much effect on **state preparedness or response**.

COVID-19 Pandemic has led to recognition of the fact that IHR need further revision and that is the reason for the negotiation of new treaty.

#### **How will a Global Pandemic Treaty be useful?**

In December 2021, the World Health Assembly held a special session (only 2nd such special session since its inception in 1948) and took the decision to form a global pandemic treaty to 'strengthen pandemic prevention, preparedness and response'.

An **Intergovernmental Negotiating Body** (INB) will be responsible for drafting and negotiating a treaty under Article 19 of the World Health Organisation's (WHO) Constitution. This will be second such initiative under Article 19. The first was the WHO Framework Convention on Tobacco Control which came into effect in 2005.

#### **Article 19 of the WHO Constitution**

It mentions that the Health Assembly shall have the authority to adopt conventions or agreements with respect to any matter within the competence of the Organization. A 2/3rd vote of the Health Assembly shall be required for the adoption of such conventions or agreements.

The new pandemic treaty is expected to cover aspects like **data sharing, genome sequencing of emerging viruses, equitable distribution of vaccines and drugs and related research throughout the world.**

This treaty is an attempt to plug existing gaps, as well as to strengthen global coordination measures that have been weakened over time, in order to have a better global response to these massive issues.

A treaty could also **enhance the capacity of more countries** (especially in low- and middle-income countries) to produce diagnostics, therapies, and vaccines, built by a global commitment of funds, expertise, and technology transfer.

It will help to reach consensus on high-level legally binding principles and commitments within the Convention.

## What are the potential benefits of an international agreement on pandemics?



**Political engagement at leaders' level and global inclusivity** via a new **legally binding agreement** rooted in the WHO constitution



**Improved equity** in access to quality medical countermeasures (vaccines, therapeutics and diagnostics)



**Established principles, priorities and targets** to help countries better prepare for and respond to future pandemics



**Sharing of monitoring data, genetic data, samples, technology and their associated benefits**



**Strengthened national, regional and global resilience** to – and capacities to tackle – future pandemics



**A One Health approach** that connects the health of humans, animals and the planet

*Source: European Council*

### What dimensions should be covered in a Global Pandemic Treaty?

**First**, Prevention of pandemics and their early detection should be the topmost priority. This could be achieved with a more **robust country-reporting mechanism**, as well as through the more widespread use of **joint external evaluations** and better follow-up.

**Second**, Ensuring **universal and equitable access** (addressing vaccine inequities) to medical solutions, such as vaccines, medicines and diagnostics will **ensure resilience** to the future pandemics.

**Third**, there is a need to **ensure better surveillance** of pandemic risks. The monitoring of risks and knowledge-sharing on new infectious diseases spreading from animals to humans is crucial to the prevention of future pandemics. This could be achieved through: **(a) Increasing laboratory and surveillance capacity** required to identify animal diseases in all countries; **(b) Increasing cooperation** between research institutions worldwide. This will aid in the worldwide data collection process, which will help with a better understanding of the disease; **(c) Better coordination of international funding** for core capacities. This will ensure a better health system in developing or underdeveloped countries also.



**Fourth**, Better alert systems should be developed. Digital technologies and innovative tools for data collection and sharing as well as predictive analytics can **support real-time communication and early warnings** which should, in turn, trigger a **more rapid response**.

**Fifth**, the **WHO alarm mechanism must be reformed** by making the process of declaration of Public Health Emergency of International Concern (PHEIC) and enforcing travel restrictions more robust.



**Sixth, A new pooled insurance mechanism** could be established to share the risks associated with infectious disease outbreaks, while simultaneously using these financing resources to encourage compliance with a global pandemic treaty.

### 10 incentives and benefits of an international treaty on pandemics

- 1  Faster and better information for signatory countries about pandemic threats
- 2  Greater certainty for citizens regarding equitable access to pandemic countermeasures (e.g. diagnostics, medicines, vaccines)
- 3  Cost-effective solutions, based on regional and global planning, for stockpiling and production of pandemic supplies in, or near, a given country
- 4  A guaranteed "seat at the table" for national leaders at all treaty fora where decisions on pandemic preparedness and response will be taken
- 5  More secure global supply chains and sufficient healthcare workers during pandemics
- 6  Clarity about each country's core capacities
- 7  Insight into research and development on pandemic solutions, and better sharing of R&D solutions
- 8  Greater confidence that all partners are doing their part, through fair accountability systems
- 9  Integration of the 'one health' approach into the global health architecture, thereby improving prevention by connecting the health of humans, animals and the planet
- 10  Partnership and networking with national counterparts in overcoming the threat of future pandemics, and with all other relevant actors (international organisations, civil society, private sector)

Source: European Council

Some states have been **reluctant for the instrument to be a legally binding framework convention** because it would require ratification by every member state. They argue this would be a substantial political hurdle. However, in the absence of a legally binding framework, many countries might not comply with the requirements, thus rendering the treaty ineffective. Hence it must be legally binding.

### Conclusion

The COVID-19 pandemic brought forward the gaps in the existing mechanisms to tackle global pandemics. The fact that the comity of nations under the aegis of WHO have agreed to negotiate a Global Pandemic Treaty indicates that have realized the existing system needs to be fixed. Now it must be ensured that the agreed framework fixes the lacunae. Most crucial aspects would be addressing vaccine equities, transparency in early reporting mechanisms and enhanced domestic capacities, especially in the developing/least-developed countries. Inability to address these gaps will leave the world vulnerable to a similar or even more deadly pandemic in future.

**Syllabus:** GS II, Global groupings and agreements involving India and/or affecting India's interests,

**Source:** [The Hindu](#), [The Hindu](#), [European Council](#), [Lancet](#)

## [Kurukshestra September Summary] Tribal Development Strategies – Explained, pointwise

### Introduction

Development of tribes of India has remained a central theme in India's development plans and strategies right since the Independence. However, challenges still exist today for India's Scheduled Tribes (STs) due to their traditional lifestyles, remoteness of habitations, dispersed population, and frequent displacement. STs constitute 8.6% (10.45 crore) of the total population of India (Census, 2011). Around 92% of the ST population lives in rural areas. While the proportion of the ST population to the total population has marked an increasing trend from 6.9% in 1961 to 8.6% in 2011, the socio-economic progress of ST people vis-à-vis the rest of the population in the country remained skewed on various development parameters. Various provisions have been provided in the Constitution to safeguard the interests of tribals. Governments have framed several policies and launched many programmes for Tribal Development, which have yielded mixed results.

### Constitutional Safeguards

The creators and founding fathers of the Indian Constitution recognised the special needs of the STs and put in place certain special safeguards, which are enshrined in the Fundamental Rights, DPSP, and other special provisions laid out in the Constitution. These safeguards have been provided to **ensure social and economic justice** as well as to protect these communities from any other potential exploitation. These provisions lay down the basis of ensuring an equitable tribal development in India.

S.N	Articles/ Schedules	Provisions in Brief
1	14	Equality before the law or the equal protection of laws.
2	15	Government not to discriminate against any citizen on the grounds of religion, race, caste, sex, place of birth.

3	15(4)	States can make any special provisions for the advancement of any socially and educationally backward classes of citizens including STs.
4	16(4)	Reservation of appointments or posts by States.
5	38	State to strive to promote the welfare of its people by securing and protecting a social order.
6	46	State to promote educational and economic interests of all the weaker sections including STs.
7	164(1)	States with a large proportion of ST population (Bihar, Madhya Pradesh and Odisha) shall have a Minister-in-charge of tribal welfare.
8	275(1)	Grants-in-aid from consolidated funds of India for promoting the welfare of the STs and for raising the level of administration of the scheduled areas.
9	330, 332 and 335	Reservations of seats for ST in the Lok Sabha, the State legislative assemblies and services.
10	340	State to appoint a Commission to investigate the conditions of the socially and educationally backward classes.
11	342	State to specify tribes or tribal communities as STs.
12	275(1)	Grants from the Consolidated Fund of India each year to be released for promoting the welfare of the STs.
13	5th Schedule	Prescriptions outlined for the administration of Scheduled Areas and the setting up of Tribal Advisory Councils for monitoring and advising the matters relating to welfare of the tribal community and tribal development [Article 244(1)]
14	6th Schedule	Administration of Scheduled areas in the States of Assam, Meghalaya, Tripura, and Mizoram by designating certain areas as Autonomous Districts and Autonomous Regions and also by constituting District Councils [Article 244(2)],
15	73rd and 74th Amendments, Panchayats (Extension to the Scheduled areas Act 1996)	Major shift towards empowering and enabling the scheduled tribes to look after their own interest and welfare through their own initiative. PESA provides a constitutional, legal and policy framework to ensure sustainable autonomous tribal governance.

#### Plans and Programmes for Tribal Development

The policy makers and planners accorded utmost priority to the welfare and development of ST from the beginning of the First Five-Year Plan (1951-56). The Plan laid down the principle for suitably designing such programmes that could adequately cater to the needs of all the underprivileged. Special provisions were initiated towards securing effective and intensified developmental drives for the all-round development of STs. At the end of the First Plan, the Government recognised the **need for a concrete, integrated developmental planning** to improve the socio-economic conditions of STs in the country.



In the Second Plan (1956- 61), the Government **grouped development programmes** in Scheduled areas under four heads: **(a)** Communications; **(b)** Education and culture; **(c)** Development of tribal economy, and **(d)** Health, housing and water supply. An emphasis was laid on **economic development**, with the focus on **reducing economic inequalities** in society. The development programmes for ST were planned, based on respect and **understanding of their culture and traditions** and economic problems. In 1961, the Government opened 43 Special Multi-purpose Tribal Blocks, later termed as **Tribal Development Blocks (TDBs)**.

The Third Plan (1961-66) continued the earlier plans and policies for tribal development. The Fourth Plan (1969-74) vowed to realise a rapid rise in the standard of living of the people, ensuring equality and social justice to all. Six pilot projects in Andhra Pradesh, Bihar, Madhya Pradesh and Odisha were set up in 1971-72.

The Fifth Plan (1974-78) launched the **Tribal Sub-plan (TSP)** envisaging the percolation of direct benefits of development initiatives to the STs. The TSP aimed at the promotion of development activities to raise the level of living standards of STs. It also envisaged the protection of interest of the ST through legal and administrative support. The TSP also stipulated to **ensure accountability and transparency**, along with the flow of funds from other developmental sectors for ST, which was proportionate to the population.

The Sixth Plan (1980-85) **sought to ensure a higher degree of devolution of funds and earmarked poverty alleviation programme** for at least 50% of ST families to cross the poverty line. Infrastructural facilities in Scheduled areas were expanded to support tribal development. Seventh Plan (1985-90), the emphasis was on the economic development of STs by creating two national-level institutions viz. **(a) Tribal Cooperative Marketing Development Federation (TRIFED)** in 1987 as an apex body for **State Tribal Development Cooperative Corporations**; **(b) National Scheduled Castes and Scheduled Tribes Finance and Development Corporation**, which was later bifurcated into two separate corporations – one for SCs and other for STs. The existing NSTFDC started operating in April 2001. NSTFDC has tried to provide remunerative prices for the forest and agriculture produce of STs, and has made provisions for credit support for employment generation.

The Eighth Plan (1992-97) focused on eliminating the exploitation of ST and paid attention to their special problems of suppression of rights, land alienation, non-payment of minimum wages and restrictions on the **right to collect minor forest produce**, etc. The Ninth Plan (1997-2002) envisaged the creation of an enabling environment conducive for STs to exercise their rights freely, enjoy their privileges and lead a life at par with the rest of the society.

The Tenth Plan (2002-07) focused on tackling the unresolved issues in tribal development and problems faced by the tribal society on a time-bound basis. The Eleventh (2007-12) and Twelfth Plan (2012-17) consolidated the welfare measures and offered directions to the States to design proper and appropriate developmental activities specifically relevant for the development of STs. The Annual Plans thereafter through NITI Aayog of Government of India take care of development needs of STs in States. The Aayog, from time-to-time, issues guidelines for implementing Tribal Sub-Plans by Central Ministries/Departments. Central Ministries/ Departments have been mandated by NITI Aayog to earmark funds in the range of 4.3 to 17.5% of their total Scheme allocation every year for tribal development.

Socio-economic Status of STs

### Livelihood Development

The erstwhile Planning Commission adopted the Tendulkar Methodology to estimate poverty incidence in India based on the survey results conducted by National Sample Survey Office

(NSSO). As per these estimates, ST People living below the poverty line in 2011-12 were 45.3% and 24.1% in the rural and urban areas, respectively.

**Table 2: ST Population below Poverty Line during 2009-10 and 2011-12 (in %)**

S. No.	State	Rural		Urban	
		2009-10	2011-12	2009-10	2011-12
1	Andhra Pradesh	40.2	24.1	21.2	12.1
2	Assam	32.0	33.4	29.2	15.6
3	Bihar	64.4	59.3	16.5	10.3
4	Chhattisgarh	66.8	52.6	28.6	35.2
5	Gujarat	48.6	36.5	32.2	30.1
6	Himachal Pradesh	22.0	9.5	19.6	4.0
7	Jammu & Kashmir	3.1	16.3	15.0	3.0
8	Jharkhand	51.5	51.6	49.5	28.7
9	Karnataka	21.3	30.8	35.6	33.7
10	Kerala	24.4	41.0	5.0	13.6
11	Madhya Pradesh	61.9	55.3	41.6	32.3
12	Maharashtra	51.7	61.6	32.4	23.3
13	Odisha	66.0	63.5	34.1	39.7
14	Rajasthan	35.9	41.4	28.9	21.7
15	Tamil Nadu	11.5	36.8	17.6	2.8
16	Uttar Pradesh	49.8	27.0	20.2	16.3
17	Uttarakhand	20.0	11.9	0.0	25.7
18	West Bengal	32.9	50.1	20.6	44.5
	<b>All India</b>	<b>47.4</b>	<b>45.3</b>	<b>30.4</b>	<b>24.1</b>

Source: Reproduced from Annual Report 2021-22, Ministry of Tribal Affairs, Government of India

Source: Kurukshetra



**Table 4: Unemployment Rate (UR) for Scheduled Tribes (ST) and all from 2017-18 to 2019-20 (Figures in %)**

Social Group	Rural			Urban			Rural+Urban		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
<b>PLFS (2019-20)</b>									
ST	3.7	1.8	3.0	7.1	8.0	7.3	4.1	2.3	3.4
All	4.5	2.6	4.0	6.4	8.9	7.0	5.1	4.2	4.8
<b>PLFS (2018-19)</b>									
ST	4.4	2.4	3.8	10.5	14.4	11.5	5.0	3.3	4.5
All	5.6	3.5	5.0	7.1	9.9	7.7	6.0	5.2	5.8
<b>PLFS (2017-18)</b>									
ST	4.9	2.2	4.0	7.0	7.6	7.1	5.1	2.6	4.3
All	5.8	3.8	5.3	7.1	10.8	7.8	6.2	5.7	6.1

Source: PLFS 2019-20, NSO, MOSPI, Reproduced from Annual Report of Ministry of Tribal Affairs, 2021-22

Source: Kurukshetra

#### Literacy and Education

The literacy rates (Census 2011) of the total population and ST population for all age groups in 2011 were 73.0% and 59.0% respectively. The youth literacy gaps between ST and all categories were recorded at 5.1 percentage points whereas for males and females the gaps were 7.1 and 14.7 percentage points, respectively. Such widening gaps between the literacy rates of the general population and ST indicate that the literacy drives of the Government are **yet to benefit all citizens of the country equitably**. In the case of STs, the dropout rates show a declining trend for primary, upper-primary.

**Table 5: Literacy Rate by Age Group-Census 2011**

All Categories (age groups)	Total			Scheduled Tribe		
	Person	Male	Female	Person	Male	Female
All Ages	73.0	80.9	64.6	59.0	68.5	49.4
10-14	91.1	92.2	90.0	86.4	88.3	84.4
15-19	88.8	91.2	86.2	80.2	85.7	74.6
20-24	83.2	88.8	77.3	69.2	79.6	59.0
Adolescent (10-19)	90.0	91.7	88.2	83.6	87.1	79.9
Youth (15-24)	86.1	90.0	81.8	75.0	82.9	67.1

Source: Office of the Registrar General, India, Reproduced from Annual Report of Ministry of Tribal Affairs, 2021-22

Source: Kurukshetra

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Table 6: Drop-out Rates in School Education for Scheduled Tribe Students

Year/ Class	Primary			Upper-Primary			Secondary		
	Girls	Boys	Overall	Girls	Boys	Overall	Girls	Boys	Overall
2015-16	4.18	4.29	4.24	9.64	9.70	9.67	26.28	26.27	26.27
2016-17	3.91	3.96	3.94	8.60	8.69	8.64	27.15	27.85	27.51
2017-18	3.48	3.82	3.66	6.14	5.95	6.04	21.36	22.90	22.14
2018-19	5.23	5.72	5.48	6.46	6.89	6.69	23.38	26.40	24.93
2019-20	3.45	3.90	3.69	5.65	6.15	5.90	22.49	25.51	24.03

Source: Unified District Information System for Education Plus (UDISE+), Ministry of Education, Reproduced from Annual Report of Ministry of Tribal Affairs, 2021-22

Source: Kurukshetra

Providing education is key to equitable tribal development. To address the issues of literacy and drop-outs from formal education and lower enrolment ratios, ST students have been accorded **special incentives** through the provision of **free textbooks, uniforms, and free education in schools**. Residential schools have been built exclusively for the ST students, and the cost of boarding and lodging is borne by the Government. A special focus has also been laid on ST students under **District Primary Education Programme, Kasturba Gandhi Balika Vidyalaya, Mid-day Meals Scheme, and Navodaya Vidyalaya**. While the construction of girls' hostels was started during the Third Plan period, a separate scheme for the construction of hostels for Scheduled Tribe boys was launched in 1989-90. **Tribal schools have been established in TSP areas** from 1990-91 onwards.

The Government has also been providing quality education to the ST students by utilising a part of funds under Article 275(1) of the Constitution of India for setting up **280 Eklavya Model Residential Schools (EMRS)** in 20 States from Class VI to Class XII. This initiative was launched during 1997-98 with an objective to enable ST students to avail the facility of reservation in higher and professional education courses as well as in/higher level jobs in the government and various public sector undertakings. This programme was revamped on September 12, 2019.

### Entrepreneurship and Skill Development

Under Skill India Mission, the Ministry of Skill Development (MSDE) has been delivering short-term skills through **Pradhan Mantri Kaushal Vikas Yojana (PMKVY)**, **Jan Shikshan Sansthan (JSS)** Scheme, **National Apprenticeship Promotion Scheme (NAPS)**, **Stand-up India** program, and long-term skills through **Craftsman Training Scheme (CTS)** and Industrial Training Institutes (ITIs) to the youth belonging to all section of the society including tribal community.

All of the above tribal development schemes have the mandatory provision of utilisation of funds for tribals through Scheduled Tribes (ST) component. While resources are not an issue, the prime concern is how to encourage the participation of youth, employable ST in various vocations by mapping their needs and aspirations.

### Conclusion

Plans and Programmes of the government have continuously facilitated the socio-economic development of ST population. However, the achievement is skewed across States. The poverty gap between ST and all populations living below poverty line shows that ST are more backward economically. Most of the ST who are living under poverty line are landless agricultural labourers having minimal or no access to productive assets.

The Government has identified the problems and designed the ways and means to overcome the problems through various social, economic, and political initiatives. There is a need to popularise a **tribal-specific participatory self-governance system** where the STs will choose their own destiny by managing their own resources and empowering themselves in the **tribal-participative and tribal-managed tribal development process**. Extra efforts could be made to enhance skill and knowledge base of the ST youth through the provision of need-based training and skill upgradation. Since a majority of the tribal community is dependent on minor forest produce and low-productive agriculture, efforts need to be made to make them more productive. **Cooperation, Coordination, and Convergence** are required for the effective implementation of scheme dedicated to the upliftment of STs.

**Syllabus:** GS II, Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes.

**Source:** Kurukshetra September 2022

### India Japan Relationship – Explained, pointwise

#### Introduction

The 2+2 Ministerial Meeting between Defence and External Affairs Ministers of India and Japan was recently held in Tokyo, Japan. In the Joint Statement issued after the meeting, both India and Japan acknowledged the need of global cooperation to address acute security challenges and reaffirmed their commitment to a rules-based global order that respects sovereignty and territorial integrity of nations. In recent years, the India Japan relationship has steadily expanded and deepened. Both India and Japan share a global vision of peace, stability and prosperity, based on sustainable development. They also share democratic values and commitment to human rights, pluralism, open society, and the rule of law underpin the global partnership between the two countries.

#### How has the India Japan Relationship evolved?

India and Japan share a historical close relationship that has existed since ancient times. The exchange is said to have begun in the 6th century when Buddhism was introduced to Japan. Indian culture, through the influence of Buddhism, has had a profound impact on Japanese culture. Throughout the various phases of history since contacts began, the two countries have never been adversaries.

After World War II, India and Japan signed a peace treaty and established diplomatic relations in April, 1952. This treaty was one of the first peace treaties Japan signed after World War II. India Japan relationship has traditionally been strong particularly so since the beginning of India's "Look East" policy in the 1990s. Japan was among the few countries that bailed India out of the balance of payment crisis.

The India Japan relationship was elevated to '**Global and Strategic Partnership**' in 2006. Strong bilateral trade and aid relations have expanded toward security-based relations. The relationship has been pursued with a new vigour since the visit by the Japanese Emperor and Empress in 2013 and the PM Shinzo Abe in January 2014. The relationship was further elevated to '**Special Strategic and Global Partnership**' in September 2014.

Both India and Japan are looking to increase their presence in the Asia-Pacific, alongside the United States. Concerns regarding China's intentions in the region have led to strengthened trilateral cooperation, but none of these countries wish to threaten China with the developing partnership. Rather, policy and security coordination between these three countries can benefit the entire Asia-Pacific region.

**What is the current status of India Japan Relationship?****Strategic and Defence Cooperation**

The **Joint Declaration on Security Cooperation** between India and Japan was issued in October 2008. There are also various frameworks of security and defense dialogue between Japan and India including Foreign and Defense Ministerial Meeting (**'2+2' meeting**), annual Defense Ministerial Dialogue and Coast Guard-to-Coast Guard dialogue. The first '2+2' meeting was held in November 2019.

In September 2020, the Agreement concerning **Reciprocal Provision of Supplies and Services (RPSS)** between the Self-Defense Forces of Japan and the Indian Armed Forces was signed (**'Acquisition and Cross-Servicing Agreement'** or ACSA). ACSA enables **mutual logistics support**, including accommodation and food, during joint exercises and training. India is one of 5 countries with which Japan has an ACSA, along with Australia, Canada, the UK and the US. ACSA has enabled increased maritime security cooperation in the Indo-Pacific region.

Indian and Japanese forces regularly hold joint exercises like **Shinyuu Maitri** (Air Force), **Dharma Guardian** (Army), **JIMEX** (Navy), **Sahyog-Kaijin** (Coast Guard) and **Malabar** (Navy, multilateral).

Both India and Japan support each other's candidature for permanent membership in UN Security Council's expansion. Japan supported India's inclusion to Missile Technology Control Regime and India joined the group in 2016. Strategic and Defence cooperation is a key dimension of India Japan relationship.

**Trade**

India and Japan signed Comprehensive Economic Partnership Agreement in 2011. The economic cooperation has made a rapid progress since 2014. Japan is regarded as a key partner in India's economic transformation. Japan's interest in India is increasing due to reasons like India's large and growing market and its resources. India Japan bilateral trade stood at US\$ 13.7 billion in 2020, with Indian exports worth US\$ 4.3 billion and imports worth US\$ 9.4 billion. India's primary exports to Japan have been petroleum products, chemicals, non-metallic mineral ware, fish & fish preparations, metalliferous ores & scrap, clothing & accessories, iron & steel products, and machinery etc. India's primary imports from Japan are machinery, electrical machinery, iron and steel products, plastic materials, non-ferrous metals, parts of motor vehicles, organic chemicals, manufactures of metals, etc.

**Investments and Development Assistance**

Between 2000-2019, Japan has invested ~US\$ 32 billion. It now ranks 3rd among major investors in India. Japanese FDI into India has mainly been in automobile, electrical equipment, telecommunications, chemical, financial (insurance) and pharmaceutical sectors.

Japan is the **largest bilateral donor for India**. Japanese ODA (Overseas Development Assistance) supports India's efforts for **accelerated economic development** particularly in priority areas like power, transportation, environmental projects and projects related to basic human needs. Several high-profile infrastructure projects crucial for India's economic transformation like the **Mumbai-Ahmedabad High Speed Rail**, the **Western Dedicated Freight Corridor** (DFC), the **Delhi-Mumbai Industrial Corridor** with 12 industrial townships, the **Chennai-Bengaluru Industrial Corridor** (CBIC) are being supported by Japanese assistance.

**Digital Partnerships and Start-ups**

**'India-Japan Digital Partnership'** (I-JDP) was launched in October 2018. In May 2018, both countries signed the Joint Statement on Japan-India Startup Initiative setting up the first Startup Hub in Bangalore. Collaboration in start-ups has emerged as a vibrant aspect under this



Partnership. Till date Indian start-ups have raised more than US\$ 10 billion from Japanese Venture Capitalists (Softbank being the largest investor).

### Science and Technology

The bilateral **Science & Technology Cooperation Agreement** was signed in 1985 and it underpins the bilateral S&T cooperation. The **India-Japan Science Council (IJSC)** was established in 1993. It has so far supported 250 joint projects. Several Institutional Agreements/ MoUs in the areas of life sciences, material sciences, high energy physics, ICT, biotechnology, healthcare, methane hydrate, robotics, alternative sources of energy, earth sciences, outer space etc. have been signed between the science agencies of both countries. The **India-Japan Agreement for Cooperation in the Peaceful Uses of Nuclear Energy** came into force in 2017. Both countries also have cooperation in the field of ICT, in areas such as 5G, telecom security, submarine fibre optic cables, smart-city technologies etc.

Technology cooperation has also increased through the Quad and provided a new dimension to India Japan relationship. Quad has established a critical and emerging technology working group, focused on technology principles, standards development, telecommunications, monitoring of technology trends, and critical technology supply chains.

### Skill Development

An MoC was signed in 2016 to train 30,000 shop floor leaders. Japanese companies have established 12 **Japan India Institute of Manufacturing (JIM)** in India and 4 Japanese Endowed Courses (JEC) in Indian Engineering Colleges. An MoC has also been signed on **Technical Intern Training Programme (TITP)**.

### Other Areas of India-Japan Cooperation

- **Healthcare:** In view of the similarities between the goals and objectives India's AYUSHMAN Bharat Programme and Japan's AHWIN, both sides had been consulting each other to identify projects for collaboration. Both sides have concluded a MoC to formalize cooperation in the field of Healthcare.
- **Act East Forum:** It was established in 2017 and aims to provide a platform for India-Japan collaboration under the rubric of India's 'Act East Policy' and Japan's 'Free and Open Indo-Pacific Vision'. The objective is to coordinate developmental projects in North-East India in areas of connectivity, forest management, disaster risk reduction and capacity building.
- **Supply Chain Resilience Initiative (SCRI):** The Trade and Economy Ministers of **India, Japan and Australia** launched the (SCRI) in April 2021. The initiative seeks to **enhance the resilience of supply chains** in the Indo-Pacific Region and to develop dependable sources of supply and to attract investment.
- **Disaster Risk Reduction:** India and Japan signed an MoC in the field of Disaster Risk Reduction in 2017. India and Japan have jointly organized a series of workshops to exchange information on policy and measures on disaster risk reduction.

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### What are the issues limiting India Japan Relationship?

**First**, Japan has a strained relationship with Russia. India continues to pursue its strategy of 'multi-alignment' and 'strategic autonomy', balancing relations between the West and Russia. India remains heavily reliant on Moscow for the support of key capabilities in its armed forces.

By contrast, Japan's interest lies in taking a united position against Russia to defend the rules-based order.

The response of India and Japan to Russia's invasion in Ukraine is also in stark contrast. Japan also objected to Russia's holding of maritime component of Vostok-2022 exercises near [Kuril Islands](#). India has participated in Vostok exercises.

**Second**, despite expansion in economic ties, the trade between India and Japan is limited and far below potential. Japan barely makes to India's top 15 trading partners. India-Japan bilateral trade is less than one-fifth of India-China trade.

**Third**, on multiple global issues (especially issues related to developing vs developed nations gap) India and Japan end up on opposite sides. These include trade related aspects at the WTO like India's tariff structure on imports.

**Fourth**, The Asia Africa Growth corridor has not achieved much so far. The joint infrastructure projects in Africa has remained limited in outcomes. Similarly, Japanese companies face considerable logistics challenges in their projects in India.

#### **What steps can be taken to further deepen India Japan Relationship?**

**First**, The governments of both countries should work together to remove bottlenecks hampering bilateral trade. Facilitating trade will help achieve its full potential. Trade can be the most potent pillar of India Japan relationship. As of now India-Japan trade is ~5% of Japan-China trade.

**Second**, despite their differences on Ukraine issue, India and Japan must work together and effectively promote peace in the region. This will require continued exchanges, clear communication, skilful diplomacy and unwavering political will from both partner states with a dedicated focus on building trust.

**Third**, Both the countries can work on strengthening industrial competitiveness which would also help building supply chain resilience. Moreover, Japan can support India's quest to become a global semi-conductor chip manufacturing hub.

**Fourth**, Japan should look at more ways to accept specified skilled workers from India and help boost the digitalisation process in Japan by using the Indian IT Professionals

**Fifth**, there is a need to expand the partnership in the domain of Science and Technology like establishing a safe and reliable 5G network, building better space technology, renewable energy and green energy solutions (including green hydrogen), blockchain, Artificial Intelligence/Machine Learning (AI/ML) technologies.

**Sixth**, the cooperation in the field of infrastructure can be extended to cooperate more in India's Northeast region. Japan can support development of India's connectivity projects with the South East Asian nations. They should also work on building greater interconnectivity among ports in India, Japan and other friendly countries in the Indo-Pacific region. This will add a new multilateral dimension in India Japan relationship.

#### **Conclusion**

India and Japan are great democracies and aim at the ideals of a value-based order. The need to form the rules-based order was needed to tackle Chinese assertiveness and expansionism in the Indo-Pacific region. Further, India and Japan aim to form a new security architecture which mainly covers maritime security and cooperation. Therefore the deepening of India Japan relationship is not only important for the two countries, but also for the Indo-Pacific region and will encourage peace, prosperity and stability for the world. It is time to consolidate this shared heritage and to cooperate for a better and more prosperous tomorrow .

**Syllabus:** GS II, India and its neighbourhood relations

**Source:** [Indian Express](#), [Ministry of External Affairs](#), [ORF](#), [Ministry of Foreign Affairs, Japan](#),

## Climate Reparation: Loss and Damage – Explained, pointwise

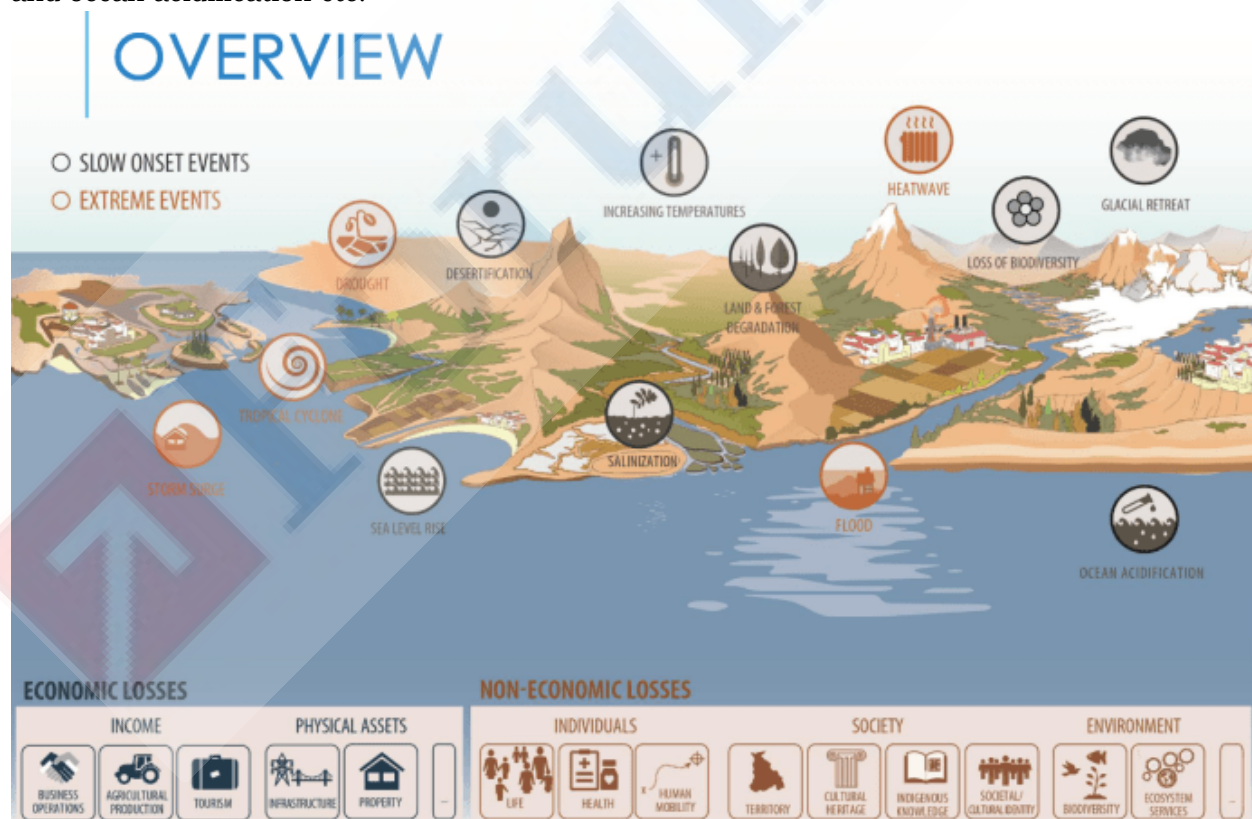
### Introduction

Extreme weather events are becoming more frequent and severe, as climate change is becoming evident. The most recent extreme event occurred in Pakistan. According to media reports, at least 33% of the country's territory became inundated leading to displacement of more than 33 million people (~15% of the population). Experts have called them the worst floods in a century. The floods were preceded by extreme heatwaves in April/May (in the Indian Sub-continent). Pakistan has demanded compensation from developed countries that are being held responsible for climate change. Climate Reparations (or Loss and Damage) has been demanded by many developing countries, most notably, by small island States. Developing countries have very little historic contribution to Green House Gas (GHG) emissions that are responsible for global warming and climate change. However, they are most vulnerable to extreme events due to climate change.

Since the formation of the UN Framework Convention on Climate Change (UNFCCC), vulnerable nations have been calling on developed countries to provide financial assistance that can help them address loss and damage due to climate change. There has been little movement in this regard.

### What is 'Loss and Damage'?

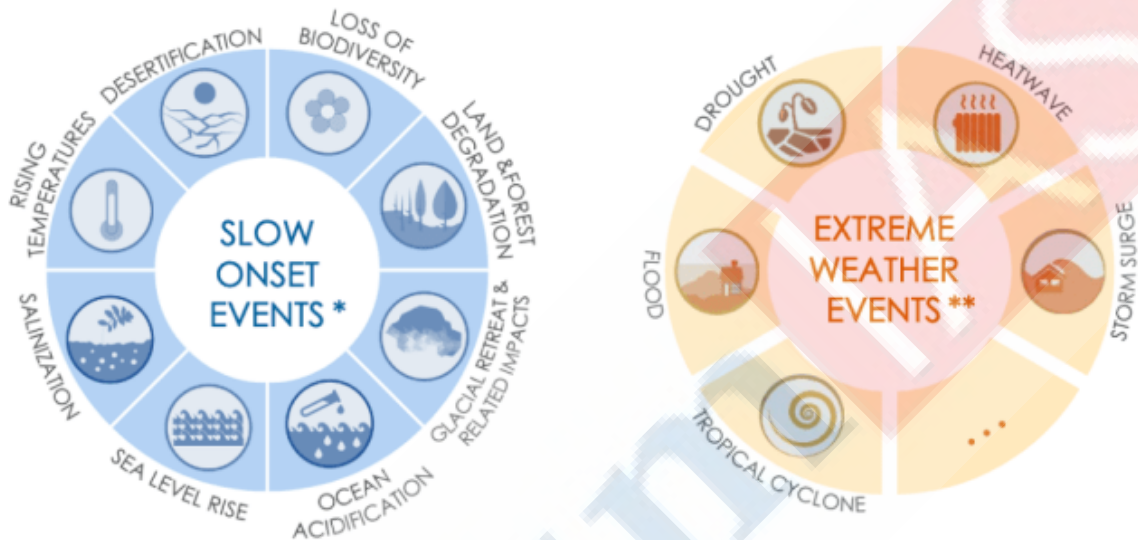
Events occurring due to climate change are having a deep impact on human lives and economic activities. It has increased the frequency of **extreme weather events** like floods, cyclones etc. It is also contributing to **slow onset events** like desertification, loss of biodiversity, sea level rise and ocean acidification etc.





# IMPACTS OF CLIMATE CHANGE

Impacts of climate change include slow onset events\* and extreme weather events which may both result in loss and damage.



Source: UNFCCC, Guide to Loss and Damage

These events due to climate change are responsible for both **economic** and **non-economic losses**. Economic losses can be measured in monetary terms e.g., damage to infrastructure/property or agriculture production (in INR or US\$). Non-economic losses are intangible and can't be accurately measured in monetary terms e.g., loss of human life, biodiversity, cultural heritage or indigenous knowledge. For instance, Communities in Kosrae, Micronesia, have lost burial grounds due to coastal erosion caused by sea level rise. Loss of sea ice in the Arctic has affected the cultural identity and hunting practices among Inuit communities.



**Economic losses** can be understood as the loss of resources, goods and services that are commonly traded in markets.



**Non-economic losses** can be understood as the remainder of items that are not commonly traded in markets.

Source: UNFCCC, Guide to Loss and Damage

People, communities and nations can adapt to some of these events. For other events, adaptation is not possible, or there is a lack of resources to adapt.

There is no official definition of ‘**Loss and damage**’. It is a general term used in UN climate negotiations to refer to the consequences of climate change that go beyond what people can adapt to; or when adaptation is possible but a community doesn’t have the resources to access or utilise them. A close definition is found in the literature review commissioned by the UNFCCC.

	<b>Loss</b>	<b>Damage</b>
<b>UNFCCC (2012)</b>	The negative impacts in relation to which <b>reparation or restoration is impossible</b> , such as loss of freshwater resources.	The negative impacts in relation to <b>which reparation or restoration is possible</b> , such as windstorm damage to the roof of a building, or damage to a coastal mangrove forest as a result of coastal surges.

The **developing countries are more vulnerable to climate change events**, both due to **frequency of events** as well as **lack of resources to adapt**. According to a study, 6 of the world’s 10 most affected countries (between 1996-2015) by extreme weather events were in Asia. Under the Loss and Damage framework, **developing countries demand compensation from developed countries for losses/damages suffered due to climate change events**.

Two vital arguments in the context of Loss and Damage are “Historic Emissions Argument” and “Polluter Pays Principle”.

#### **‘Historical Emissions’ and ‘Polluter Pays’**

At its core, the demand for compensation for loss and damage from climate disasters is an extension of the universally acknowledged “Polluter Pays” principle that **makes the polluter liable** for paying not just for the **cost of remedial action**, but also for **compensating the victims** of environmental damage caused by their actions.

In the climate change framework, the burden of responsibility falls on developed countries that have contributed most of the greenhouse gas emissions since 1750 (considered to be the beginning of the industrial age). The United States and the European Union, including the UK,

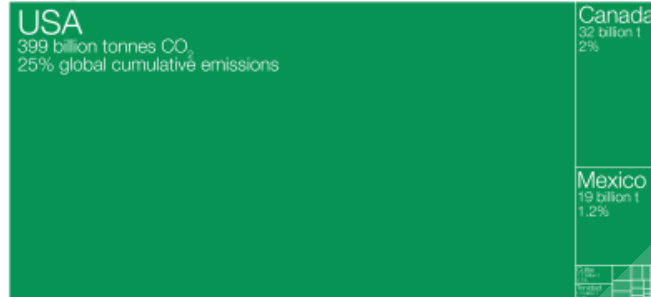
account for ~47% of all emissions since 1750. Inclusion of Russia, Canada, Japan and Australia takes this contribution to ~60%.

## Who has contributed most to global CO<sub>2</sub> emissions?

Cumulative carbon dioxide (CO<sub>2</sub>) emissions over the period from 1751 to 2017. Figures are based on production-based emissions which measure CO<sub>2</sub> produced domestically from fossil fuel combustion and cement, and do not correct for emissions embedded in trade (i.e. consumption-based). Emissions from international travel are not included.

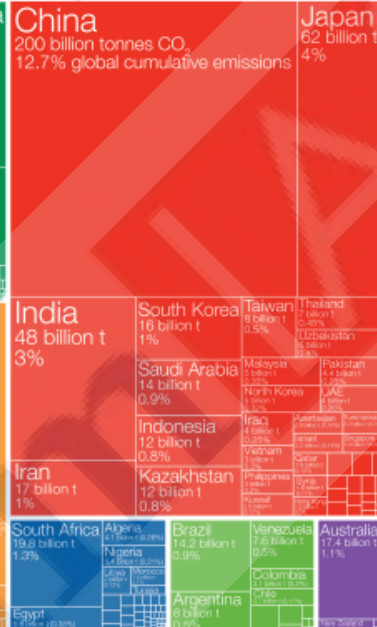
### North America

457 billion tonnes CO<sub>2</sub>  
29% global cumulative emissions



### Asia

457 billion tonnes CO<sub>2</sub>  
29% global cumulative emissions



EU-28  
353 billion tonnes CO<sub>2</sub>  
22% global cumulative emissions



### Europe

514 billion tonnes CO<sub>2</sub>  
33% global cumulative emissions

Figures for the 28 countries in the European Union have been grouped as the 'EU-28' since international targets and negotiations are typically set as a collaborative target between EU countries. Values may not sum to 100% due to rounding.

Source: Our World in Data

Historical responsibility is important because carbon dioxide remains in the atmosphere for hundreds of years (300-1000 years according to NASA). It is the cumulative accumulation of carbon dioxide that causes global warming. India, currently the 3rd largest emitter, accounts for only 3% of historical emissions.

Developing Countries that have had negligible contributions to historical emissions and have severe limitations of resources are the ones that face the most devastating impacts of climate change. Hence they demand climate reparations from developed countries.

### What is the difference between mitigation, adaptation and addressing Loss and Damage?

Under the Paris Climate Agreement, countries recognized the importance of **averting**, **minimising** and **addressing** loss and damage.

Loss and damage can be 'averted' by **curbing greenhouse gas emissions (mitigation)**. It can be 'minimised' by **taking preemptive action to protect communities** from the consequences of climate change (**adaptation**).

'Addressing' loss and damage is the third pillar of climate action: helping people **after they have experienced climate-related impacts**.

Climate adaptation measures include: **(a)** Protecting communities from sea level rise by helping them move to higher ground; **(b)** Preparing for extreme weather disasters by investing in early



warning systems; **(c)** Protecting food supplies; **(d)** Switching to drought-resistant crops among others.

Loss and damage happens when efforts to reduce emissions are not ambitious enough and when adaptation efforts are unsuccessful or impossible to implement, sometimes due to limited resources.

The IPCC's 6th Assessment Report (WGII) observes that as the magnitude of climate change increases, the ability to adapt decreases. It has defined soft and hard adaptation limits. **'Soft Adaptation Limits'** are when adaptation options exist but communities don't have the financial resources needed to adopt them. **'Hard Adaptation Limits'** are those when climate change becomes so extreme that no amount of resources can avert or minimize loss and damage. Coral reefs offer a good example of where adaptation is likely to reach its limits. The IPCC found that 70-90% of tropical coral reefs will die by mid-century even if temperature rise is limited to 1.5°C (and nearly total loss under the 2°C scenario). This will lead to irreversible losses of biodiversity and have a major impact on coastal communities that eat and sell fish that live along the reefs.

**Read More:** [The IPCC Sixth Assessment Report \(Part 2\) – Explained, pointwise](#)

### What actions has the international community taken to address Loss and Damage?

At the drafting stage of the UNFCCC in 1991, it was proposed by the Alliance of Small Island States to create an insurance scheme to provide financial resources to countries impacted by rising sea levels. Each country would contribute resources according to their relative contribution to global emissions. The proposal was rejected, and Loss and Damage was not mentioned in the Framework Convention adopted in 1992.

Loss and damage first appeared in the negotiated outcome of the UN climate talks in 2007 as part of the **Bali Action Plan**. In 2013, **Warsaw International Mechanism (WIM)** was formed to avert, minimise and address loss and damage. The WIM has been mandated to **share knowledge, strengthen dialogues** among stakeholders and **mobilise expertise** to enhance action and support to address loss and damage. But **neither the WIM nor any other established mechanism delivers funding** to help countries manage loss and damage.

Loss and Damage is mentioned in Article 8 of the Paris Agreement. However, there is no reference to provision of finance for climate reparation/compensation in this Article.

At COP26 in Glasgow, a large coalition of climate-vulnerable countries advocated for creating a new finance facility or fund dedicated to loss and damage. The proposal for loss and damage financing was once again rejected by developed countries.

A 2-year **Glasgow Dialogue** was established at the COP26. It will discuss possible arrangements for loss and damage funding. It was also agreed to **operationalise and fund the Santiago Network on Loss and Damage (SNLD)**.

**Santiago Network on Loss and Damage (SNLD)**  
**The Santiago Network is a network to enable Loss and Damage fund flow from developed to developing countries. It will work towards the implementation of relevant approaches at the local, national and regional level, in developing countries that are particularly vulnerable to the adverse effects of climate change.**

The first session of the Glasgow Dialogue took place at the Bonn UN climate negotiations in June 2022. In Bonn, the developed nations acknowledged the need to deal with loss and damage, but didn't commit on any steps they would be willing to take to address the problem. The negotiations also saw limited progress on how to design the SNLD.

**How much funding currently goes toward addressing loss and damage, and how much is needed?**

According to a recent report by the UN Office for the Coordination of Humanitarian Efforts (UNOCHA), annual funding requests related to climate-linked disasters averaged **US\$ 15.5 billion** in the 3-year period between 2019 and 2021. The economic loss from cyclone Amphan in India and Bangladesh in 2020 has been assessed at US\$ 15 billion.

A paper published by researchers at the Basque Centre for Climate Change (Spain) estimates that the economic costs in developing countries from damages will increase from **US\$ 116-435 billion in 2020** to US\$ 290-580 billion in 2030, and could reach between **US\$ 1-1.8 trillion by 2050**.

An Oxfam research found that funding appeals linked to extreme weather events are 8 times higher than they were 20 years ago.

Despite the recent mention in the IPCC WGII report that about 24% of the Green Climate Fund's approved projects refer to loss and damage, it's difficult to clearly identify the amount of funding available for loss and damage. The **lack of an agreed definition makes it hard to tag projects** that could be considered loss and damage and obscures its relation to adaptation and mitigation.

**What should be done going ahead?**

**First**, it is necessary to arrive at an agreement on a definition of Loss and Damage. The lack of an agreed definition makes it hard to tag projects that could be considered loss and damage and obscures its relation to adaptation and mitigation.

**Second**, Climate plans and policies should account for loss and damage alongside mitigation and adaptation. The developed countries have to acknowledge their historical contributions and provide funding for both adaption/mitigation as well as Loss and Damage measures.

**Third**, At COP27, it will be important for negotiators to find a workable pathway and start helping communities that are already suffering and have no mechanism for financial support.

**Fourth**, To receive funding for loss and damage, it has to be established that the disaster was caused by climate change. Climate science has come a long way and is now advanced enough to enable scientists to say with a fair degree of certainty how much role climate change has had to play in a particular extreme weather event. But it is still far from being an exact science. Further advancements are necessary in climate science which will provide a solid basis for Loss and Damage finance.

**Conclusion**

The developed countries have continued to dilute their obligations since the UNFCCC came into existence in 1992. Kyoto Protocol failed to achieve its outcome, the promise to provide US\$ 100 billion annually in climate finance has remained unfulfilled. They have repeatedly blockaded the attempts to establish Loss and Damage finance. As the impacts of climate change are becoming more and more apparent, developed countries must own up their responsibility and provide immediate assistance to the suffering countries. Else the situation is only going to get worse from here.

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

**Source:** [Indian Express](#), [World Resources Institute](#)

**Algorithmic Trading: Meaning, Benefits and Concerns – Explained, pointwise****Introduction**

The Securities and Exchange Board of India (SEBI) recently came out with guidelines for stock brokers who provide services relating to algorithmic trading to investors. The aim of the guidelines is to prevent instances of mis-selling by the brokers. SEBI had noticed that certain stock brokers provide algorithmic trading facilities to investors through unregulated platforms. In the last few years, algorithmic trading and co-location have been in the news for both good and bad reasons. Algorithmic Trading, also known as Algo Trading, became legal after SEBI approved Direct Market Access (DMA) in 2008. Major concerns were raised about algo trading when it was revealed that the National Stock Exchange (NSE) gave preferential access to a few algo traders in 2015. In December 2021, SEBI issued a discussion paper proposing that all orders emanating from stockbrokers' Application Programming Interface (API) be treated as algorithmic trading, raising concerns that such restrictions will stifle the growth of algo trading in India.

**What is Algorithmic Trading?**

Algorithmic trading is computer assisted buying and selling of stocks. It is also known as **automated or programmed trading**. In algorithmic trading pre-programmed computer strategies execute buy and sell trades depending on set parameters, instructions or market pattern and conditions. The instruction can be to buy or sell a particular number of share(s) of a specific company as soon as the price reaches a certain pre-defined level.

The trades happen at a **super-fast speed** by the use of **advanced mathematical models** that involve **automated execution** of trade. The execution speed is so fast that even a split-second faster access is considered capable of bringing huge gains to a trader. The algorithms are run on computer systems owned by traders (and not investor). The algorithm automatically executes the order with **no human involvement from either the broker or the investor**. The algorithmic trading system automatically **monitors the live stock prices** and initiates an order when the given criteria are met. This frees the trader from having to monitor live stock prices and initiate manual order placement.

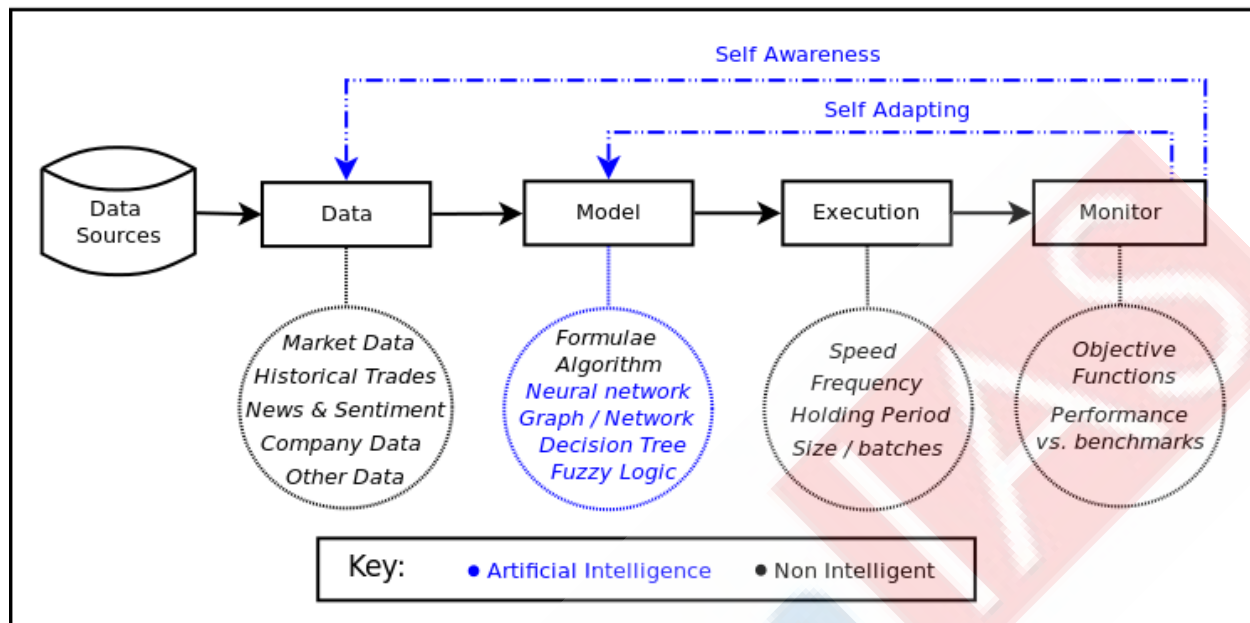
Assume that an investor/trader wants to buy shares of XYZ Corporation if it rises by 2% over its previous closing price and if trading volumes on that day are higher than the average volume of the last 10 days.

The investor can put this order through a broker's website or app, and wait for the order to be executed. However, the investor will only be able to specify the price, not the volume. Another way is to monitor live stock prices and manually place the order when the order is bet.

A third way is to have a software with an algorithm that will place the order only when both conditions are met. This will be done automatically without human intervention.



## Conceptual Model of Algorithmic Trading



Source: Turing Finance. The system picks information from database (e.g., market data related to price) and other latest information. The algorithm compares the data with instructions (model) and executes the order. With advancements in Machine Learning, the models can improvise/adapt themselves for even better/faster executions.

### What is an Application Programming Interface (API)?

An API or application programming interface is a set of programming codes that analyses data and sends instructions between one software platform and another.

Investors/traders typically look for opportunities by screening stocks based on certain parameters (like trend of price). Earlier, they had to identify such stocks on a separate application and then place trades with their broker. In other words, the trader's screening software and the broker's software could not directly communicate with each other. But with brokers providing APIs, traders can **connect their screening software with the broker's API offering access to real-time prices**. The trader's screening software will identify opportunities based on the live prices, and automatically place orders.

Every broker has an open Application Programme Interface, or API. API allows a trader's software to connect to the broker terminal. Brokers, at their end, have an order management system which is used to place an order electronically.

### What is the current status of Algorithmic Trading in India?

Algorithmic Trading was allowed in India in 2008.

According to a report by the National Institute of Financial Management (under the Union Ministry of Finance), ~50%+ of total orders at both NSE and BSE are algo trades.

Many brokers in India have started providing Application Programming Interface (API) access to their clients. This has allowed small investors (retail investors) to invest through algo trading. Companies like Zerodha, Upstox, 5 paisa are amongst the few brokers who provide algo trading platforms to retail clients for algo trading.

**What are the benefits of Algorithmic Trading?**

**First**, algorithmic trading enables faster execution of trades and thus increases the efficiency.

**Second**, It **reduces chances of human error**. It also **eliminates human emotions** which might impact actual execution of order (like last minute dilemma whether to buy or sell).

**Third**, It makes the market broader and **improves the market quality**. From a broker's or trader's perspective, the algo can be set in such a way as to **get the best possible price**.

**Fourth**, algos are executed automatically and with great speed, and substantially **reduces the risk for traders**.

**Fifth**, it improves the **liquidity in the market**. An algo keeps throwing orders in the market and then withdrawing it. This is something that SEBI plans to regulate more closely now. The bottom-line is that this aggressive interplay of orders helps improve the liquidity in the market and facilitates the execution of transactions seamlessly.

**What are the concerns related to Algorithmic Trading?**

**First**, it increases market volatility (i.e., large variation in prices, market instability). Even a small fall in the market can trigger a mass sell order, leading to a crash. Algorithms lack human intuition and hence may not be able identify events of panic selling during market crash further exacerbating such crashes.

**Second**, algorithmic trading is **susceptible to system failure risks** and network connectivity errors etc.

**Third**, the accuracy depends upon the robustness of algorithms. A **faulty algorithm** can result in **large losses** to the traders/investors. In many cases, software engineers writing the algo strategies may lack understanding of working of markets/trading of shares resulting in poor algorithms.

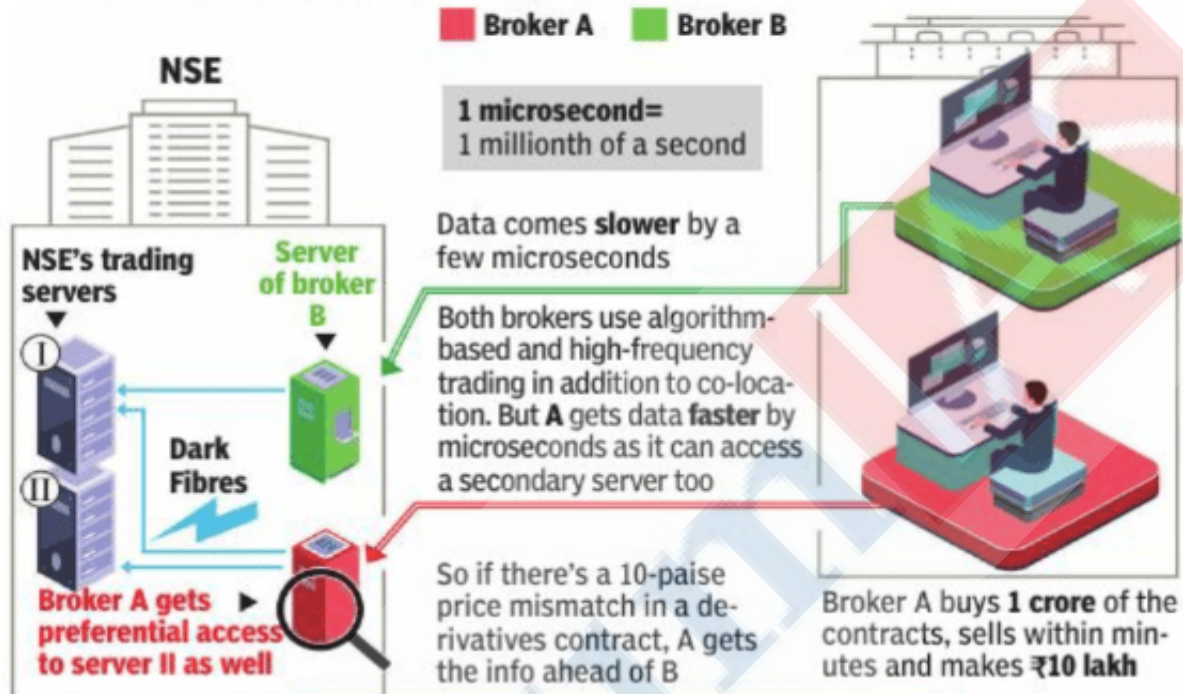
**Fourth**, although it reduces chances of human errors but can't eliminate them. Algo trades are susceptible to **fat finger trades** and algos misfiring. Fat finger trade is a human error while punching an order. This can include **entering a wrong value in terms of price or quantity** or selection of the **wrong execution action such as buy or sell**.

**Fifth**, The trading strategies for algorithms are often written and analysed by the concept of '**backtesting**'. Backtesting is analysing past historical financial data to generate a set of trading signals. There are three problems with the approach; **(a)** Bulk of the back testing is generally based on data analysed over the last two-three years. However it is a **narrow horizon** and may fail to identify a bubble (when share prices are exceptionally high) or bust (when share prices are extremely low say during a recession); **(b)** Past performance cannot guarantee future returns; **(c)** The strategy writers and the marketplaces remain unregulated as of now.

**Sixth**, algorithmic trading is susceptible to scams like co-location scam as happened in the National Stock Exchange.

## HOW MICROSECONDS MAKE A DIFFERENCE

In the example below, brokers A and B located their servers in the NSE trading room. While B traded legally, A — in connivance with some NSE execs — also got preferential access to a second server with less load and unknown to others. As a result, A got faster access to price info, helping him to execute orders before B and thereby making a quick buck



Source: The Times of India

**Seventh,** For the algos deployed by retail (small) investors using APIs, **exchanges are not able to identify if the particular trade emanating from API link is an algo or a non-algo trade.** This kind of unregulated and unapproved algos pose a risk to the market and can be misused for **systematic market manipulation** as well as to **lure the retail investors by guaranteeing them higher returns.**

### What are the SEBI Regulations/Guidelines regarding Algorithmic Trading?

Brokers need to take the **approval of all algos from the stock exchanges.** Each algo strategy has to be certified by Certified Information Systems Auditor (CISA)/ Diploma in Information System Audit (DISA) auditors. They need to inform the exchanges (BSE, NSE etc.) of any changes to the algos.

All orders emanating from an API should be treated as an algo order. The APIs to carry out algo trading should be tagged with the unique algo ID provided by the stock exchanges.

All algo orders have to be routed through **broker servers located in India.** Also, all algo orders have to be tagged with a unique identifier provided by the stock exchange in order to establish an audit trail. This allows the exchange to know if an order is an algorithmic one or non-algorithmic.

Brokers shall ensure that **appropriate checks** are in place so as to **allow only exchange approved algos.**



The stock broker will be responsible for all algos emanating from its APIs and redressal of any investor disputes.

#### **What are the shortcomings/concerns related to the SEBI regulations?**

**First**, the third party algo providers are not regulated. There is also no investor grievance redressal mechanism in place.

**Second**, getting the requisite permission from the stock exchanges is a tedious process, brokers may have to stop using the API system. This will impact development of the market.

**Third**, submitting algo programmes to exchanges for their approval would mean that **vendors may have to reveal their approach**. There is a possibility of the intellectual property (IP) being compromised—some brokerages can easily replicate the successful algo strategies.

#### **What are the global rules on Algorithmic Trading?**

In April 2016, the U.S. Securities and Exchange Commission (SEC) approved a rule proposed by the Financial Industry Regulatory Authority (FINRA) that would require algorithmic trading developers to register as securities traders. The move was primarily aimed at reducing market manipulation.

In the UK, any market participant must notify the regulator Financial Conduct Authority if it is engaging in algorithmic trading. A firm must provide information like nature of its algorithmic trading strategies and details of the trading parameters to the FCA.

#### **What should be done going ahead?**

**First**, there is a need to establish an investor grievance redressal for trades undertaken by third party vendors.

**Second**, the third-party algo providers must also be tightly regulated.

**Third**, SEBI must tighten the regulatory norms so that the Co-location scams that happened in NSE can be prevented.

**Fourth**, there is a need to raise awareness among the retail (small) investors in the stock market about the risks associated with algorithmic trading, so that they are able to use such investing strategies more prudently.

#### **Conclusion**

India's dematerialised (demat) accounts have crossed the 100 million mark, up from about 40.9 million in March 2020. This number is further going to increase in the coming year due to digitalisation and more awareness about the economy. As the participants in the stock markets increase, so do the risks in the market. In this context, the role of the market regulator becomes critical in order to protect new or small investors while also ensuring accountability on the part of the various market players. SEBI's recent guidelines against algorithmic trading facilities for investors provided by unregulated platforms are commendable. SEBI must expand these regulations to cover the unaddressed aspects of algo trading and protect investors' interests.

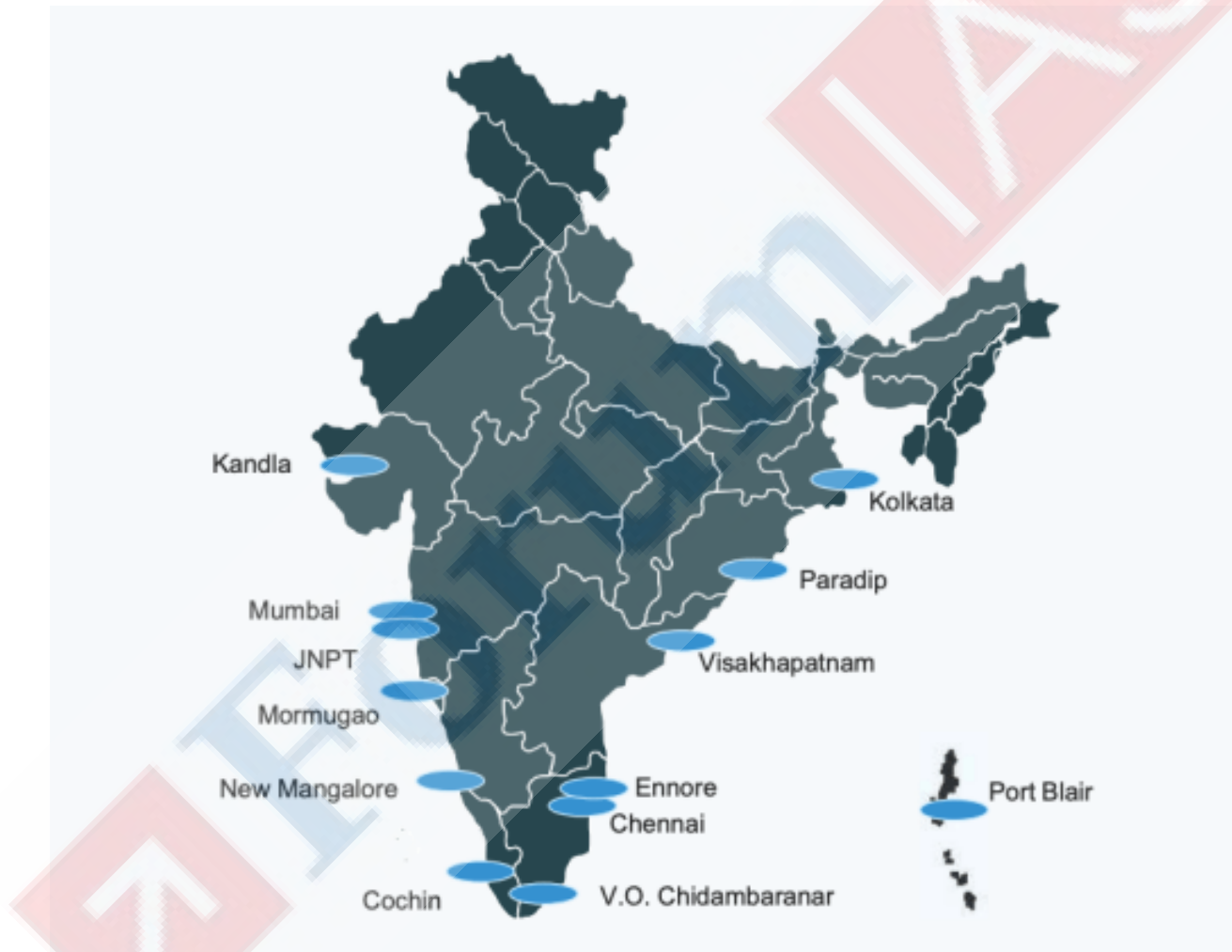
**Syllabus:** GS III, Indian Economy and issues related to growth.

**Source:** [Mint](#), [Indian Express](#), [The Hindu BusinessLine](#), [The Hindu BusinessLine](#), [CNBC](#)

**Draft Ports Bill 2022 and Port Infrastructure in India – Explained, pointwise****Introduction**

The Union Government has prepared a new Draft Ports Bill, 2022. It has been prepared to replace the Indian Ports Act, 1908. An earlier draft was released in 2021, and this Bill has some improvements over it. The purpose of the Draft Ports Bill is to revamp the 1908 Act to reflect the present-day frameworks. In addition, it seeks to amend and consolidate legislation for containment, prevention of pollution and facilitate compliance with the country's maritime treaties and international instruments and aid the consultative development of the ports sector in the national interest.

About Ports in India



Source: IBEF. Chidambaranar is also called Tuticorin Port.

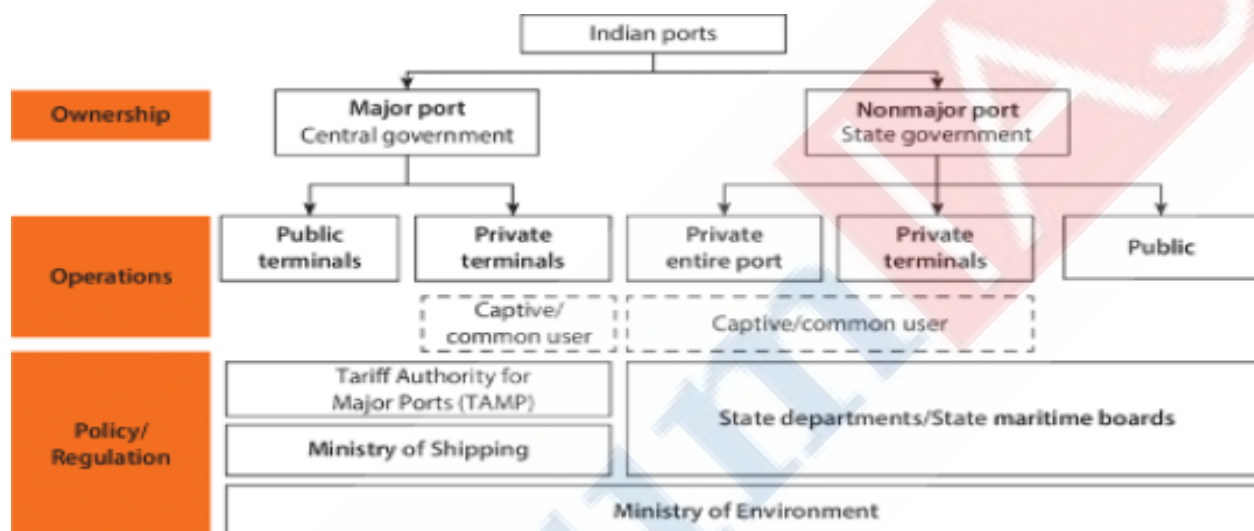
According to the website of Ministry of Ports, Shipping and Waterways, India has 12 major ports and 200 non-major ports. Port Blair was declared as 13th major port via a notification in 2010, although there were considerations to scrap the the major port status in 2017. Mundra is the largest private container port in India. Most of the non-major ports are small fishing harbour , and only a few of them cater to international shipping. **Major ports are listed in the Union List** and come under the jurisdiction of the Union Government. **Non-major ports are in the**

**Concurrent List** and come under the respective state governments, but the Centre has overriding legislative and executive powers.

### What are the Institutional Arrangements governing the Ports Sector in India?

Apart from the 1908 Act, the Major Ports are governed by the **Major Port Authorities Act, 2021** which repealed the earlier Major Port Trusts Act, 1963.

In 1997, a **Maritime State Development Council (MSDC)** was created by an **Executive order**, with the Union Minister of Shipping as chairperson and the Ministers in charge of ports of the maritime States/Union Territories (UTs) as members. The MSDC serves as an **apex advisory body** for the **coordinated development** of major ports and non-major ports.



Source: Ministry of Port, Shipping and Waterways. Institutional Arrangement of Port Management in India.

### What is the current status of India's Maritime Trade and Cargo Handling?

Over **95% of India's trade by volume** and **65% by value is done using maritime transport facilities** at ports. Merchandise exports reached US\$ 417.81 billion in FY22. Increasing trade is translating into higher demand for containerisation due to their efficiency.

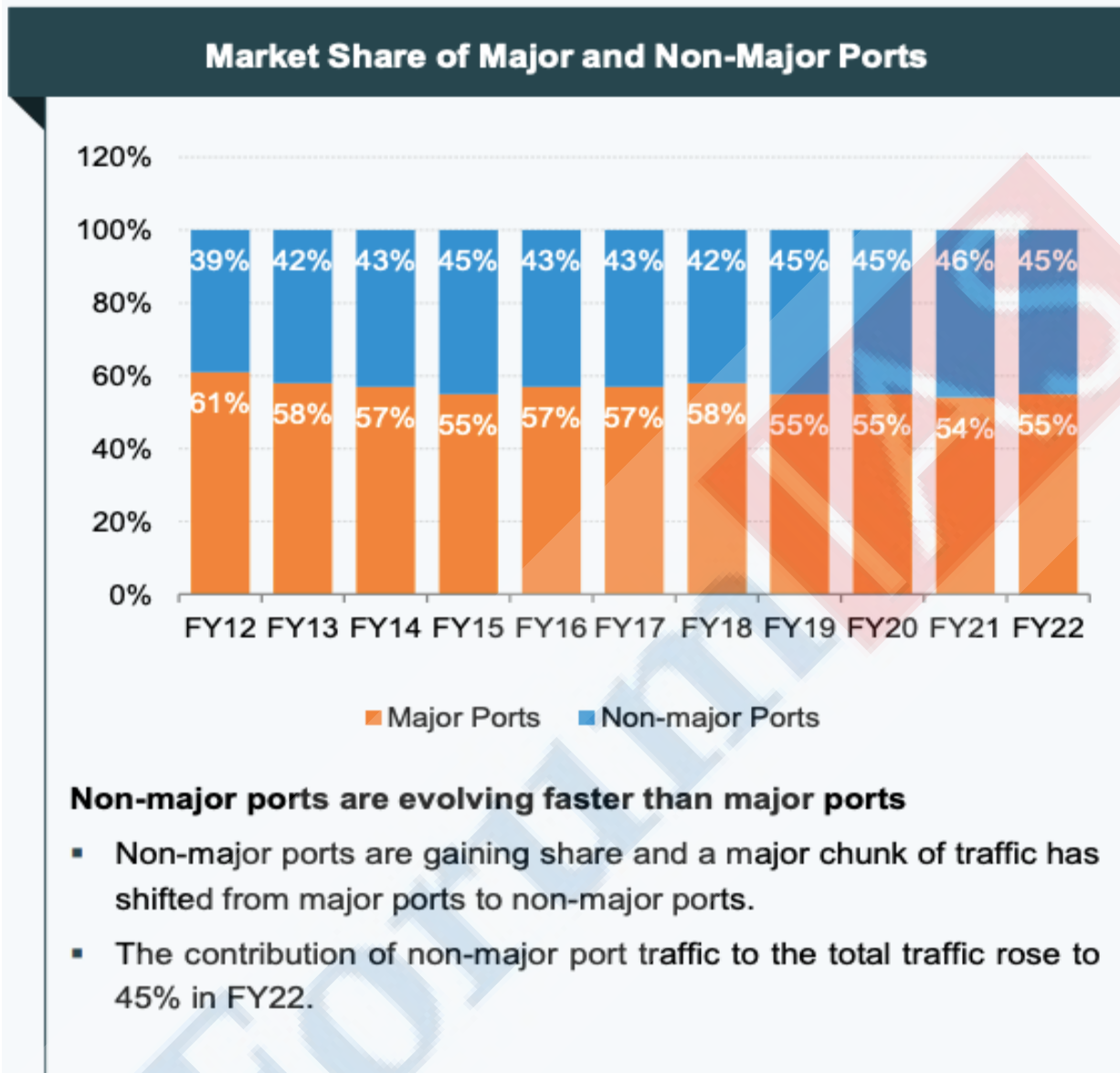
Net profits at the major ports increased from INR 1,150 crore (US\$ 178.4 million) in FY13 to INR 3,413 crore (US\$ 529.6 million) in FY18, while operating margins increased from 23% to 44%.

To meet the growing cargo traffic, the capacity of ports was increased to 1,514 million tonnes in FY19, from 505 million tonnes in FY07. Cargo traffic handled by India's major ports grew 7.72% YoY to touch 720.29 MT in FY22.

**Turnaround time** at major ports in India has decreased at a rapid pace from 82.32 hours in FY17 to 59.51 hours in FY19. Turnaround time at major ports was 62.16 hours in FY21. Turnaround time refers to the time that is taken between the **arrival of a vessel and its departure**. Average turnaround time is influenced by factors such as type of cargo, parcel size and entrance.

Non-major ports are evolving faster than major ports and a major chunk of traffic has shifted from major ports to non-major ports. The contribution of non-major port traffic to the total traffic rose to 45% in FY22. The share of non-major ports was only 8% in 1993-94.





*Source: IBEF*

#### What are the major provisions of the Draft Ports Bill, 2022?

The Draft Indian Ports Bill has a 4-fold primary objectives: **(a) Promote integrated planning** between States and Centre-States through a **consultative and recommendatory framework**; **(b) Ensure prevention of pollution measures** for all ports in India while incorporating India's obligations under international treaties; **(c) Address lacunae in the dispute resolution framework** required for burgeoning ports sector; **(d) Usher-in transparency and cooperation** in the development and other aspects through the use of data.

The Bill is aimed at ensuring **streamlined and homogenised development in the maritime sector**. Its objective is to promote ease of doing business. Some of the redundant provisions of the 1908 Act have been deleted or replaced with contemporary provisions.

**What are the issues with the Draft Ports Bill, 2022?**

**First**, the Draft Bill seeks to give statutory status along with wide ranging powers and functions to the MSDC. The Bill will make it a permanent body with its own office, staff, accounts and audit. A body like the MSDC is necessary, but the nature and quantum of its work do not call for a statutory or permanent status.

**Second**, the proposed composition of the MSDC favors the Union Government. The draft Bill makes 5 Secretaries and 1 Joint Secretary to the Government of India, besides the administrators of the coastal UTs, as members of the MSDC. The vote of an officer would count the same as the vote of a minister. This sets a bad precedent.

**Third**, as noted above, the performance of non-major ports has been better. Between, 1993-94 and 2021-22, the average growth rate of cargo traffic has been 14% in non-major ports versus 4.8% in major ports. Thus the Union Government should delegate more control to State Governments rather than centralising through MSDC.

The 2011 World Bank Report, 'Regulation of the Indian Port Sector', observed that non-major ports are perceived as more business-oriented, customer-friendly, cheaper, and, in general, more efficient. On the other hand unnecessary regulatory and financial burdens are imposed upon port trusts, private terminal operators, and investors by the Union Government.

**How can these issues be resolved?**

**First**, the MSDC should continue to function as an **apex advisory body**.

**Second**, Like the Goods and Services Tax Council, the MSDC should consist only of the concerned Ministers of the Union and maritime States/UTs; officers should only be special invitees. The Union and State Governments can have 50% vote share each.

**Third**, In accordance with global port reform strategies, the Union Government should strive for greater decentralisation, deregulation, corporatisation, and private sector participation. The Union Government should only be responsible for functions like border control, competition policy, port security, environmental protection, and hinterland connectivity.

**Fourth**, State Governments and city municipal corporations should be provided greater stakes in corporatised major ports.

**What are the key challenges faced by the Port Sector in India?**

**Infrastructure Bottleneck:** Indian ports are plug with the **lack of capacity** and **low productivity**. The high turnover time and freight costs make Indian ports **less competitive**. Although the turnaround time has improved it is still poor compared to global standards e.g., Japan (8.16 hours), Taiwan (10.56 hours), Hong Kong (12.48 hours) have much better turnaround times than Indian ports (62.16 hours). Poor planning has meant that India's port expansion has not been commensurate with rise in cargo traffic.

**Logistics Bottleneck:** The port productivity and efficiency also depend upon the quality and reliability of road and rail connectivity, and adequate storage and handling facilities. The lack of expressway connectivity between major ports and industrial clusters, high fuel cost make hinterland transportation inefficient and slow.

**Technology Bottleneck:** Major international ports are using advanced innovations and information technology to change the way goods are transported between port terminals. They have implemented end-to-end solutions and online tracking systems to streamline the flow of

information between their trading partners. In India such smooth information flow between customs, ports, inland terminals and shippers involved in container trade is limited. This reduces efficiency.

**Regulation Bottleneck:** The port operations in India are marred by complex custom procedures, regulations, and lengthy documentation process. In some major ports like Singapore modernized custom administrations have adopted a highly selective procedure for examinations of containers and about 95% of containers are allowed clearance without any physical examinations. In India, rules require 10% of the contents of each box to be checked and verified. It causes delay, and adds a high transportation costs.

### Document Benchmark

Activity	India		Singapore		China		Indonesia	
	No Documents	No Days	No Documents	No Days	No Documents	No Days	No Documents	No Days
Removal of goods from plant	7	1	2	0	3	0	2	0
Customs Clearance	3	1	1	1	1	1	1	1
Export Benefits Application	5	5						
Export benefits Verification	2	10						

Source: CII

What steps have been taken by the Government for developing Port Infrastructure in India?

**First,** The government has allowed FDI of up to 100% under the automatic route for projects related to the construction and maintenance of ports. Indian ports have received cumulative FDI inflow worth US\$ 1.63 billion between April 2000 and June 2021.

**Second,** Major Port Authorities Act has been passed in 2021, replacing the Major Port Trusts Act, 1963. The new Act aims to **decentralise decision-making** and reinforce excellence in major port governance.

**Third, Project UNNATI** has been started by the Government of India to identify opportunity areas to improve operations of key Under the project, 116 initiatives were identified, out of which, 98 initiatives have been implemented, as of September 2020.



**Fourth,** A new **Captive Policy for Port Dependent Industries** has been prepared to address the challenges of renewal of concession period, scope of expansion, and dynamic business environment.

**Fifth,** Private ports enjoy **price flexibility** as the Government allows non-major ports to determine their own tariffs in consultation with the State Maritime Boards. At major ports, tariffs are regulated by the Tariff Authority for Major Ports (TAMP).

**Sixth,** Model Concession Agreement (MCA) has been finalised to bring transparency and uniformity to contractual agreements that major ports would enter with selected bidders for projects under the build, operate and transfer.

**Seventh,** A **10-year tax holiday** has been provided to enterprises engaged in the business of developing, maintaining and operating ports, inland waterways and inland ports.

### Sagarmala Programme

- Sagarmala Programme has been launched to promote **port-led development** in India.
- It aims to harness the **coastline**, 14,500 km of **potentially navigable waterways** and strategic location on key international maritime trade routes.
- The vision of the Programme is to **reduce logistics cost** of international and domestic trade with minimal infrastructure investment. This includes:
  - Reducing the cost of transporting domestic cargo.
  - Lowering logistical cost of bulk commodities by locating future industrial capacities near the coast.
  - Improving export competitiveness by developing port proximate discrete manufacturing clusters.
- The Sagarmala programme has identified 504 projects under **4 pillars**:
  - 211 **port modernisation** projects.
  - 199 **port connectivity** projects.
  - 32 **port-led industrialisation** projects.
  - 62 **coastal community development** projects.
- These projects are expected to mobilise more than Rs. 3.57 Lac Cr of infrastructure investment.

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### What more steps can be taken going ahead?

Suggestions have been provided in the report titled “**Promotion of Infrastructure in India’s Maritime Sector**” by the Ministry of Ports, Shipping & Waterways, to improve the port infrastructure and efficiency.

**First,** Government should **formulate policies for generation of employment opportunities** with involvement of personnel in various activities of construction, operations and maintenance of projects in regard to creation of Coastal Economic Zones (CEZs), Coastal Economic Units (CEUs), Port-Linked Industrial & Maritime Clusters and Smart Industrial Port cities.

**Second,** ways should be chalked out to link Private Ports with the Major and Minor Ports of the country in order to cater to the growing requirement for import/ export of manufactured goods/ raw materials.

**Third,** The Ministry of Ports in coordination with the Ministry of Renewable Energy should work towards establishment of solar power plants and wind power generation units on the unutilized

land. This will help reduce the burden on non-renewable resources of energy and to increase the employment.

**Fourth**, The Ministry should **develop an efficient system** which can support **seamless movement of cargo** across all modes. The Ministry should emphasize all the Major and Minor Ports to **enhance the productivity and infrastructure** to the level of best Ports in the world which will enable them to compete globally.

**Fifth**, Increased competition and economy of scale have fuelled the development of bigger ships. In order to accommodate such vessels, **promotion of huge facilities** capable of handling bigger ships is required.

**Sixth**, to ensure **green development**, the Ministry should formulate **proper guidelines** and **conduct an environmental impact assessment** before releasing funds for any connectivity project.

**Seventh**, The Ministry of Ports should also work in close coordination with the Ministry of Road Transport and Highways, NHAI, and Ministry of Environment to **address the delays in projects due to land acquisition** and environmental clearances.

### Conclusion

The Government has set a target to make India a developed nation by 2047. This will require rapid economic growth supported by domestic demand, investments and robust exports. Maritime trade and port infrastructure will play a vital role in achieving a robust growth in exports. Thus the Government has to support the development of world-class port infrastructure in India to make Indian ports and exports globally competitive.

**Syllabus:** GS III, Infrastructure: Ports

**Source:** [The Hindu](#), [Hindustan Times](#), [IBEF](#), [CII](#)

## [Yojana September Summary] Counter-Terrorism Scenario in J&K – Explained, pointwise

### Introduction

It has been 3 years since the Government of India revoked the special status of the erstwhile State of Jammu and Kashmir. Two new Union Territories (UTs) of J&K and Ladakh were created. This constitutional change was a watershed moment for the region, marking a break from the past to herald a new administrative and security approach to this strategically important region. Several initiatives implemented by the J&K UT administration and security establishment since then. The change in the counter-terrorism scenario in J&K demonstrate that a change is afoot on the ground, which offers hope for a better future.

The J&K UT, has been afflicted by the problem of **cross-border terrorism**, **separatist violence** and **armed militancy** for the last 3 decades. Recent events like **targeted killings** of religious minorities, migrants, security forces personnel and civilians, have drawn attention to the evolving security situation in J&K. These developments give an impression of a region in the throes of violence and instability. However, the reality is otherwise. Today, the Indian security establishment firmly controls the situation in J&K. Actions like **targeting the terrorist sympathisers**, **practising humanitarian gestures** and **proactively countering anti-India propaganda** have considerably shrunk the manoeuvring space for the terrorists. Although there

are some evolving and emerging challenges from the counter-terrorism (CT) perspective, security forces are confident of effectively tackling them.



**J&K WITNESSES GOOD GOVERNANCE POST REMOVAL OF ARTICLE 370**

-  **890 Central Laws now applicable**
-  **Establishment of Human Rights Commission**
-  **Establishment of Women Rights Commission**
-  **Establishment of SC/ST Rights Commission**

Source: Yojana September 2022

### Current Terrorism Outlook for the Region

A vital indicator of the improved security situation in Kashmir Valley is the residual strength of the terrorists operating in the region. Numbered thousands at the peak of militancy in the early 1990s; today, circumstances have changed. Current terrorist strength in Kashmir stands at approximately 163, the lowest in decades.

Region	Pakistani terrorists	Local terrorists	Total
North Kashmir	60	17	77
South Kashmir	18	68	86
<b>Total</b>	<b>78</b>	<b>85</b>	<b>163</b>

Source: Yojana September 2022. Table: Terrorist Strength in Kashmir Valley.



They primarily belong to the three terrorist groups: Lashkar-e-Taiba (LeT), Jaish-e-Mohammed (JeM) and Hizbul Mujahideen (HM). Some are part of the local affiliates of pan-Islamic groups such as Al-Qaeda's Ansar Ghazwat-ul-Hind, and Islamic State J&K. However, their numbers are marginal. Security forces note that, unlike the previous times, **Pakistani terrorist have been reduced to guiding and motivating the local terrorists** who have taken charge of the militancy in the region.

### Tackling Cross-Border Militant Infiltration

Pakistan-based terrorist groups have used the mountainous terrain in north Kashmir to sneak into the Kashmir Valley. Pakistani security establishment actively supports them by bringing infiltrating terrorists right up to the LOC in army vehicles, monitoring the infiltration routes, giving covering fire while terrorist infiltrate, and supplying sophisticated communication equipment. Militants also enter from the south of Pir Panjal range, sometime through tunnels as long as 400 meters.

To counter this infiltration, security forces in the last one and half decades, have raised a highly effective **three-tiered counter-infiltration grid**. In this, the **Indian Army forms the first tier on the LoC**, followed by the **second tier of paramilitaries such as the Central Reserve Police Force (CRPF)**, and the **third one of the J&K Police (JKP)**.

In addition, the security forces have deployed **Anti Infiltration Obstacle System (AIOS) fencing** and **strengthened surveillance** through **reconnaissance drones, night-vision equipment, and hand-held thermal imaging devices**.

These efforts combined have contributed to the **infiltration levels going down significantly**. For example, in 2020 and 2021, the number of infiltration attempts have come down to 62 and 58 respectively. Only 72 managed to successfully infiltrate together in those two years. In 2022 there had been **only 5 infiltration attempts till June**, in which three terrorists managed to infiltrate. Subsequently, security forces eliminated those terrorists in encounters.

### Crackdown on Terrorist Groups and their Ecosystem

Security forces have kept up the pressure on the terrorist groups in the hinterland through several Counter-Insurgency (CI) operations. These have yielded significant success by eliminating the top militant leadership and disrupting their subversive plans. Militants have been reduced to carrying out an **intermittent campaign of targeted killings against soft targets**.

Sustained CI operations have forced terrorist groups to join hands and operate together. Pakistan's ISI is playing a role in bringing the groups together.

#### Punitive Action

Another dimension of counter-terrorism in J&K is the **punitive action against the elements of the ecosystem** that support the terrorists. It includes the network of the **Over Ground Workers (OGWs)** and terrorist sympathisers and the cadres of Jamaat-e-Islami (JeI). In February 2019, The Union ministry of Home Affairs banned the JeI terming it an unlawful association. Simultaneously, the government began removing those employees who abetted secessionist and militant activities.

Since 2019, the J&K Police has arrested more than 900 OGWs under the **Public Safety Act** and the **Unlawful Activities (Prevention) Act**.

Year	2019	2020	2021	2022
Arrests	372	277	184	90

Source: Yojana September 2022. Table: Year-wise arrested Over Ground Workers

### Countering Terror Financing

**Countering-terrorist finances** has been another focus area of counter-terrorism measures in J&K. The National Investigation Agency (NIA) has launched several investigations into the cases of terrorist financing.

The MHA has set up a **Terror Monitoring Group**, comprising representatives of **security** (NIA, Central Bureau of Investigation, Intelligence Bureau and JKP) and **financial agencies** (Central Board of Direct Taxes, and Central Board of Indirect Taxes and Customs) to **closely monitor terrorist financing cases**. The crackdown has **dramatically reduced the stone-pelting incidents** which had once become a striking feature of unrest in Kashmir Valley.

### Soft Measures

Another aspect of counter-terrorism in J&K is the implementation of several soft measures. These measures have been appreciated by the locals. These include **exercising maximum restraint, avoiding pellet guns** and **minimising collateral damage during the Counter-Insurgency(CI) operations** and protest demonstrations.

Since August 2019, there have been **no civilian casualties** during the encounters or pellet gun injuries in protest demonstrations.

Top security officials have made an **outreach to the families of active militants** to request their kids to surrender. In one such outreach in September 2021, senior army and police officers interacted with 80 families of active militants in south Kashmir's Shopian, urging them to request their sons to shun the path of violence. These initiatives have deprived ISI and terrorist masterminds of significant propaganda material.

A direct impact of these steps implemented by the security agencies is the improvement in the security situation in the valley. This has **boosted the local tourism sector**, with tourist arrivals hitting a new high: in the first half of 2022, more than **10 million tourists visited the region**, making it the most successful tourist season in Kashmir's history.

## Evolving and Emerging Challenges in Counter-Terrorism (CT) in J&K

The region faces new challenges

### Radicalisation and Terrorist Recruitment

While security forces have broadly controlled the situation, a major concern is the **uptick in local terrorist recruitment**, primarily from South Kashmir: Pulwama, Shopian, Kulgam and Awantipora.

A significant contributor to this local recruitment is the **radicalisation of the local youth**, which has emerged as the most critical security challenge.

Several factors aid the radicalisation process, including **peer pressure, victimhood feelings** and **self-radicalisation** enabled by the Salafi and Wahhabi propaganda. Furthermore **cyberspace**, including the dark web and social media platforms, **amplifies this religious propaganda**, accelerating radicalisation.

Countering this radicalisation process is a work in progress, and security forces have launched multiple initiatives to reverse the trend. For instance, the Indian Army's '**Sahi Raasta**' initiative aims to bring the youth on the right track through national integration tours, sports training programmes and festivals, and skill development workshops. The JKP, too, implements a similar initiative.

#### Hybrid terrorists and virtual terrorist outfits

With increased CI ops and neutralisation of many active militants, terrorist masterminds have now changed their strategy to obfuscate their activities. To commit violence, they are now using terrorist sympathisers. **Most of them have no criminal records** and are therefore likely to escape police scrutiny. These '**hybrid terrorists**' are the ones who are primarily responsible for the recent acts of targeted killings in and around Srinagar. In addition, security forces have noted the proliferation of **virtual terrorist groups** like the Jammu Kashmir Ghaznavi Force and The Resistance Front, which are nothing but **front organisations** for LeT and other terrorist outfits or organisations. In response, the JKP is strengthening its human and technical intelligence capabilities. This is proving helpful in apprehending these hybrid terrorists.

#### Pakistan's Information Warfare

Since August 2019, ISI's disinformation machinery has gone into overdrive on social media platforms with anti-India propaganda. With Pakistan's material and financial support to anti-India terrorist groups like LeT and JeM coming under the global scanner, the ISI has sought to **project Kashmir's militancy as 'indigenous resistance'**.

In addition, it has sought to **label India as a major human rights violator**. This propaganda aims to draw attention to Kashmir and gain international sympathy.

This information warfare campaign by Pakistan is a significant challenge because it exploits any minor incident to create a narrative of falsehood against India and the security forces. This has the potential to undo the gains made by counter-terrorism efforts in J&K post-August 2019.

Countering these narratives will require a comprehensive national effort anchored in India's democratic credentials and calling out Pakistan's litany of lies. Army's Srinagar-based Chinari Corps is implementing a counter-response, but its efforts need national amplification.

#### Conclusion

It is clear that despite a flux in the regional security environment and Pakistan's attempts to stir trouble, Kashmir's security situation has remained remarkably calm and stable. Counter-terrorism Ops in J&K by the security forces have decisively turned the tables against Pakistan-sponsored cross-border terrorism and its proxies. To maintain this advantage, other government agencies will need to carry the baton forward to deliver better governance and establish the writ of the sovereign.

**Syllabus:** GS III, Challenges to Internal Security through communication networks, Role of media and social networking sites in internal security challenges.

**Source:** Yojana September 2022



## The Lancet Commission Report on COVID-19 Pandemic: Lessons for the Future – Explained, pointwise

### Introduction

According to the Institute for Health Metrics and Evaluation (University of Washington, US), there have been 6.9 million 'reported deaths' and 17.2 million 'estimated deaths' from COVID-19, as of May 2022. The Lancet Commission Report on COVID-19 Pandemic has examined the global response to the pandemic in the two years since 2020. The Report has cited widespread failures in prevention, transparency, rationality, basic public health practise, operational cooperation, and international solidarity that resulted in an estimated 17.2 million deaths. The report also finds that most national governments were unprepared and were slow to respond. They paid insufficient attention to their societies' most vulnerable groups, and were hampered by a lack of international cooperation and an epidemic of misinformation.

### What are the Key Findings of the Lancet Commission Report on COVID-19?

**Origin of the Pandemic:** The report notes that there are two leading hypothesis regarding origin of SARS-CoV-2. **(a)** The virus emerged as a **zoonotic spillover** from wildlife/farm animal, possibly through a wet market whose location is still undetermined; **(b)** The virus emerged from a **research related incident**, during the field collection of viruses or through a laboratory-associated escape.

Both hypothesis require further scientific investigation. Identification of the origin of the virus will help to **prevent future pandemics** and **strengthen public trust** in science and public.

**Slow Initial Response of the WHO:** The WHO acted too cautiously and too slowly on several important matters. The include: **(a)** Warn about the human transmissibility of the virus; **(b)** Declare a Public Health Emergency of International Concern (PHEIC); **(c)** Support international travel protocols designed to slow the spread of the virus; **(d)** Endorse the public use of face masks as protective gear; **(e)** Recognise the airborne transmission of the virus.

**Slow response of the Governments:** The outbreak became known globally in early January 2020. However, most governments around the world were too slow to acknowledge or act with urgency in response.

**Poor Coordination among Governments:** Coordination among governments was inadequate on policies to contain the pandemic, including; **(a)** Travel protocols to slow the global transmission of the virus; **(b)** Testing strategies; **(c)** Public health and social measures; **(d)** Commodity supply chains; **(e)** Data standards and reporting systems; **(f)** Advice to the public.

**Public Opposition:** Epidemic control was hindered by **substantial public opposition** to routine **public health and social measures**, such as the wearing of properly fitting face masks and getting vaccinated. This opposition reflects: **(a)** A lack of social trust; **(b)** Low confidence in government advice; **(c)** Inconsistency of government advice; **(d)** Low health literacy; **(e)** Lack of sufficient behavioural-change interventions; **(f)** Extensive misinformation and disinformation campaigns on social media.

**Absence of Behavioural Aspects in Public Policies:** Public policies have also failed to draw upon the behavioural and social sciences. Doing so would have led to more successful implementation of public health interventions and helped to increase social trust, pro-sociality

and equity. In many cases, policies and decision making have not been informed by robust and continuously updated evidence syntheses.

**Inability to address Inequalities:** Public policies did not adequately address the pandemic's profoundly unequal effects.

Heavily burdened groups include: **(a)** Essential workers (disproportionately concentrated in more vulnerable minority and low-income communities); **(b)** Children and Women who face employment, safety, and income losses, exacerbated by the adverse consequences of school closures; **(c)** People living in congregate settings, such as prisons or care homes, especially for older populations; **(d)** People living with chronic conditions and disability; **(e)** Migrants, refugees, and displaced populations; **(f)** People without access to quality and affordable health care.

**Countries with Resilient Healthcare Systems fared better:** High-income countries that have a strong and resilient national health system have generally fared better at addressing COVID-19 and maintaining non-pandemic-related health services.

**Benefit of Community Healthcare and Prior Experience:** In low- and middle-income countries (LMICs), health systems tend to be under-resourced and fragmented. Better outcomes were seen when **previous experiences with outbreaks/epidemics** were built upon, and when **community-based resources** (like community health workers) were used to support screening and contact tracing capacity and trust-building within communities.

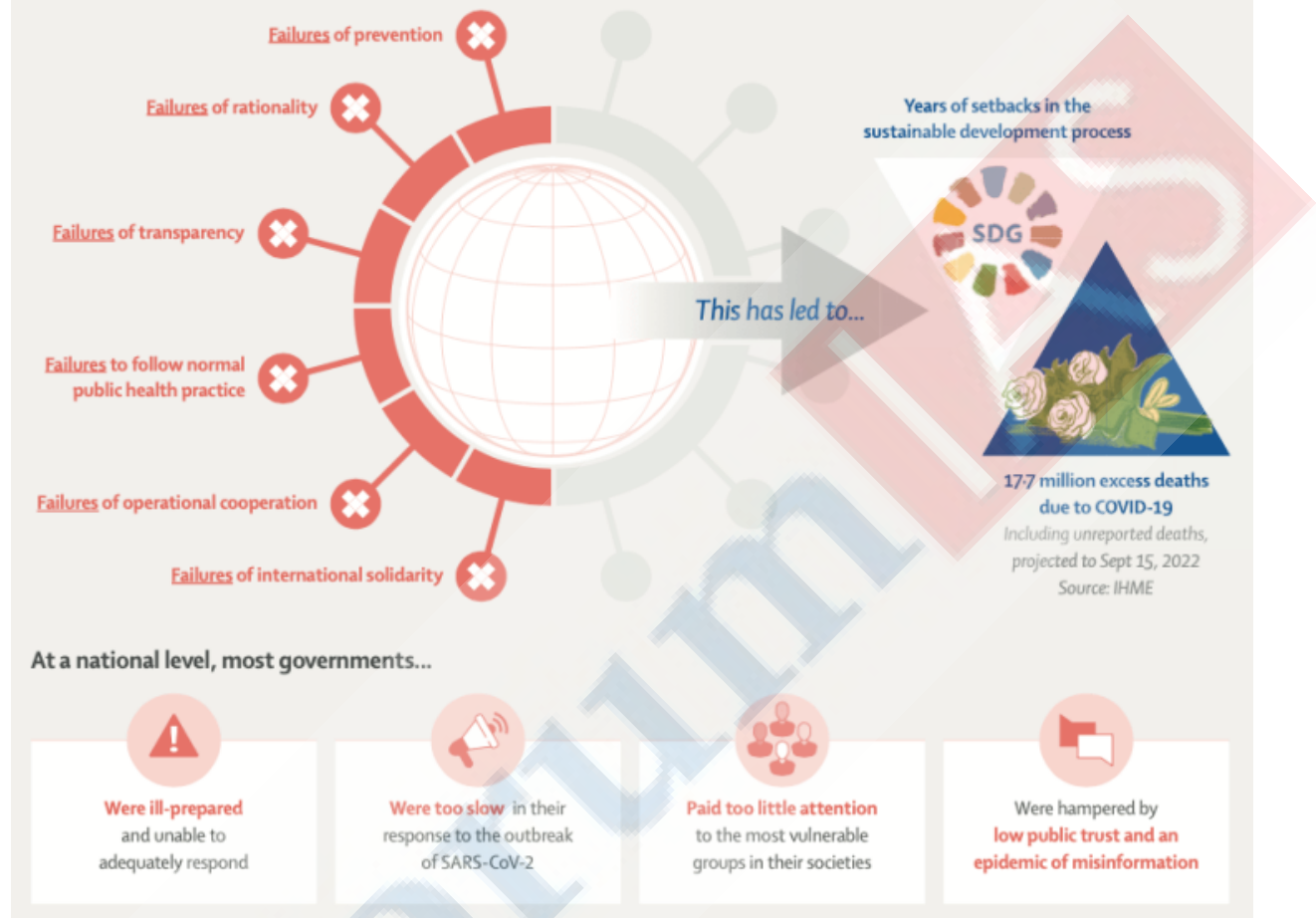
**Inequitable Access to Vaccines:** Rapid vaccine development indicates success of robust R&D system and is the result of long-standing public and private investment and cooperation. However, the **lack of a multilateral and coordinated approach by governments** to manage intellectual property rights, technology transfer, international financing, the allocation of vaccines from multinational pharmaceutical companies, and the support for vaccine production in LMICs for use in those countries, has come at a great cost in terms of inequitable access to vaccines.

**Economic Recovery:** Economic recovery depends on sustaining high rates of vaccination coverage and low rates of new infections. It is also dependent on fiscal and monetary policies to **mitigate the socioeconomic effects** of the pandemic and prevent a financial crisis. Emergency global financing from the International Monetary Fund, the World Bank, and regional development banks had a positive impact, although much larger financial flows from high-income to low-income regions were needed.

**Impact on Sustainable Development:** The sustainable development process has been set back by several years, with a deep under financing of investments needed to achieve the Sustainable Development Goals (SDGs) and the aims of the Paris Climate Agreement. In most countries, the pandemic diverted resources and policy attention away from longer-term goals, thereby reversing progress towards the SDGs in many countries.

## COVID-19 response: a massive global failure

Widespread failures at multiple levels worldwide have led to millions of preventable deaths and a reversal in progress towards sustainable development for many countries



Source: *The Lancet*

### What are the Key Recommendations of the Lancet Commission Report on COVID-19?

**Globally Coordinated Efforts:** There is a need for globally coordinated efforts to bring an end to the COVID-19 pandemic on a rapid and equitable basis. Countries should maintain a **vaccination-plus strategy** that combines: **(a)** Mass vaccination; **(b)** Availability and affordability of testing; **(c)** Treatment for new infections and long COVID (test and treat); **(d)** Complementary public health and social measures (including the wearing of face masks in some contexts); **(e)** Promotion of safe workplaces; **(f)** Economic and social support for self-isolation. A vaccination-plus strategy with the goal of protecting populations should be implemented on a sustainable basis, rather than as a reactive policy that is abruptly turned on and off.

**Trace the Origin:** The WHO, Governments, and the scientific community should intensify the search for the origins of SARS-CoV-2, investigating both a possible **zoonotic origin** and a **possible research-associated origin**. The search for origins requires unbiased, independent, transparent, and rigorous work by international teams in virology, epidemiology, bioinformatics, and other related fields.



**Expand the WHO Science Council:** The WHO should expand the WHO Science Council to apply urgent scientific evidence for global health priorities, including future emerging infectious diseases. This Council should include experts from diverse fields and should include younger people and have gender parity. Establishing an understanding of **exposure routes** and the **highest-risk environments for transmission** should always be among the first essential steps for scientists in response to future disease threats. This knowledge should determine effective control strategies for reducing risk.

#### **WHO Science Council**

The Science Council was established in April 2021 by the Director General of the World Health Organization to provide guidance on the science and research strategy of the organization. It directly advises the Director-General about high-priority scientific issues. It is aimed at identifying current and new science and technology issues that WHO needs to address, including global health threats, and new advances with a potential for direct or indirect impact on global health.

**Stronger Means of Coordination:** The Governments, represented at the World Health Assembly (WHA) by their national health ministers, should establish stronger means of cooperation and coordination in the response to emerging infectious diseases. Strengthened cooperation should be incorporated in a new **pandemic agreement** and in **updated International Health Regulations (IHR)**, as were adopted in 2005 after the outbreak of SARS and which now need updating.

**Read More:** [Need for a Global Pandemic Treaty – Explained, pointwise](#)

**Strengthen the WHO:** The WHA should create a WHO Global Health Board with representation from all regions. Reforms of WHO should include a **substantial increase of its core budget**. The world community should not establish new centres of global health policy and finance that would compete with or undermine, the central role of WHO.

**Preventing future infectious diseases:** The Lancet Commission Report on COVID-19 recommends a dual track to prevent future emerging infectious diseases.

To prevent **natural spillovers**, governments should **coordinate on the global surveillance**. There is also need to **regulate trade of domestic and wild animals** and take stronger measures against dangerous practices.

To prevent **research-related spillovers**, WHO should be given new **oversight authority** regarding the **biosafety, biosecurity, and bio-risk management** of national and international research programmes that are engaged in the collection, testing, and genetic manipulation of potentially dangerous pathogens.

**Bolster R&D and Production Capacities:** The WHA, in conjunction with the G20 countries, should adopt a 10-year global strategy to bolster research and development capacity and **commodity production capacity** (including for vaccines), including in the low-income regions. WHO should help several low-income and middle-income countries (LMICs) to achieve WHO's stringent regulatory authority status.

**Strengthen National Health Systems:** Countries should strengthen national health systems on the foundations of public health and universal health coverage. The systems should be grounded in human rights and gender equality. Strong public health systems should include: **(a)** Strong relationships with local communities and community organisations; **(b)** Surveillance and

reporting systems; **(c)** Robust medical supply chains; **(d)** Health-promoting building design and operation strategies; **(e)** Investments in research in behavioural and social sciences to develop and implement more effective interventions; **(f)** Promotion of **prosocial behaviours**; **(g)** Strong health education for health promotion, disease prevention, and emergency preparedness; **(h)** Effective health communication strategies; **(i)** Active efforts to address public health disinformation on social media.

**National Pandemic Preparedness Plans:** Each country should determine and expand national pandemic preparedness plans to prevent and respond to newly emerging infectious diseases. Preparedness plans should include **(a)** Improved surveillance and monitoring; **(b)** Definition and protection of vulnerable groups; **(c)** International notifications; **(d)** Cooperation within WHO regional groups; **(e)** Emergency financing; **(f)** Guidelines on behavioural, social, and environmental interventions, travel protocols, and safe schools and workplaces; **(g)** Robust health-commodity supply chains (e.g., personal protective equipment, diagnostics, therapeutics, and vaccines); **(h)** Effective risk communication and active opposition to misinformation and disinformation; **(i)** Training of public health professionals; **(j)** Provision of adequate staffing.

**Global Health Fund:** A new Global Health Fund should be created. This Fund should combine and expand the operations of several existing health funds and add new funding for 3 windows of financing: **(a)** Commodities for disease control; **(b)** Pandemic preparedness and response; **(c)** Primary health system strengthening in LMICs. The Fund should have **decentralised programme design and implementation** to reflect regional needs and priorities rather than being under top-down control from a few donor countries.

**Scale-up Financing for LMICs:** The UN member states, (particularly G20 countries), should adopt a new financial architecture to scale up financing for LMICs to meet the urgent challenges of pandemic preparedness, the Paris Climate Agreement, and the Sustainable Development Goals. The new financial architecture should include increased sustainable development funding from all sectors: official institutions, the private sector, foundations, and civil society.

The Lancet COVID-19 Commission makes 11 recommendations in three key areas of interest

#### Practical steps to control and understand the current pandemic

- » Establish global and national vaccination-plus strategies to end the COVID-19 pandemic
- » An intensified investigation into possible origins of SARS-CoV-2, both natural and laboratory-related



#### Necessary investments to strengthen the defence against future pandemics

- » Strengthen national health systems and increase investments in primary health care and public health
- » National pandemic preparedness plans
- » Financing for sustainable development and green recovery plans



#### Ambitious proposals to enhance multilateralism

- » Maintain WHO as the lead institution for the response to emerging infectious diseases
- » Establish a global pandemic agreement and strengthen the International Health Regulations
- » Reform of WHO governance
- » Regulations for the prevention of pandemics
- » G20 support for finance, research and development, and the production capacities of low-income and middle-income countries
- » New Global Health Fund to ensure Sustainable Development Goal 3 (Health for All), universal health coverage, and functioning health systems



Source: The Lancet

What are the 5 Pillars to fight emerging infectious diseases suggested by the Lancet Commission Report on COVID-19?

**Prevention:** To stop an outbreak before it occurs by taking effective measures to prevent the emergence of a new and dangerous pathogen.

**Containment:** To eliminate the transmission of disease from infected individuals to susceptible individuals after a disease has emerged.

**Health services:** To save the lives of people with the disease and ensure the continuity of other health services, including those for mental health.

**Equity:** To ensure that economic and social burdens are shared among the population and that the most vulnerable groups and individuals are protected.

**Global innovation and Diffusion:** To develop, produce, and distribute new therapeutics and vaccines in an equitable and efficient manner.

#### Conclusion

The Lancet Commission Report on COVID-19 Pandemic has provided some key insights about the failures at the global level, that led to massive loss of lives and social disruption. The Report has provided valuable recommendations to combat future pandemics and calls for strengthened multilateralism centred on a reformed and strengthened World Health Organization (WHO). It has also recommended scaling-up investments, refined planning for national pandemic



preparedness and health system strengthening with special attention to vulnerable populations. Strong action on these recommendations through a coordinated global effort can prepare the world for a much better response to any future pandemic.

**Syllabus:** GS II, Issues relating to development management of Social Sector/Services relating to Health, Education, Human Resources; GS II, Effect of policies and politics of developed and developing countries on India's interests; GS III, Disaster and Disaster Management.

**Source:** [Indian Express](#), [The Hindu](#), [The Lancet](#)

### National List of Essential Medicines (NLEM) and Drug Pricing in India – Explained, pointwise

#### Introduction

The Union Ministry of Health recently released the new National List of Essential Medicines (NLEM). The NLEM has been modified after 7 years. The previous list was issued in 2015. The Ministry updates the list every few years in consultation with health experts. The new NLEM (2022) has added 34 new medicines and dropped 26 old ones from the previous list (2015). It has included more cancer medicines, newer diabetes drugs, and 4 drugs that are under patent. A total of 384 medicines feature on NLEM 2022 under 27 therapeutic categories. The primary aim of NLEM is to promote rational use of medicines, considering three important aspects: **cost**, **safety**, and **efficacy**.

#### What is the National List of Essential Medicines (NLEM)?

The National List of Essential Medicines (NLEM) was launched for the first time in 1996 in India, along the lines of the World Health Organisation's (WHO) Essential List of Medicines (ELM).

According to the World Health Organization (WHO), essential medicines are those that **satisfy the priority health care needs of a population**. The list of essential medicines is made with due regard to: **(a)** Disease prevalence; **(b)** Public health relevance; **(c)** Evidence of efficacy and safety; **(d)** Comparative cost-effectiveness. They are intended to be available in the health systems at **all times**, in **appropriate dosage forms**, of **assured quality** and at **affordable prices**.

The WHO issues list of essential medicines every two years, which is used by countries to develop their own national lists. The essential medicines list needs to be country specific **addressing the disease burden** of the nation. It contains medicines required at the primary, secondary and tertiary healthcare levels. The National list of essential medicines is one of the **key instruments in balanced healthcare delivery system** of a country.

India has regularly modified its NLEM. Since the first issue in 1996, NLEM has been modified in 2003, 2011, 2015 and now in 2022.

Drugs listed under NLEM are known as **scheduled drugs**. They are cheaper because the **National Pharmaceutical Pricing Authority (NPPA) caps medicine prices** and changes only based on wholesale price index-based inflation.

#### How is the NLEM updated?

The NLEM is a dynamic document which is prepared after several rounds of wide consultations with experts from different disciplines from different parts of the country and from various organizations.

For inclusion in NLEM, the drugs have to be: **(a)** Useful in treating **diseases that are a public health problem** in India; **(b)** Licensed/approved by the Drugs Controller General (DCGI); **(c)** Proven efficacy; **(d)** A safety profile based on scientific evidence; **(e)** Comparatively cost-effective; **(f)** Aligned with the current treatment guidelines.

They have to be recommended under the National Health Programs of India (for instance, ivermectin is part of the Accelerated Plan for Elimination of Lymphatic Filariasis, 2018). When more than one medicine from the same therapeutic class is available, a prototype of the best-suited medicine for that class is included. Besides this, the **price of the total treatment is considered** and not the unit price of a medicine.

A medicine is deleted from the list if; **(a)** It is banned in India; **(b)** There are reports of concerns about the safety profile; **(c)** A **cheaper** medicine with **better efficacy** is available; **(d)** The disease, for which a particular medicine is recommended, is **no longer a national health concern**. Additionally, in the case of antimicrobials, if the resistance pattern has rendered an antimicrobial ineffective, it is removed from the NLEM.

For updating the 2015 list, the **Standing National Committee on Medicines** (SNCM) was constituted by the Union Health Ministry in 2018. After detailed consultation with experts and stakeholders, the Committee revised the NLEM, 2015. The Government accepted the recommendations of the Committee and adopted the new list.

No specific drugs for the treatment of Covid -19 have been added to the new list, although it includes four drugs that are still under patent.

#### How is drug pricing controlled in India?

**Legal Basis:** In India, prices of essential drugs are regulated by the Union Government under the **Essential Commodities Act, 1955**. The rationale behind price ceilings is to make **drugs cheaper** and **easily affordable to everyone**. A large section of the Indian population finds it difficult to bear the cost of medications, which forms a significant chunk of **out-of-pocket expenditure** on healthcare. The **Drug Price Control Order (DPCO)** is issued under Section 3 of the ECA, 1955 to regulate the prices of drugs. The Order provides: **(a)** The list of price controlled drugs; **(b)** Procedures for fixation of prices of drugs; **(c)** Method of implementation of prices fixed by Govt.; **(d)** Penalties for contravention of provisions etc.

**Implementation:** The powers to implement the DPCO are vested with the **National Pharmaceutical Pricing Authority (NPPA)**. The medicines listed in the NLEM are sold below a **price ceiling** fixed by the NPPA. NLEM 2022 contains 384 drugs.

### National Pharmaceutical Pricing Authority (NPPA)

- The National Pharmaceutical Pricing Authority (NPPA) was established in August 1997.
- It comes under the control of Department of Pharmaceuticals, under the **Ministry of Chemicals and Fertilizers**.
- The NPPA has been entrusted with the task of:
  - **Fixation/revision of prices** of pharmaceutical products (bulk drugs and formulations).
  - **Enforcement** of provisions of the **Drugs Prices Control Order (DPCO)**.
  - **Monitoring of the prices** of controlled and decontrolled drugs in the country.

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**Fixing of Prices:** The **ceiling price of a scheduled drug** is determined on the basis of simple average of price to retailer (PTR) of all branded-generic and generic versions of that particular drug formulation having a **minimum market share of 1%**. A notional retailer margin of 16% is added to it.

The manufacturer of a non-scheduled drugs (drugs not under direct price control) is not required to take price approvals from NPPA. However, the NPPA is required to monitor the prices of such drugs and take corrective measures if required. Scheduled drugs roughly constitute 17-18% of the estimated INR 1.6-trillion domestic Pharma market.

#### **What are the benefits of controlling drug pricing?**

**First**, It ensures the accessibility, affordability, and safety of some of the most essential drugs.

**Second**, it helps in optimum utilisation of healthcare resources and budget, drug procurement policies, health insurance, improving prescribing habits, medical education and training and drafting pharmaceutical policies.

**Third**, A study by Public Health Foundation of India, noted that more than 55 million Indians are pushed into poverty every year due to out-of-pocket healthcare expenses. The Government spends less than 1.3% of the gross domestic product (GDP) on healthcare. The out-of-pocket expenditure on healthcare is 80% in Bihar and 50% in Gujarat. The world average is 18.6%, according to the World Bank. Capping prices of essential drugs mitigates the impact of out-of-pocket expenditure to an extent.

**Fourth**, high drug prices impact health-seeking behaviour negatively, leading to higher morbidity. Controlling drug prices helps to reduce this.

#### **What are the issues in controlling drug pricing in India?**

**First**, The price ceiling policy has been in place for more than two decades and India has one of the lowest drug prices in the world. But the **out-of-pocket expenditure on healthcare remains high** and many Indians continue to be deprived of access to life-saving drugs. In terms of their relative per capita income, Indian consumers pay more than people in high-income countries. Hence, accessibility and affordability still remain critical challenges in India's healthcare system. Only ~18% of drugs in the market are under price controls.

**Second**, The current drug price control policy has had some unintended consequences. For example, many pharmaceutical companies have opted to go out of production because their profit margins decreased. This has led to **substandard and spurious drug manufacturers dominating the pharma market**. In the absence of strict quality regulations, there has been a trade-off between price and quality. A report by the United States Trade Representative claims that **20% of drugs in India are fake**.

**Third**, Decrease in profit margins of quality manufacturers has led to a **reduction in spending in research and development**. It has deterred future investments in the pharmaceutical sector and also diluting the Intellectual Property (IP) rights.

**Fourth**, Many **manufacturers have migrated to non-essential drugs** (80% of the drugs in non-essential list) or stopped promoting essential drugs. For instance, an anti-fungal cream called Tolnaftate has not been promoted for several years now. Thus, the sale fell for drugs with capped prices, and rose for drugs that didn't have a price ceiling.



**Fifth**, Some pharmaceutical companies in India have started promoting different drug categories: non-National List of Essential Medicines (NLEM), FDCs (not on NLEM) and non-standard dosages (for instance, doctors routinely prescribe splitting of medicines). An information asymmetry between the buyer and the seller has created a breeding ground for **mis-selling** and **misinformation** (adding or changing of ingredients) in India's pharma industry.

**Sixth**, As prices of costlier drugs decrease, there is a tendency for a poor consumer to opt for a recognisable brands. The company selling drugs at a lower price loses the incentive to sell it at that price. Also, the chances of frivolous patents (as patented drugs are not on the essential list) have increased.

**Seventh**, The policy has also forced manufacturers to import Active Pharmaceutical Ingredients (API) and bulk drugs from China to reduce their input costs. So, it has **negatively impacted India's indigenous drug manufacturing industries**. About two-third of APIs are imported from China. Any threat from China has the potential to impact the manufacturing of critical drugs in India.

#### **Out-of-Pocket Expenditure**

Out-of-pocket payments are expenditures borne directly by a patient where insurance does not cover the full cost of the health good or service. They include cost-sharing, self-medication and other expenditure paid directly by private households.

#### **What should be the approach going ahead?**

**First**, The price control mechanism being set up by the government needs to be tweaked to ensure accessibility and affordability in a real sense. Some experts suggest **Trade Margin Rationalization (TMR) instead of price ceiling**. The Government can rationalize the trade margins of all stakeholders in the drug supply chain (from stockist to the retailer). This will have similar effect on regulation of prices of medicines and devices.

**Second**, For the industry to be able to continue to make and supply the medicines from NLEM, the Government should ensure that inflation is taken into account while fixing the ceiling price.

**Third**, There is need to educate healthcare professionals and doctors against using several fixed-dose combinations (FDCs) of antibiotics. This has also been highlighted by the Standing National Committee on Medicines (SNCM).

**Fourth**, Instead of price controls, other mechanisms can be explored like: **(a) Bulk procurement** of generic drugs by public institutions for distribution; **(b) An increase in public spending** on healthcare; **(c) Promoting competition** among manufacturers; **(d) Strictly regulating the quality of drugs**; **(e) Tackling information asymmetry** by promoting transparency. This will be helpful in delivering better outcomes for India's pharmaceutical industry

#### **Conclusion**

Medicines are a fundamental part of health care and a well-controlled functional pharmaceutical sector is a pre-requisite for universal health coverage. Healthcare is a public good and it is the responsibility of the Government to ensure affordable and equitable access to medicines and healthcare for all citizens. Addressing some of the concerns and proper implementation of NLEM is therefore vital to enhance the Human Development Index (HDI) and achieving the targets of Sustainable Development Goals by 2030.

**Syllabus:** GS II, Issues relating to development management of Social Sector/Services relating to Health.

**Source:** [Indian Express](#), [Business Standard](#), [Mint](#), [Vikaspedia](#)

## Impact of Climate Change on Monsoon – Explained, pointwise

### Introduction

The South-west Monsoon is a dominant weather system in the South Asian region. It lasts from June to September and is responsible for 75-80% of India's yearly rainfall. The monsoon is vital for Indian economy as the kharif crops are largely dependent on monsoon rainfall. In addition, monsoon rainfall is critical for water supply, groundwater replenishment and generation of hydroelectricity. However, climate change is having a profound impact on monsoon. The rainfall is becoming more erratic, extremely heavy rainfall events are becoming more frequent with long dry spells in between, along with large regional variations in rainfall. The impact of climate change on monsoon will have critical implications for the people of India.

### What are the impacts of climate change on Monsoon?

Multiple studies have been undertaken to understand the impact of climate change on Monsoon rainfall.

#### Excess Rainfall

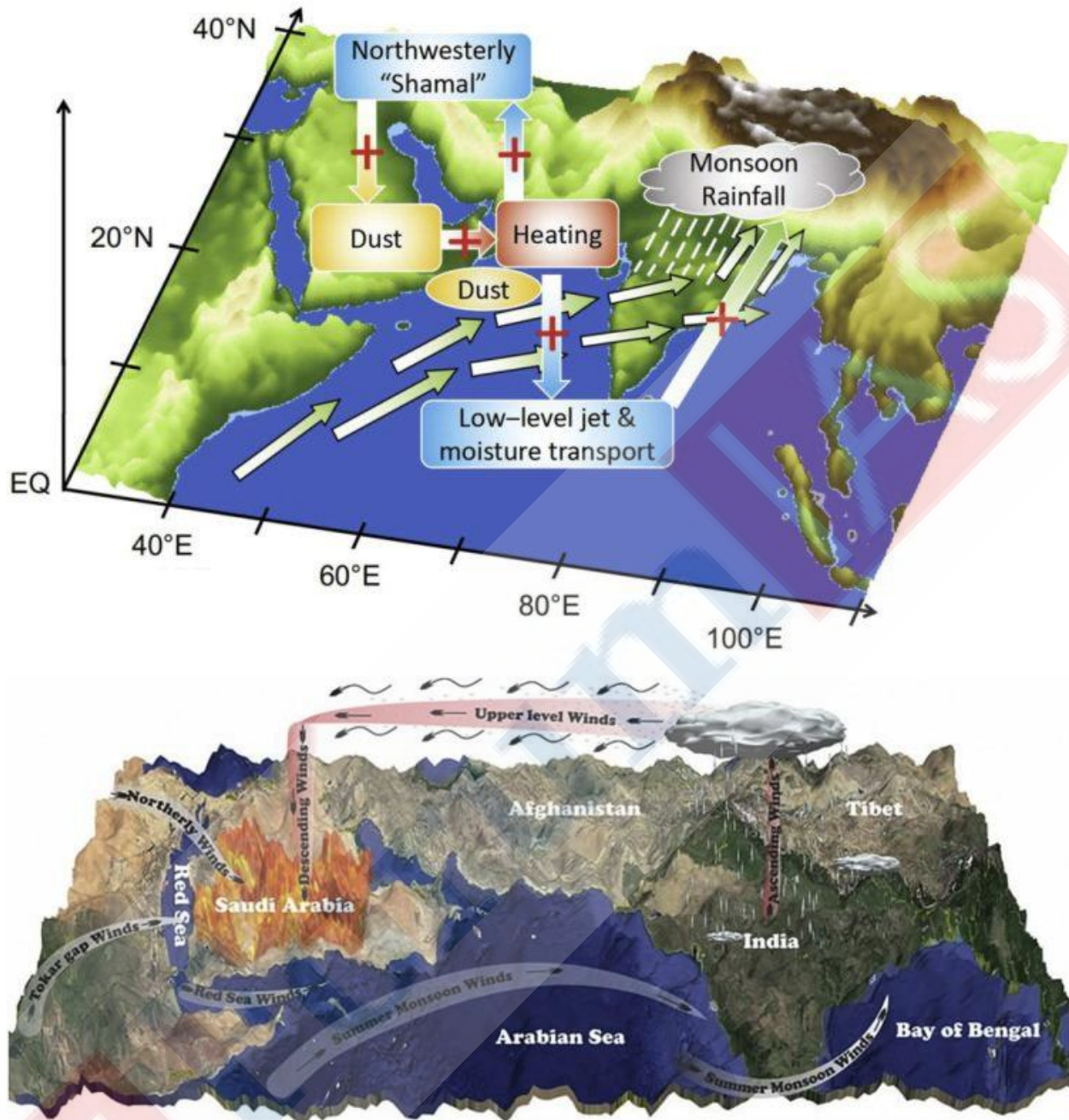
Researchers at Indian Institute of Tropical Meteorology (IITM) Pune, refer to effects of higher temperature on monsoon rains. For **every 1°C rise in temperature**, the atmosphere can **hold 7% more moisture**. Excess rainfall is also being caused by the rapid heating of the global ocean, which has absorbed 90% of the excess heat generated by man-made climate change in the past 50 years. Researchers from Germany's Potsdam Institute for Climate Impact Research (PIK) found that every additional degree of warming is likely to increase monsoon rainfall by 5%.

There is a strong relationship of the monsoon with sea surface temperature (SST). SST effects the monsoon circulation. Climate change is **weakening the land-sea temperature gradient** (the thermal contrast), thus drying the monsoon circulation. At the same time, there is an **increase in moisture in the air** because of rise in SST. So even if the monsoon circulation is weak strong winds can bring in plenty of moisture from the Arabian Sea region which then falls over land in the form of extreme rainfall.

Excess and extreme rain events over central India have increased threefold between 1950-2015, despite a weakening in overall monsoon circulation.

### Impact of Events in the Middle-east

According to a study published in the journal 'Earth Science Reviews', events in the Middle-east are also impacting Monsoons. The paper found that dust particles swept into the atmosphere from deserts in the Middle East grow extremely hot under sunlight. They change the air pressure over the Arabian Sea. This creates a kind of heat pump in the sky, which **drives moisture from above the ocean to the Indian subcontinent, leading to a wetter monsoon season**. This then strengthens winds and could whip up even more dust particles creating a positive feedback loop.



Source: [Earth-Science Reviews/Science Direct](#)

Inconsistent rainfall across time and space

Wide variation in rainfall across regions is becoming a routine. A research paper published in the journal 'Earth Systems Dynamics' noted that human-wrought climate change is making the Indian summer monsoon wetter and more erratic.

IMD divides India into 4 broad regions: the **South Peninsula** (Karnataka, Telangana, Andhra Pradesh, Tamil Nadu, Kerala and the island union territories), **Central India** (Gujarat, Maharashtra, Goa, Madhya Pradesh, Chhattisgarh and Odisha), **East and Northeast India** (Bihar, Jharkhand, West Bengal and all north eastern states), and **Northwest India** (Rajasthan,



Haryana, Delhi, Chandigarh, Punjab, Jammu and Kashmir, Ladakh, Himachal Pradesh, Uttarakhand and Uttar Pradesh).

In 2021, All regions saw above-normal rainfall in June. In July 2021, 3 out of the 4 regions witnessed below normal rainfall. But the South Peninsula States and UTs saw rainfall 26% above normal (July 2021). All regions except the East and North-east recorded below normal rainfall in August. At a 24% deficit, 2021 saw the first August drought since 2009.

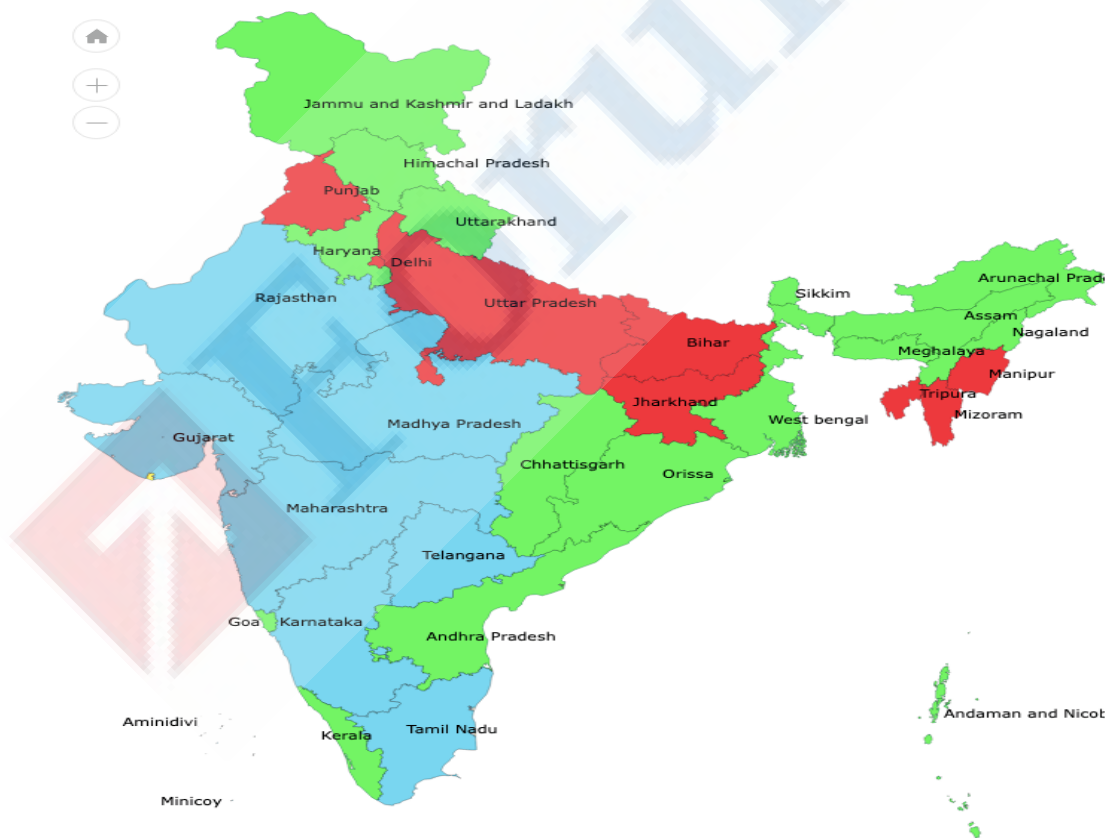
Similar pattern has existed in 2022 season so far with **wide regional variations**. 7 states have received deficient rainfall. Of them, the 3 are from the North East. Manipur recorded a deficit of 48%. Tripura and Mizoram recorded deficit of 23% and 20% respectively. Bihar has deficit of 30%.

**In the Northwest, Delhi has deficit of 37% and UP of 35%.**

The Central and South Peninsula regions witnessed excess rainfall. These include Tamil Nadu (58% excess), Telangana (46%), Karnataka (35%), Gujarat (31%) and Maharashtra (26%).

There were heavy floods in the in Northeast India, especially in Assam and Meghalaya in June 2022. The region then went through a dry phase in July and August. In July, Gujarat, Rajasthan and Maharashtra suffered floods. August brought flood-like conditions in Kerala, Karnataka and central Indian states Odisha and Madhya Pradesh.

A study published by scientists from IITM published in journal Nature found that the **rising unpredictability of monsoon westerly winds from the Arabian Sea** is 'driving surges of moisture supply, leading to extreme rainfall episodes across the entire central subcontinent'.



**Source: IMD.** Most regions in South and Central India have received excess rainfall (blue, 20-59% more than long term average). The deficit regions (red, 20-59% less than long term average) are in the Northwest, East and Northeast Regions.

A Climate Scientist who is also Secretary, Ministry of Earth Sciences remarked, “The number of rainy days (in a season) is decreasing. And the length of the dry spells is increasing. The number of rainy days may be small, but when it rains, it will rain very heavily”.

According to the climate change assessment for the Indian region (2020) released by the Ministry of Earth Sciences, the frequency of localised extreme single-day rain events exceeding 150 mm per day increased by about 75% between 1950 and 2015. The Indian Meteorological Department (IMD) has noted that **2022 season has seen the second highest extreme events** since 1902.

### September a ‘new August’, October an anomaly

Monsoon rainfall data for the last 10 years shows a trend of increasing rain in September and widely varying patterns in October. National and international climate change assessments have flagged these increasingly varying patterns.

### Climate change contributes to monsoon uncertainty

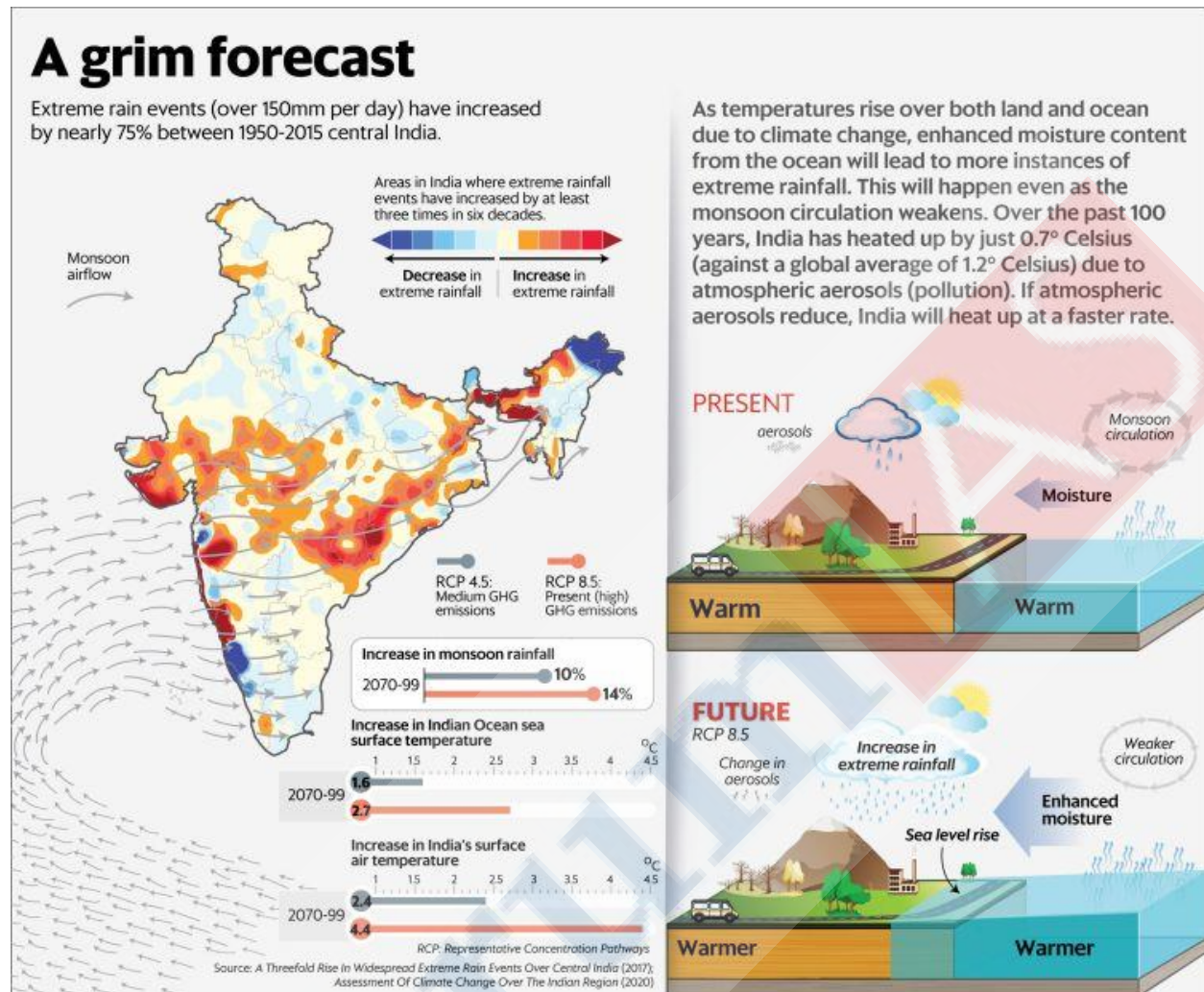
According to the **6th Assessment Report** of the Intergovernmental Panel on Climate Change (IPCC, Working Group I), there has been a noticeable decline in rainfall, with **monsoon deficits occurring with greater frequency in various regions of South Asia**. Since 1950, the frequency of moderate rain events has decreased.

Based on models showing the dominance of 20th century human aerosol emissions giving way to the dominance of greenhouse gas emissions, the IPCC’s assessment also projected increased monsoon rainfall and intensifying monsoon extremes in India and South Asia by the end of the 21st century. Even a 0.5°C increase in temperature would result in a 3% increase in precipitation.

### Rare Events

The formation of a tropical storm (Cyclone *Gulab*) in September 2021 was another rare event. Cyclone *Gulab* was only the third cyclone in the 21st century to form in September, had formed in the Bay of Bengal. After making landfall over coastal Andhra Pradesh, the remnants of *Gulab* **crossed over peninsular India to the Arabian Sea**, where it re-emerged as Severe Cyclonic Storm *Shaheen*. This was an extremely rare event.

The ongoing **La-Niña event in the Pacific Ocean has entered its third year**. This is one of the longest ever La-Niña episodes in recorded history. It is also only the third episode since 1950 to stretch into a third year. La-Niña events tend to bring-in higher monsoon rainfall in the Indian subcontinent. However, there is lack of consensus among the scientific community whether the current La-Niña event is due to climate change.



Source: Mint

### What are the impacts of Variability in Monsoon?

According to an analysis by a team of German researchers, the shift in monsoon pattern may entail grave consequences for India's economy, food systems and people's well-being.

**Floods, Landslides, Lightning: Loss of Lives and Livelihoods**

The extreme rainfall events have increased the frequency of floods, including in urban areas. This leads to loss of lives and property. Almost 2,000 people have died due to extreme weather events such as floods, landslides and lightning across 396 districts of the country in the 2022 Monsoon season (Disaster Management Division of the Union Ministry of Home Affairs).

Himachal Pradesh recorded 320 deaths due to frequent cloudbursts, flash floods and landslides. Lightning killed 536 people in the country in the 4 months of the monsoon till date, 159 in Madhya Pradesh alone. Many people lost their livelihoods, with over 1.5 million hectares of cropland destroyed and close to 70,000 animals, mostly livestock, killed due to extreme weather events.

Pakistan also witnessed unprecedented rainfall this season, leading to inundation of almost 33% of its territory under water.



**Agriculture Output**

The variability in Monsoon has also impacted the cropping systems. In the Indian subcontinent, the two main crop planting seasons are *kharif* (planted at the start of the monsoon) and *rabi* (planted at the end of the monsoon). The *kharif* season is almost entirely dependent on the monsoon. Both crops are affected by the **changing arrival and withdrawal patterns** of the monsoon.

Heavy rainfall in September **reduces yields of short-duration kharif crops** such as groundnut, urad, soybean, and maize, and disrupts storage and transportation, potentially leading to food inflation and a food crisis. Scarce rainfall in UP and Bihar impacted paddy sowing and reduced the acreage this season. The Ministry of Agriculture has estimated a 6% fall in paddy output this season.

Uneven distribution rains along with increasing temperatures and humidity can give rise to **pest attacks and diseases**. This can, in turn, impact the quality of the grain as well as their nutritious value.

**What should be done going ahead?**

There is general consensus among the scientists that **Climate Change is already here** and the rising variability in Monsoons is a clear evidence. India is one of the most vulnerable to impacts of climate change.

India must prepare to **adapt to the impacts of climate change**. This includes measures like more robust flood management practices including in urban areas, adoption of climate resilient agriculture systems among others. At the same time, the Government should continue to pursue its **mitigation measures promised under Paris Agreement**.

The Government must press the developed countries for **Climate Finance** and **Technology transfer** to hasten the processes of mitigation as well as adaptation. It is only through collective efforts that the scourge of climate change can be tackled.

**Conclusion**

The Indian summer monsoon plays a crucial role in India's agriculture and affects the livelihood of 20% of the world's population. Erratic monsoon season poses a threat to the agriculture and the Indian economy. The Government must step up its efforts to combat the negative impacts. At the same time, these extreme events should provide a wake-up call to the global leadership regarding the impacts of climate change. They should now act earnestly to address the exigencies of climate change.

**Syllabus:** GS I, Salient features of world's physical geography, Important Geophysical phenomena, Changes in critical geographical features; GS III, Environment pollution and degradation.

**Source:** [The Hindu](#), [Indian Express](#), [Mint](#), [Down to Earth](#), [DW](#)

**Shanghai Cooperation Organization (SCO) – Explained, pointwise****Introduction**

The 22nd summit of the Shanghai Cooperation Organization (SCO) concluded recently in Samarkand, Uzbekistan. At the end of the summit, member nations signed the Samarkand Declaration, which identified the areas of cooperation to strengthen security and development. In the last 2 decades, the SCO has emerged as a key organization in the Eurasian region. The Organization assumes more importance for India as it gears up for Presidency next year and hosting the summit in 2023. India's presidency of the SCO shows its new multi-alignment policy; wherein it is delicately balancing membership of SCO (China-Russia led group) with Quad (US-led group). However, as the Russia-Ukraine war prolongs, it presents a new challenge to India's diplomacy to balance its relationship with both the West and China/Russia led groups.

**About the SCO**

**Origin:** The **Shanghai Cooperation Organisation (SCO)** was formed in June 2001. It had its origins in **Shanghai Five** that was established in 1996. Shanghai Five, having China, Kazakhstan, Kyrgyzstan, Russia and Tajikistan as members, had emerged from a series of border demarcation and demilitarization talks which the four former Soviet republics held with China to ensure stability along the borders. In 2001, Uzbekistan also joined and the group was rechristened as the Shanghai Cooperation Organisation (SCO).

**Members:** The SCO has 8 members as of September 2022. These are, **India, China, Russia, Kazakhstan, Pakistan, Uzbekistan, Tajikistan, and Kyrgyzstan**. India and Pakistan had joined in 2017. Afghanistan, Belarus, Iran and Mongolia have the status of Observers. Iran will join as full member in 2023. In addition, Armenia, Azerbaijan, Cambodia, Egypt, Nepal, Qatar, Saudi Arabia, Sri Lanka and Turkey are dialogue partners. Members of the SCO account for **~40% of the world's population** and **~30% of Global Gross Domestic Product (GDP)**.



Source: SCO

**Structure:** The SCO has political economic and security dimensions. The Organisation has two permanent bodies — the **Secretariat in Beijing** (China) and the **Regional Anti-Terrorist Structure** (RATS) in Tashkent (Uzbekistan).

The **Heads of State Council** (HSC) is the **highest decision-making body** in the SCO. It meets once every year to take decisions and give instructions on all important issues regarding SCO activity. The **Heads of Government Council** (HGC) meets once per year to discuss a strategy for multilateral cooperation and priority directions within the Organisation's framework, to solve important and pressing cooperation issues in economic and other areas, as well as to adopt the Organisation's annual budget.

There are also mechanisms of meetings on the level of Secretaries of Security Councils, Foreign Ministers, Ministers of Defence, Emergency Relief, Economy, Transportation, Culture, Education, Healthcare, Heads of Law Enforcement Agencies, Speakers of Parliament, Supreme Courts and Courts of Arbitration, and Prosecutors General etc.

**Russian** and **Chinese** are the official and working languages of the SCO. India is pushing for use of English as working language.



**What is the significance of the SCO?**

**Connectivity and Trade:** Given the massive size of the SCO, there is considerable **potential in trade and connectivity** across the region. SCO members have among them major **gas and oil suppliers** in the region (Russia, Kazakhstan) and also the largest consumers (China, India). SCO nations are also the largest wheat producers, which includes India. The Samarkand Declaration, signed in September 2022 at the 22nd Summit, **centralises connectivity** which is a priority for India, as well as energy and food security.

**Security:** SCO has a key security dimension as well, with security related concerns having a centre-stage. The main threats which are focus of the SCO include terrorism, separatism and extremism. It has been reported that the SCO had foiled 600 terror plots and extradited 500 terrorists through RATS till 2017.

Under the RATS (Regional Anti-Terrorism Structure), it has been proposed to create a **unified register of terrorist and extremist organisations** whose activities will be prohibited on the territories of the SCO member countries. SCO members also held a joint anti-terror exercise in 2021.

Over the past few years, the organisation's activities have expanded to include increased military cooperation and intelligence sharing.

**What are the challenges with the SCO?**

**Internal Struggles:** Bilateral Relationships of many SCO members are strained. Recent clashes on Kyrgyzstan and Tajikistan border has lead to deaths of more than 100 people. Kyrgyzstan also has a border dispute with Uzbekistan although it is closer to resolution. The relationship of India and China is also at a historic low due to the border dispute and increasing Chinese presence in India's neighbourhood.

Although Russia and China seem to be united against the West, Russia is wary of growing Chinese presence in Central Asia. Russia considers Central Asia as its own backyard (former Soviet Republics). Russia still retains the military lead in the region through the CSTO (Collective Security Treaty Organisation), but China might soon displace Russia as security provider subsequent to the greater economic integration with the region.

**Connectivity:** The connectivity has remained poor, especially between India and the other SCO members. Pakistan has blocked all efforts to enhance connectivity with India. China has benefited the most, as all Central Asian nations have joined the Belt Road Initiative.

**Terrorism:** India has long held Pakistan as a State sponsor of terrorism. The presence of Pakistan, which is under grey list of FATF, severely limits the ability of the SCO to cooperate on the counter-terrorism front. The role of China is also dubious have repeatedly blocked the resolutions of India/US to blacklist Pakistan-based terrorists.

**What is the importance of SCO to India?**

**Relationship with Central Asia:** The SCO provides a platform to India to strengthen its relationship with Central Asian nations. The region is rich in **energy and mineral resources** (including rare earth elements) which are critical to India's economic growth. Many minerals are vital for new materials which will support **transition to clean energy technologies**.

**Read More:** [India – Central Asia Relations – Explained, pointwise](#)

**Relationship with Russia:** India continues to have high dependence on Russia for its energy and defence needs. India sees Russia as a balance to China. Russia, wary of Chinese presence in Central Asia, wants to prop-up India to keep check on China.

**Regional Security and Stability:** India sees partnership with SCO nations as a crucial factor in regional stability. For instance, India held NSA-level meetings with SCO Members Russia, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan along with Iran and Turkmenistan for Regional Security Dialogue on Afghanistan in November 2021. Central Asian Nations can support India in counter-terrorism despite limited response from China and Pakistan.

#### **What steps can be taken to increase the relevance of SCO for India?**

**First,** The lack of adequate connectivity with the Central Asian Republics (CARs) has been a major constraint for India, especially due to Chinese dominance through the Belt and Road Initiative. So it is necessary to conceive creative measures that enable Indian corporate to expand its footprint in the region's markets. With Iran joining in 2023, India must leverage its relationship and existing projects (Chabahar) to increase its presence in the region.

**Second,** Pakistan has to be persuaded to **open land corridors** which are the cheapest and shortest route. For Central Asian nations, **India is a lucrative market as well as a potential investment partner**. Rising Chinese debt and experience with BRI projects elsewhere have made them to have second thoughts on Chinese investments. Collective pressure from them on Pakistan to relent, can boost regional connectivity, trade and investments.

**Third,** India should push for more bilateral trade and settlement in national currencies to reduce dependence on US Dollar and reduce price volatility.

**Fourth,** There is need to give more focuses on humanitarian ties. Member States are working fruitfully in the field of education, health, culture, tourism and youth contacts and the cooperation should be enhanced further..

#### **Conclusion**

SCO is a platform which serve India's regional interests to ensure nation-building through development partnerships, maintaining sovereignty, preventing the region from terrorism and extremism. The organization has great potential to create a multi-polar, multi-aligned global order. India should enhance its active engagement with the Central Asian Nations to secure its geopolitical interests as well as counter Chinese influence in the region.

**Syllabus:** GS II, Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

**Source:** [The Hindu](#), [Indian Express](#), [Indian Express](#),

#### **[Kurukshetra September Summary] Education for Tribals – Explained, pointwise**

#### **Introduction**

The aim of any education system is to ensure inclusive and equitable quality education at all levels of school education. An inclusive education system ensures that no child loses any opportunity to learn and excel because of the circumstances of birth or background. To ensure inclusive education for tribals, the Ministry of Education and Ministry of Tribal Affairs have been implementing various schemes relating to education, health, economic empowerment, etc. in the

Scheduled Tribe dominated areas of the country. Many schemes are implemented with specific target of uplifting the education amongst tribal communities.

### About Tribal Education Status

According to the 2011 Census, Scheduled Tribes (notified by the Government of India under Article 342 of the Indian Constitution) **constitute 8.6% of the total population**. There are 705 Scheduled tribes living in different parts of India and are notified in 31 States/UTs (Census 2011).

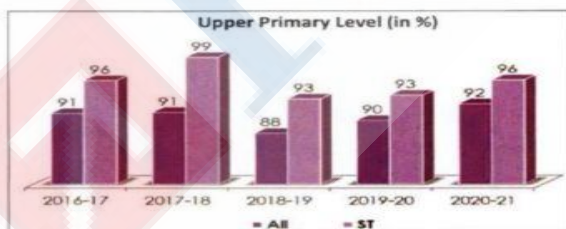
There is direct correlation between education and economic growth but this impact are evident only after certain period of time as the impact might not be ascertainable immediately. The government has formulated a number of schemes for the socio-economic development and adopted a tribal sub-plan. Education was conceived as a means for promoting the overall development of the tribes and also adopted as a strategy for mainstreaming them.

Year	All			Scheduled Tribes		
	Persons	Males	Females	Persons	Males	Females
1961	28.30	40.40	15.35	8.53	13.83	3.16
1971	34.45	45.96	21.97	11.30	17.63	4.85
1981	43.57	56.38	29.76	16.35	24.52	8.04
1991	52.21	64.13	39.29	29.60	40.65	18.19
2001	64.84	75.26	53.67	47.10	59.17	34.76
2011	73.00	80.90	64.60	58.96	68.50	49.40

Source: Kurukshetra. Literacy rates of Scheduled Tribes continue to be lower than that of all communities. It was 59% against national literacy rate of 73%.

The Gross Enrolment Ratio (GER) of tribal students has improved over the years. Analysis has shown that the **GER for ST students is above the national average for the last 5 years at primary and upper primary level**. However, it starts **decreasing at secondary and senior level**.

### Gross Enrolment Ratio





Source: Kurukshetra. The major challenge is high dropout rate at secondary level. GER for STs is higher at primary level but lower than average for all communities at secondary and higher secondary level. This indicates higher dropout rate among ST Communities.

### Genesis of Educational Policies and their Focus on Tribal Education

After independence various commissions were constituted to study, review, analyse and recommend the desired contextual changes in education system. ~~The first university education~~

Education Commissions/Committees formed by the Government of India	
Name	Recommendation
Scheduled Areas and Scheduled Tribe Commission (1961)	Educating the tribes in vernacular language with the support of trained teachers from the tribal communities. Promoting tribal culture and arts, by adding folklore, songs, etc. in the curriculum. Identified the basic issues related to the educational backwardness of tribal communities and the drop-out of the students leading to formation of new tribal education policies.
National Education Commission (1966) (Kothari commission)	Supported the recommendations and suggestions of Debar Commission. Noted the importance of the need for promoting <b>parental education among tribal population</b> , and <b>early childhood learning</b> .
2nd National Policy on Education (NPE) (1986)	Vision to remove the disparities, inequality and to bring educational opportunity for all. Gave more priority to the promotion of tribal education, such as the establishment of primary schools in tribal areas; address the need for starting Model Residential Schools including Ashram Schools for tribal students in the country; starting Anganwadis in tribal hamlets, etc.
Review of NPE (1990)	Highlighted the issue of removing disparities in education by stating that “the rural areas in general and the tribal areas in particular, have suffered in terms of resources, personnel and infrastructure facilities”. Recommended special earmarking for girls within the special component plan for Scheduled Castes and Tribal sub-plan.

### Various Programmes/Schemes on Education

**The RTE Act:** With the 86th Amendment to the Constitution Article 21A was inserted to ensure that every child has a right to full time elementary education of satisfactory and equitable quality in a formal school satisfying certain norms and standards. This subsequently resulted in formulation of the **Right of Children to Free and Compulsory Education (RTE) Act, 2009** which gave a legal mandate to provide free and compulsory elementary education to every child in the age group of 6-14 years.

**Samagra Shiksha Scheme:** Department of School Education and Literacy (DoSEL), Ministry of Education is implementing the *Samagra Shiksha* scheme, effective from 2018-19. Its objective is to bridge gender and social category gaps at all levels of school education. The Scheme reaches out to girls, and children belonging to SC/ST, Minority communities and Transgenders.

Under *Samagra Shiksha*, there is a provision of **Kasturba Gandhi Balika Vidyalyayas (KGBVs)**. KGBVs are residential schools from class VI to XII for girls belonging to disadvantaged groups such as SC, ST, OBC, Minority and Below Poverty Line (BPL). At present 4,986 KGBVs are functioning in the country with an enrolment of 6.69 lakh girls. Preference are given to

Educationally Backward Blocks (EBBs), LWEs, Special Focus Districts (SFDs) and the 115 aspirational districts.

The Central Sector Scheme '**National Means-cum-Merit Scholarship Scheme**' has objective to award scholarships to meritorious students of economically weaker sections to arrest their drop-out at class VIII and encourage them to continue the study at secondary stage.

Ministry of Tribal Affairs has been implementing various schemes relating to education, health, economic empowerment, etc. in the Scheduled Tribe dominated areas of the country.

**Eklavya Model Residential School (EMRS):** EMRS are targeted to be established in every block having more than 50% ST population and at least 20,000 tribal persons (as per census 2011). These EMRSs are to be at par with *Navodaya Vidyalayas* with special facilities for preserving local art and culture besides providing training in sports and skill development. The scheme has target to establish 740 schools. At present out of 684 schools sanctioned, only 378 schools have been made functional with an enrolment of 1.05 lakh students.

**National Fellowship and Scholarship for Higher Education of ST Students:** The scheme provides financial assistance for pursuing MPhil and PhD in Universities and for perusing graduate and post graduate courses in top 246 Institutes like IIT/AIIMS etc.

**National Overseas Scholarship (NOS) to the ST Students for Studies Abroad:** Under the Scheme, financial assistance is provided to 20 ST students every year for pursuing higher studies abroad.

**Pre-Matric Scholarship:** Pre-Matric Scholarship Scheme is a Centrally Sponsored Scheme under which financial assistance is provided to ST students studying in classes IX and X.

**Post-Matric Scholarship:** Post-Matric Scholarship Scheme is a Centrally Sponsored Scheme under which financial assistance is provided to ST students studying beyond class X.

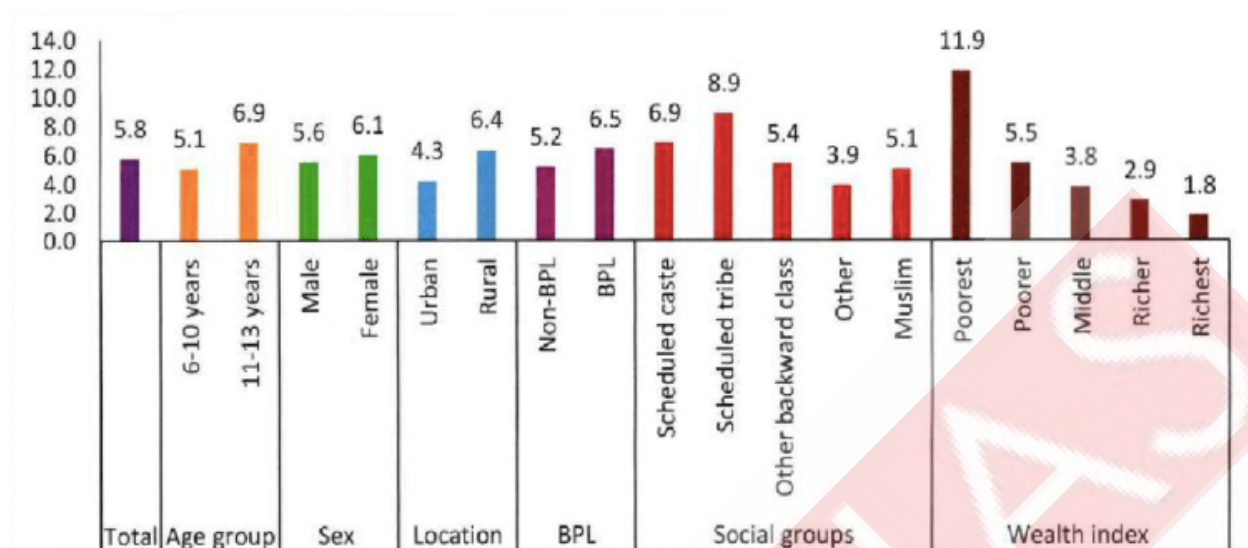
**Support to Tribal Research Institute (TRI):** This scheme aims to strengthen TRIs to carry out research, documentation, training and capacity building activities and serve as a knowledge hub catering to overall tribal development. Tribal museums are also established under this scheme.

**Development of Particularly Vulnerable Tribal Groups (PVTGs):** This scheme adopts a habitat level development approach to improve the quality of life through intervention in housing, drinking water, education and health services, livelihood support, and cultural aspects.

### Major Challenges for Tribal Education

In the case of Scheduled Tribes, the remoteness of habitations, lack of travelling facilities, insufficient infrastructure facilities, illiteracy of parents, communication problem, and segregated population are the primary constraints for the educational attainment.

**Lack of Adequate Infrastructure in Schools:** Adequate infrastructure which include gender segregated functional toilets, pucca school buildings, electricity, water, play area, library, sports facilities, and safe and conducive environment for learning are the primary requirements for retaining a child in the school. The tribal areas are generally remote, hilly and in dense forests, therefore, schools located in these areas lack such facilities. These issues ultimately lead to **children dropping out of school**.



Source: Kurukshetra. Proportion (%) of children aged 6-13 years not attending school, 2019-21, NFHS-5

**Low Learning Level of Children:** Despite the Right to Education Act and other schemes for promoting quality education, the learning levels of children remain poor. This problem is not limited to only tribal children but entire education system. The recently released results of National Achievement Survey (NAS) 2021, indicate that only 42% children at Grade III are proficient in all subjects which decrease to 23 percent in class X. Further disparity among social groups widens strikingly at grade VIII and grade IX.

**Medium of Instruction:** It is a well established fact that primary education in mother tongue has huge benefits. Various studies have established the benefits of mother tongue language development in contexts where multiple languages are used for a variety of purposes. Own language learning has beneficial effect on other language learning and teaching. In a country like India that occupies multiple cultures and languages, one language dominating learning and education as a medium of instruction can leave many illiterate and foster unproductive learning. The struggle between mother tongue and dominant language in classroom leaves the aspiring learners from the Scheduled Tribes behind in learning.

**Lack of Teachers and Appropriate Pedagogy:** Schools in far flung areas and difficult terrain face shortage of teachers. Many primary schools have single teacher and that teacher is not aware about the needs of tribal students. Due to communication gap, tribal students are termed as slow learners. Further, teachers should adopt play based and activity based pedagogy to make learning interesting so that children do not find education irrelevant. Real life application of knowledge and respect for tribal knowledge may make a huge difference in educational outcomes of the Students.

### Way Forward

**First,** The National Education Policy 2020 reaffirms that **bridging the social category gaps in access, participation, and learning outcomes** will continue to be one of the major goals of all education sector development programmes. It recognises the challenges faced by the tribals communities at multiple levels. To ensure inclusion of marginal communities in quality



educational space of India, the NEP 2020 proposed the policy strategy to **identify Special Education Zones (SEZs)**. The **SEZs will be the identified regions where significantly large populations from educationally and socio economically disadvantaged groups reside.**

**Second,** The next step could be to **preserve and assimilate tribal knowledge** in curriculum framework. It will ensure that quality education not only is accessible to all diverse groups but also is **relevant and connected with their traditions, aspirations and needs**. NEP 2020 puts special **emphasis on Indian Knowledge Systems**, including tribal knowledge (tribal ethno-medicinal practices, forest management, traditional (organic) crop cultivation, natural farming etc.), and indigenous and traditional ways of learning.

**Third, multilingual education and instruction in mother tongue** as envisaged in Article 350A of the constitution (which provides for facilities for instruction in mother tongue at the primary stage) need to be promoted in big way . The RTE Act and NEP 2020 also propagates mother tongue as medium of instruction wherever possible

**Fourth,** As per NEP 2020, special attention may be given to **employing local teachers** or those **familiar with local languages**. Teachers need to be trained, encouraged, and supported with continuous professional development. The availability of local teachers will resolve two issues simultaneously; i.e. availability of teachers and communication gap between teachers and students.

### Conclusion

As envisaged in NEP 2020, universal access to quality education to all children is the key to India's continued ascent, and leadership at the global stage in terms of economic growth, social justice and equality, scientific advancement, national integration, and cultural preservation. Ensuring quality education is going to be the most fundamental requirement as India embarks on its journey to become a developed nation in the *Amrit Kaal* period. Bridging education gaps should be the top priority of the Government in this period.

**Syllabus:** GS II, Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes, Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

**Source:** Kurukshetra September 2022

## Dispute Settlement System of the WTO: Challenges and Solutions – Explained, pointwise

### Introduction

The Dispute Settlement System of the WTO (World Trade Organization) has been stalled for long. The US has not allowed the appointment of experts to the Appellate Board. The Mechanism has been rendered non-functional since 2019 due to lack of quorum of adjudicators needed to hear appeals. It has deep implications for the functioning and effectiveness of the WTO. At the recent G20 nations' trade, investment, and industry ministerial meeting, trade ministers discussed ways to strengthen the World Trade Organisation's (WTO) dispute settlement mechanism and make it more "accessible and efficient". The World Trade Organization (WTO) has been the cornerstone of the multilateral rules-based global trading system since its inception in 1995. Presently, all three of the organization's functions: providing a negotiation forum to liberalize trade and establish new rules, monitoring trade policies, and resolving disputes between its 164

members, face challenges. In the current logjam at the dispute resolution mechanism, the WTO faces a make-or-break moment.

### What is the Dispute Settlement System of the WTO?

**Origin and Purpose:** The Dispute Settlement System (DSS) has been termed as the ‘crown jewel’ of the WTO. The DSS came into existence in 1994. It came into existence through the 8 year long Uruguay Round negotiations (1986-1994) to govern trade disputes between member states of the WTO.

The purpose of the Dispute Settlement System is to provide “**stability and predictability to the multilateral trading system**” and to establish a “**fast, efficient, dependable and rule-oriented system to resolve disputes**”.

The DSS provides a forum for an aggrieved country to ensure its rights. It also enables a respondent country to defend its claims. The DSS enables interpretation, clarification and correct application of the rights and obligations provided under the WTO agreements.

**Jurisdiction and Applicability:** The WTO’s jurisdiction over disputes is **compulsory and all members are subject to it** by virtue of having signed and ratified the agreement. A dispute arises when a member state adopts a trade policy that one or more members consider to be **inconsistent with the obligations under the WTO trade agreements**. In such a case, a member state is entitled to challenge the policy measure by invoking the procedure of the dispute settlement system.

**Structure:** The General Council (WTO’s highest decision-making body) comprises representation from member states and also meets as the **Dispute Settlement Body (DSB)**. Settling disputes is the responsibility of the DSB. The Dispute Settlement Body has the **sole authority** to: **(a)** Establish panels of experts to consider the case; **(b)** Accept or reject the panels’ findings or the results of an appeal; **(c) Monitor the implementation** of the rulings and recommendations; **(d) Authorise retaliation** when a country does not comply with a ruling. The DSB thus administers the rules and procedures of the DSS.

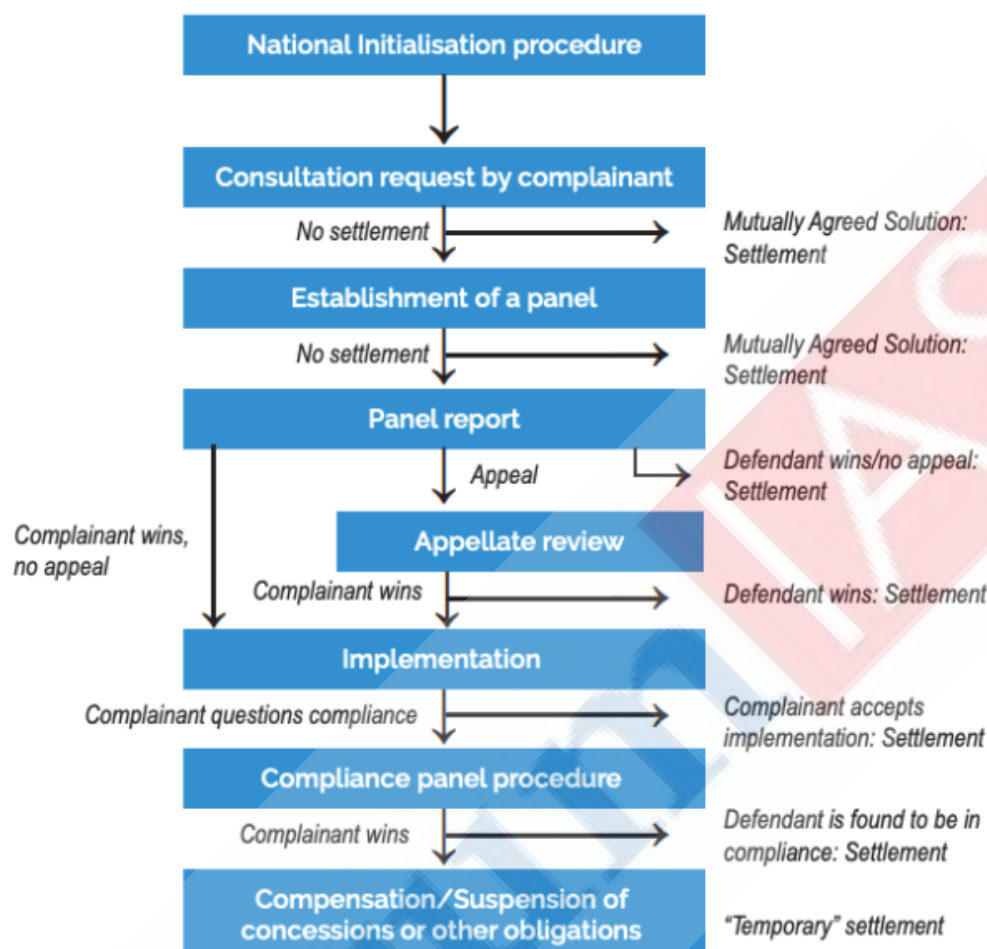
The DSB’s decision with respect to establishing panels, adopting panel and appellate body reports, and authorising retaliation, is taken by the ‘negative’ or ‘reverse consensus’ method. All other decisions, such as the appointment of panel or appellate body (AB) members, are taken through the positive consensus mechanism.

#### Reverse Consensus

It means that the DSB must automatically decide to take the action ahead, unless there is a **consensus not to do so**. This means that one sole Member can always prevent this reverse consensus, i.e. it can avoid the blocking of the decision (being taken). If one member votes that the decision be adopted, it shall be adopted.

**Appellate Body (AB):** The AB is a permanent body of 7 members who are appointed by the DSB for 4-year terms. A panel for appeals comprises three from the seven-member AB. The Appellate Body members are persons with demonstrated expertise in law, international trade and the subject matter of the WTO agreements. Most AB members have been university professors, practicing lawyers, past government officials and senior judges.

**Process:** The DSS process comprises three stages: **(1)** Consultations between parties; **(2)** Adjudication by panels, or the Appellate Body (if appealed); **(3)** Implementation of the ruling, including the possibility of countermeasures if the losing party does not implement the ruling.



Source: ORF

### What are the challenges and associated solutions with regards to the Dispute Settlement System?

Appointments and Extensions of Appellate Board Members		
	Issue	Proposed Solution
1	An appointment of AB member <b>takes place through consensus</b> , i.e., all member states need to agree upon the appointment. Since 2018, the appellate body has been defunct because the United States has blocked the appointment of new judges.	<b>Appointment by majority voting</b> , instead of consensus will provide a speedy resolution to the stalemate. Additional reforms to mitigate this crisis: <b>(a)</b> Increasing the number of AB members; <b>(b)</b> Changing the term of AB members from a 4-year renewable term, to a single term of 6-8 years; <b>(c)</b> Automatic launch of AB selection process before the expiry of term of office.
Procedural Issues		
	Issue	Proposed Solution
1	AB's jurisdiction is limited to reviewing "issues of law" and "legal	<b>Mandatory judicial economy</b> : AB should exercise "judicial economy" and limit itself to



	interpretations developed by the panel". But sometimes it goes into factual questions and exceeds its judicial mandate. It makes remarks and statements that are unnecessary to the resolution of the dispute. This has been criticized.	issues raised by parties. Under no circumstance it should pronounce on issues not raised by parties to dispute. An external review mechanism has been proposed by some countries to consider whether the AB has overstepped its mandate.
2	DSB decision on adoption of panel and AB reports is taken through ' <b>negative consensus mechanism</b> '. The decision is adopted unless there is consensus against it. This guarantees its quasi-automatic nature.	<b>US proposal to increase flexibility and member state control:</b> Mechanism for member states to review AB decisions, delete parts of a decision through mutual agreement, or only partially adopt a decision. <b>Proposal of a blocking minority:</b> If at least 1/3rd of member states, representing at least 1/4th of the total trade among WTO members, register opposition to a decision, it shall be set aside or blocked.
<b>Systemic Issues</b>		
	<b>Issue</b>	<b>Proposed Solution</b>
1	Despite overall decrease in DSS workload, the <b>average time taken to resolve disputes</b> has steadily increased.	Various steps can be taken: <b>(a)</b> Hiring more secretariat lawyers; <b>(b)</b> Streamlining translation process; <b>(c)</b> Limiting the time given to parties for their submissions.
2	The DSS has overall witnessed lesser participation from developing countries and the least developed countries( LDCs).	There is a need to <b>give assistance to developing countries and LDCs</b> in the negotiation stage. The Africa Group has proposed the setting up of fund, out of regular WTO budget for developing countries and LDCs.
3	No formal mechanism for regular dialogue between members and adjudicative bodies of the DSB. There is no available forum for member states to <b>raise concerns and discuss new issues</b> in the DSS.	A formal mechanism will provide a channel of communication, where concerns regarding AB approaches, systemic issues or trends in jurisprudence can be voiced. <b>Annual meetings can be scheduled</b> with the DSB and AB.

#### What are the impacts of non-functional Dispute Settlement System on WTO?

**First,** There is a real concern that if the Dispute Settlement System of WTO is not restored soon, it may not come back. The dispute settlement mechanism has been vital to the functionality of the WTO as it provided an amenable platform to the member states to settle their disputes. In its absence, the disputes will persist and the relevance of the WTO as a multilateral organisation will be lost. Member states will look for alternate plurilateral arrangements.

**Second,** If the DSS is demolished, it will be difficult for smaller countries to hold larger countries accountable to their trade obligations. Moreover, the rules-based multilateral trading system will collapse with no institutional mechanism available to enforce it. .

**Third,** Uncertainty in resolution of trade disputes will lead to uncertainty in trade policy which will directly impact farmers, manufacturers, industries and businesses.

**Fourth,** Because of the challenges of concluding multilateral negotiations, countries have increasingly **turned to bilateral or regional free-trade agreements (FTAs)**. More than 300 bilateral and regional free-trade agreements are currently in force, compared with fewer than 60 in 1995. All WTO members have a least one bilateral or regional free-trade agreement. Regional FTAs tend to be detrimental to the interests of the developing countries/LDCs as they lack negotiating powers.

**Fifth,** The expansion of bilateral and regional free trade agreement into new areas not covered by multilateral rules increase the risk of regulatory inconsistency.

#### **What should be the approach going ahead?**

**First,** To truly reform the WTO, its **trade rules need to be modernised** to reflect shifts in global economic power and technological transformations. Moreover, new rules are needed because **trade barriers are no longer primarily about tariffs but increasingly concern regulations and standards.**

**Second,** There is need to strengthen the WTO's notification process for bilateral and regional free-trade agreements and improve the database in which they are recorded, for increased transparency.

**Third,** the negotiations under bilateral or regional free-trade agreements can be used to advance talks on topics not currently on the WTO. However, the interests of the developing countries and LDCs must be protected and decisions should be based on their consensus.

**Fourth,** There is need to reform the WTO dispute settlement system and to end the Appellate Body crisis. This would help to maintain the pre-eminence of the WTO's dispute settlement mechanism over the plethora of other dispute settlement mechanisms that operate under free-trade agreements

#### **Conclusion**

The WTO's functions of administering and monitoring the application of trade rules and settling trade disputes depend largely on whether rules exist and are fit for purpose. Reform will therefore require updating the rulebook to address the needs of global trade in the 21st century. India, as a responsible member state, should help initiate the process of disputes settlement system (DSS) reforms through negotiations, diplomacy and engagement with all stakeholders. At the same time, it should ensure that the interests of developing countries and least developed countries (LDCs) are not compromised and the DSS as an institution retains its original purpose, which is to provide stability and security to the multilateral trading system.

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

**Source:** [Business Standard](#), [ORF](#), [WTO](#)

**Issues in Urban Planning in India – Explained, pointwise****Introduction**

Urbanization is the key to India's future. Cities in India occupy just 3% of the land, but their contribution to the GDP is a ~60%. India is the second largest urban system in the world with almost 11% of the total global urban population living in Indian cities. India's urban population is expected to cross 50% of total population within next two decades. Urban growth is expected to contribute to 73% of the total population increase by 2036. This would bring enormous opportunities of economic growth and global competitiveness. Efforts must be channelised to ensure preparedness of the nation to manage such a massive urban transition and save our cities from the clutches of unplanned urbanization and unregulated construction activities. The Ministry of Finance (2021) noted that one in-three poor people is living in urban areas, which was about one-in-eight in the early 1950s. The deluged city roads during monsoons, long traffic snarls, poor quality of air, vast slums all represent absence of sustainable urbanization in India. This situation, along with the projected urbanisation levels, if left unplanned and sub-optimally managed, may be detrimental to the society, economy, and environment. In this context, NITI Aayog had come up with a report '**Reforms in Urban Planning In India**' to improve the planning capacity to make the process of urbanization sustainable.

Issues like lack of availability of serviced land, traffic congestion, pressure on basic infrastructure, extreme air pollution, urban flooding, water scarcity and droughts are not merely a reflection of infrastructural shortcomings in the cities. These issues indicate a deep and substantial lack of adequate urban planning and governance frameworks.

**What are the challenges to Urbanization in India?**

**Uneven urbanisation:** The distribution of urban centres and the pace of urbanisation is not uniform across the country. States such as Bihar, Odisha, Assam, and Uttar Pradesh continue to be at a lower level of urbanisation than the national average of 31.1%. Over 75% of the urban population of the country is in 10 States: Maharashtra, Uttar Pradesh, Tamil Nadu, West Bengal, Andhra Pradesh, Gujarat, Karnataka, Madhya Pradesh, Rajasthan, and Kerala.

**Statutory Towns Growing Without 'Master Plans':** Master plans are critical for managing urbanisation. They are statutory instruments to guide and regulate the present and future urbanization (like utilisation of land, expansion, and zoning of cities for 20–25 years). According to the NITI Aayog Report, **~50% of India's statutory towns are expanding without any master plan** to guide their growth and infrastructure. Urban economic activity is growing rapidly in these towns but there is no local government responsible and accountable for infrastructure development or service delivery. They continue to be governed as villages and do not have an urban local body. Haphazard growth, unplanned construction, and ad-hoc provisioning of infrastructure, over a long period of time, will put them at major risks of urbanisation.

Even when master plans exist, there are several challenges during their implementation like delays, disputes in courts etc. Some master plans also get amended more than a thousand times during their implementation.

**Census and Statutory Towns**

A Census Town is an area with urban characteristics like: **(a)** A minimum population of 5,000; **(b)** At least 75% of the male main working force engaged in non-agricultural activities; **(c)**



Population density of at least 400 persons per sq.km. As per 2011 Census, there are 3,784 Census Towns.

A Statutory Town is one with a municipality, corporation, cantonment board or notified town area committee. As per 2011 Census, there are 4,041 Statutory Towns .

**Sub-Optimal Utilisation of Urban Land:** Ministry of Housing and Urban Affairs (MoHUA) noted that paradoxically congested land parcels of high population densities co-exist with vast parcels of under-utilized lands. A major reason for this is the **fragmented and poorly recorded ownership of urban land**. Moreover, multiple public sector organizations/agencies (ports, railways, ULBs, etc.) own land under their jurisdictions. This hinders holistic planning and development. Non-optimal utilization creates scarcity of land which raises land price and reduces space for affordable housing.

**Magnitude of Population Living in Slums:** According to Census 2011, 17.3% of the total urban population was under slums in India and about 70% of this slum population was concentrated in 6 States: Maharashtra (18.1%), Andhra Pradesh (15.6%), West Bengal (9.8%), Uttar Pradesh (9.5%), Tamil Nadu (8.9%) and Madhya Pradesh (8.7%). The proportion of slum population is rapidly rising. Lack of affordable housing is contributing to creation and expansion of slums.

**Increasing Risk of Water Scarcity in Cities:** The World Wide Fund for Nature India (2020) has found that Indian cities dominate current and future lists of global cities with the highest overall water risk. This situation is further exacerbated by the lack of adequate infrastructure in cities and towns to handle their own wastewater and solid waste. NITI Aayog in its Composite Water Management Index noted that hunt for additional water resources to sustain Indian cities will lead to “serious harm to the country’s biodiversity, environment, and ecological balance” (2019).

**City Planning for Disaster Mitigation:** The aspect of disaster mitigation is missing in growth of Indian cities. NITI Aayog notes that the way urban areas are planned, developed, and managed; can create long lasting impacts on the local water availability and vulnerability to disasters. The Parliamentary Standing Committee on Home Affairs in its report observed that the encroachment of lakes and riverbeds had played a major role in urban flooding in Chennai.

**Pressures on Coastal Habitations:** The coastal cities are home to 14% of the population in India and are vulnerable to floods due to multiple causes, that include faulty urban design and planning, dynamic coastline, flash floods, storm surges, cyclones, and tsunamis. Coastal habitations and infrastructural investments are vulnerable to rise in sea levels due to climate change and cyclones.

#### **What steps can be taken to improve the process of Urban Planning?**

Sustainable urbanisation requires a balance between the development of urban areas and protection of the environment with an eye to equity in employment, shelter, basic services, social infrastructure, and transportation in urban areas.

The present urban chaos in India is mainly the result of **ineffective and inefficient urban management, multiplicity of authorities, inadequate revenue base, lack of coordination between various municipal agencies**, and the non-participatory attitude of stakeholders. It has become imperative to focus on various elements that are essential for the survival of urban centres, like social, economic, environmental, and urban governance. With better management, control, and utilisation of all these four elements, sustainable urbanisation can be achieved.



Source: UN/DESA, Development Policy and Analysis Division.

Source: United Nations Department of Economic and Social Affairs

In this context, an Advisory Committee of the NITI Aayog has provided recommendations in the **'Reforms in Urban Planning In India'** Report.

**Programmatic intervention for planning of healthy cities:** There is a need for convergence of multi-sectoral efforts in planning, public health, and socio-economic development. The focus of planning urban development must encompass not only the million-plus cities but also hundreds of small- and medium-sized towns. The Advisory Committee has recommended a central sector scheme **'500 Healthy Cities Programme'**, for a period of 5 years, wherein priority cities and towns would be selected jointly by the States and the local bodies.

**Programmatic intervention for optimum utilisation of urban land:** All the cities/towns under the proposed 'Healthy Cities Programme' should **strengthen regulations to maximize the efficiency of urban land** (or planning area). The Committee has recommended review and revision of regulations for this purpose.

**Ramping up of human resources:** The public sector must have an adequate workforce in terms of quantity and quality to tackle the challenges of urbanization. The Committee has recommended that the States/UTs may need to: **(a)** Expedite the filling up of vacant positions of town planners; **(b)** Additionally sanction 8268 town planners' posts as lateral entry positions for a minimum period of 3 years and a maximum of 5 years to close the gaps.

**Ensuring qualified professionals for undertaking urban planning:** Urban areas and their developmental complexities have increased over the years. The discipline of urban planning or town planning has a dedicated course curricula with which graduates acquire a multi-sectoral overview and skillset to address such challenges. The States may need to undertake requisite amendments in their recruitment rules to ensure the entry of qualified candidates into town planning positions.

**Mainstreaming capacity-building activities:** Concerted efforts are required by the States/UTs to ensure regular capacity building of their town planning staff. Also, the existing centres of excellence established by MoHUA and State-level training institutions need to be further strengthened to regularly build the skills and expertise of urban functionaries.

**Re-engineering of urban governance:** There is a need to bring in more institutional clarity and multi-disciplinary expertise to solve urban challenges. The Advisory Committee has recommended the constitution of a high powered committee to re-engineer the present urban-planning governance structure with: **(a)** Clear division of roles and responsibilities among various authorities, appropriate revision of rules and regulations; **(b)** Creation of a more dynamic organisational structure, standardisation of the job descriptions of town planners and other experts; **(c)** Extensive adoption of technology for enabling public participation and inter-agency

**Revision of Town and Country Planning Acts:** The formation of an apex committee at the State level is recommended to undertake a regular review of planning legislations (including town and country planning or urban and regional development acts or other relevant acts).

**Involvement of citizens in Planning:** Public's participation in urban planning in India is limited. It is important to include public opinion and feedback in the planning process. The Committee has recommended a '**Citizen Outreach Campaign**' for making the process of urban planning more inclusive and accessible.

**Building local leadership:** It is important to enlighten the city leadership about the significance of urban planning to achieve integrated development, mobilize finances, ensure affordable housing, and make cities more economically productive, liveable, inclusive and sustainable. The Committee has recommended a short-term training programme for city level elected officials on the economic and social benefits of urban planning.

**Steps for enhancing the role of private sector:** The private sector needs to be evolved to heighten its role and employment opportunities for planners. Concerted measures must be taken at multiple levels to strengthen the role of the private sector to improve the overall planning capacity in the country. These include the adoption of fair processes for procuring technical consultancy services, strengthening project structuring and management skills in the public sector, and empanelment of private sector consultancies.

### Conclusion

India is rapidly urbanizing. The cities and their infrastructure are coming under increasing pressure. It is thus imperative to enhance the urban planning capacity of the ULBs. As India reaches the tipping point of transitioning from a mostly rural to an urban society, the time to undertake planning reforms is now, because the process is irreversible. This has become vital to ensure that the growth of cities is sustainable and inclusive in the future.

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

**Source:** [Indian Express](#), [NITI Aayog](#)



## Logistics Sector in India and National Logistics Policy – Explained, pointwise

### Introduction

The World Bank Logistics Performance Index 2018 (latest available) had ranked India 44th out of 160 nations. China and Vietnam did better than India with 26th and 39th ranks respectively. India's Logistics Sector performed poorly on Customs (efficiency of clearing process/speed, simplicity etc.) and Infrastructure sub-indices of the Index. Poor infrastructure adds to the costs of logistics. According to one estimate India's logistics sector records relatively higher costs at 13-14% of the GDP. The corresponding figure for developed economies is ~8-10%. This makes India's industry uncompetitive. There are several other challenges facing the logistics sector. In this context, the Government has released the National Logistics Policy. The new framework has laid special emphasis on streamlining processes for seamless coordination, and reduction in overall logistics cost, besides pushing employment generation and skilling of the workforce.

### What is the current status of India's Logistics Sector?

Logistics refers to the overall process of managing how resources are acquired, stored, and transported to their final destination. It includes all activities of the supply chain such as transportation, warehousing, packaging, inventory management, the flow of information, order processing and customer service.

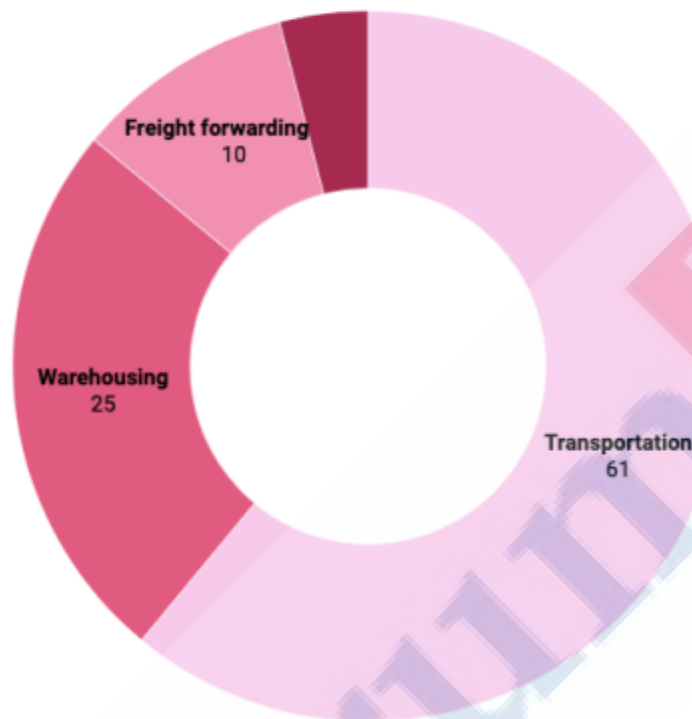


In 2019, India's logistics sector was valued at US\$ 190 billion. The sector employed over 22 million people directly. It is expected to grow at a growth rate of 8-10% over the medium term.

## Transportation activities drive a bulk of India's ₹16tn logistics market

Share in India's logistics market (%)

Transportation Warehousing Freight forwarding Value added logistics



Source: Mint

A Logistics Division was established in the Department of Commerce in 2017. It has been tasked with undertaking the integrated development of Logistics Sector. One of its key responsibility is to develop an action plan to facilitate the overall development of the logistics sector through policy changes, procedure improvements, identification of bottlenecks and gaps, and adoption of technology. Still the regulatory environment is very complex as there are over 20 government agencies, 37 export promotion councils, 40 Participating Government Agencies (PGAs), and 500 certifications.

Since 2014, there has been much emphasis on improving logistics, through initiatives like Sagarmala for shipping, Bharatmala for road and UDAN for aviation.

In October 2021, PM *Gati Shakti* was launched as a National Master Plan for multi-modal connectivity to bring together 16 ministries, including railways and roadways, for integrated planning and coordinated implementation of infrastructure connectivity projects.

**Read More:** [PM Gati Shakti – National Infrastructure Master Plan – Explained, pointwise](#)

Further, better technology has been adopted to strengthen the logistics sector. For example, paperless export-import trade operations have been made possible by the e-sanchit portal, and faceless evaluation in customs has been implemented. **E-way bills** and **FASTag** are also

frequently used on roads to boost the effectiveness of the logistics industry. Also, a unified tax system like Goods and Services Tax (GST) enables ease in issues related to the logistics sector.

### What are the challenges facing India's Logistics Sector?

**Skewed Multimodal Mix:** In India, a predominant mode of freight cargo transportation is via road. Nearly 60% cargo is moved by road, while the share of railways is ~32%. Waterways have a meagre share of ~5%. The global average is 25% for roads and 60% for railways. Share of railways is lower because of over-saturated rail networks and high rail tariffs. Road is an inefficient way of transportation because of poor infrastructure, slower speed of movement, multiple check-points etc.

The skewed modal mix raises costs of logistics. The higher logistics costs are reducing the competitiveness of India's exports. Reports suggest that **higher logistics cost is leading to a competitiveness gap** of US\$ 180 billion for India. The difference will increase to US\$ 500 billion by 2030.

## Costs shoot up due to heavy dependence on roads

Transportation cost by each mode (₹ per tonne per km)



Source: Mint

**Port Sector Issues:** The turnaround times for ships is high (~62 hours in 2020-21, ~8 hours in Japan). This is because of overcrowded berths and delay in cargo evacuation due to poor infrastructure. In addition, time consuming custom clearances add to delay. Logistics companies suffer. Coastal shipping in India gets hampered due to the weak land side and port facilities. Insufficient depth at ports discourage large vessels, thus curbing the large scale use of it for freight movements.

**Read More:** [Draft Ports Bill 2022 and Port Infrastructure in India – Explained, pointwise](#)

**Tax Structure:** The complicated tax regime places several hardships on logistics companies in India. Multiple State and Center taxes lead to considerable loss of time in transit on roads.

**Warehousing Issues:** The poor state of warehousing and their restricting locations are one of the major concerns of logistics sector. Storage facilities are quite fragmented for low margin products thereby resulting in a **disincentive to create a large integrated warehousing space**. The Government owned most of the large warehouses and used for food grain.

**Technological and Skill Deterrents:** Automation of processes is still in the embryonic stage in India. Non-standardization in the industry due to its fragmentation further slows down the progress. Acceptance and adoption of technological advancements like RFID, tracking,



warehouse management system, etc. can resolve the issues between domain requirement and IT. Besides this, there is lack of quality workforce in this sector, and the available skill set needs to be upgraded urgently.

**Fuel Costs:** The high fuel costs continues to be a detriment to the sector. Higher fuel prices increase the transportation costs. Rising fuel prices are increasing the surcharges to the freight tariffs. This reduces profitability of the logistics sector.

**Government Regulations:** Carriers face significant compliance regulations imposed by State Governments and local authorities. It causes time overruns and disruption in supply chains.

**Fragmented Sector:** Unorganized players control 90% of the logistics market. Most Indian logistics companies are very small, and have limited fleet of trucks/vehicles. This prevents scale and cost economies. Fragmentation leads to low margins which prevents investments to scale-up operations or adoption of new efficient digital technologies. It also makes it hard to streamline supply chains. So the road transportation sector remains inefficient overall.

## India's high logistics costs are impacting its competitiveness adversely

*Logistics cost, as a % of GDP*



*Source: Mint*

### What are the salient provisions of National Logistics Policy?

The National Logistics Policy has been launched recently. It provides a comprehensive agenda to develop the entire logistics ecosystem

#### Vision and Targets

The policy has been formulated with two major visions.

The first is to **reduce logistics cost** in India by 5 percentage points of GDP over the next 5 years (from current 13-14% of GDP to 8-9% of GDP).

The second is to **improve India's ranking in the Logistics Performance Index**. It aims to enhance logistics sector competitiveness through a unified policy environment and an integrated institutional mechanics.

The policy aims to **boost economic growth, provide employment opportunities, and make Indian products more competitive** in the global market.

The three targets of NLP are:

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**First**, to reduce cost of logistics in India to be comparable to global benchmarks by 2030.

**Second**, improve the Logistics Performance Index ranking, to be among top 25 countries by 2030.

**Third**, create data driven decision support mechanism for an efficient logistics ecosystem.

Major Steps

There are 4 significant steps to be implemented under the NLP through the **Comprehensive Logistics Action Plan (CLAP)**.

**Integration of Digital System (IDS):** There will be digital integration of 30 different systems from 7 departments, integrating data from the road transport, railways, customs, aviation, and commerce departments.

**Unified Logistics Interface Platform (ULIP):** This will ensure **smoother cargo movement**. It will enable the exchange of information confidentially on a real-time basis. This National Industrial Corridor Development Corporation (NICDC) Logistics Data Bank Project has been leveraged. This will **bring all the digital services related to the transportation sector into a single portal**, freeing the exporters from a host of very long and cumbersome processes.

**Ease of Logistics (ELOG):** It will enable and ensure the ease of logistics business through **transparency and accessibility**. Through this portal, industry associations can directly take up any such matters which are causing problems in their operations and performance with the government agencies.

**System Improvement Group:** It will monitor all logistics-related projects regularly.

Apart from the above, CLAP envisages benchmarking service standards, human resource development, capacity building, development of logistics parks, etc.

#### **How National Logistics Policy addresses challenges of India's Logistics Sector?**

**First**, the policy paves way for **reduction in logistics cost in the country**. Focus will be on enabling adequate development of warehouses with optimal spatial planning. Establishing multi-modal logistics parks (MMLPs) in crucial markets will improve first- and last-mile connectivity. This will enable better inventory management **making the supply chains more efficient bringing down the costs**.

**Second**, promotion of standards, measures to facilitate seamless coordination between different stakeholders, speedy issue resolution, and streamlined EXIM processes will reduce unnecessary delays.

**Third**, measures to improve digitization, automation across the logistics value chain and better track and trace mechanisms will enable faster movement of goods and reduce wastage in transit.

**Fourth**, The government will also offer management courses around Logistics and Supply Chain. This will lead to human resource development to create an employable pool of skilled manpower, for the sector's growth.

**Fifth**, According to the Government, all States and UTs have been fully onboarded. 14 States have already developed their respective State Logistics Policies on the lines of the National Logistics Policy and for 13 States, it is in draft stage. The institutional frameworks under PM GatiShakti at the Union and State level, which will also monitor implementation of the Policy, is

fully operational. This will ensure a fast and effective adoption of the Policy across all stakeholders. Coordination with States will **help reduce bottlenecks in inter-state movement of goods**.

**Sixth**, This policy supports enhancing competitiveness of Micro, Small and Medium Enterprises, and other sectors such as agriculture and allied sectors, fast moving consumer goods and electronics. With greater predictability, transparency and reliability, wastages in supply chain and need for huge inventory will reduce.

The NLP is closely aligned with previous connectivity and infrastructure improvement programs like the *Gati Shakti* Programme, *Sagarmala* and *Bharatmala* projects.

Proper implementation of the policy will result in **greater integration of global value chains** and higher share in global trade besides facilitating accelerated economic growth in the country, is another outcome envisaged.

**Read More:** [Global Value Chains: Building Resilient GVC linkages in India – Explained, pointwise](#)

#### What more steps can be taken going ahead?

**First**, The focus has to be on correcting the modal mix. The Dedicated Freight Corridors are expected to improve the share of the railways in logistics. Efforts must be made to make the DFCs operational at the earliest.

**Second**, Inland waterways have remained underdeveloped. They provide a cost-efficient and environment-friendly way to move goods. Inland port development must become a priority for the Government.

**Third**, A technology-driven documentation approach would highly impact the logistic sector by avoiding transit delays and untimely deliveries caused due to improper documentation.

**Fourth**, the focus has to be on the implementation of the policy. There should be periodic review to check for the outcomes and course-correction.

#### Conclusion

India aims to become US\$ 5 Trillion economy in the near term and a developed economy by 2047. For this, connectivity and robust infrastructure will become crucial points, and the NLP provides the required boost for the sector to this effect. As logistics develop, manufacturing and other industries like warehousing and infrastructure development will also develop. This will spur the growth of commercial real estate and industrial parks. This will help greater integration of Indian industry with global value chains and make India a manufacturing hub. Effective implementation of NLP will be a key step in making India a developed economy.

**Syllabus:** GS III, Infrastructure

**Source:** [Economic Times](#), [The Hindu BusinessLine](#), [Financial Express](#), [Mint](#), [IBEF](#), [PIB](#)



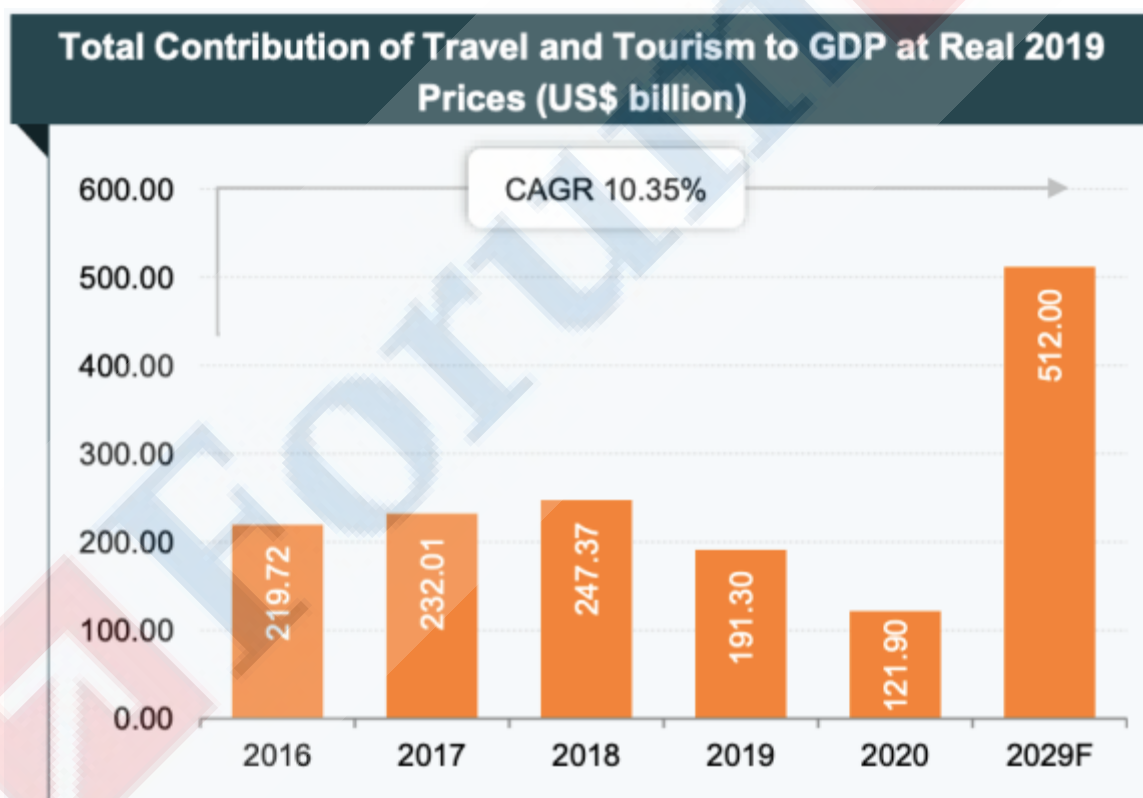
## Tourism Sector in India – Explained, pointwise

### Introduction

A three-day National Conference of Tourism Ministers of States was held for the first time in Dharmshala (Himachal Pradesh) recently. The purpose of the Conference was to discuss, debate, and deliberate on modes and mechanisms to develop tourism sector in India. The meeting came up with '**Dharmshala Declaration**'. The Dharmshala Declaration aims to recognise India's role in contributing towards global tourism as well as focus on recovery by also promoting domestic tourism, which has been overlooked for long. India is a vast country with huge geographical, climatic, landscape, wildlife, heritage and cultural diversity. As such India has huge tourism potential. Yet this potential has remained under-utilized. In this context, the Ministry of Tourism has undertaken several initiatives to boost tourism in India.

### What is the current status of Tourism Sector in India?

Before the onset of the pandemic, the contribution of tourism sector to India's GDP had reached ~US\$ 250 billion in 2018. However, the contribution had fallen to US\$ 122 billion in 2020 due to pandemic. The share of Tourism to GDP has hovered around ~5-6%. With post-pandemic recovery, the tourism industry is expected to reach US\$ 512 billion by 2028.



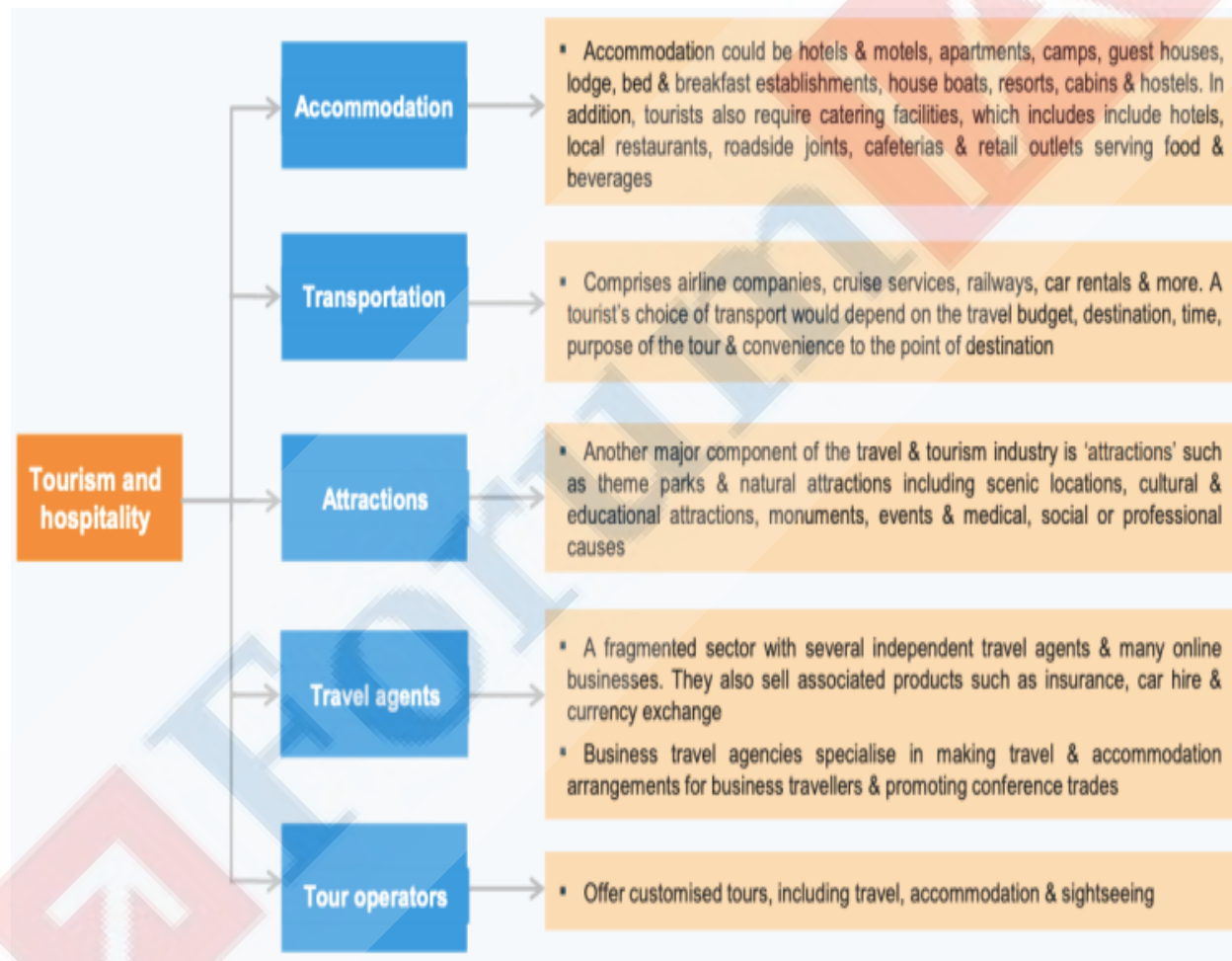
Source: IBEF

Tourism Sector is the third-largest foreign exchange earner for the country in 2019. The foreign exchange earnings between 2016 and 2019 increased at a CAGR of 7%, but dipped in 2020 due to the COVID-19 pandemic. By 2028, Indian tourism and hospitality is expected to earn US\$

50.9 billion as visitor exports compared with US\$ 28.9 billion in 2018. Foreign Tourist arrivals had reached 10.9 million in 2019, before falling to 2.7 million in 2020 due to the pandemic.

India was ranked 34th in the Travel & Tourism Competitiveness Report 2019 published by the World Economic Forum. The Economic Impact 2019 Report published by the World Tourism and Travel Council (WTTC) has noted that between 2014-19, India witnessed the strongest growth in the number of jobs created (6.36 million), followed by China (5.47 million) and the Philippines (2.53 million).

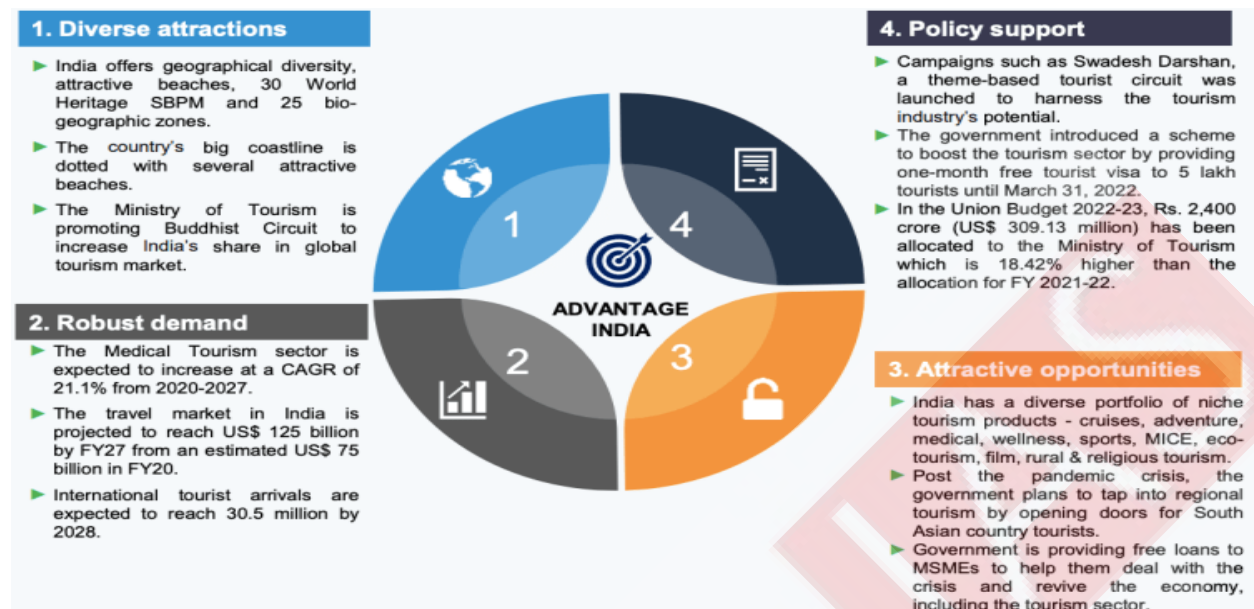
In 2020, the Indian tourism sector accounted for 39 million jobs, which was 8% of the total employment in the country. By 2029, it is expected to account for about 53 million jobs. Tourism sector provides diverse opportunities for jobs like in hospitality/hotels/accommodation, transportation, tour guides, travel operations etc.



Source: IBEF. Components of Tourism Sector

### What are the driving factors of Tourism Sector in India?

The Tourism Sector in India is driven by various factors like diverse attractions, robust demand (like for medical tourism) and attractive opportunities.



Source: IBEF

In addition to the above, rapidly expanding India economy is providing huge opportunities for business tourism. According to the World Bank, India has overtaken Japan to become the world's third largest economy in terms of purchasing power parity (PPP). India holds a 6.4% share of global GDP on a PPP basis. Because of the economic growth, foreign players are interested to establish their operational facilities in the country. Domestic investors have also made huge investments to expand their business. Tourism industry gets benefited from the growing economic environment and investment made by both domestic and foreign investors. The country's growing economic environment acts as one of the major influential driver for tourism growth and development of the country.

### What are the challenges faced by the Tourism Sector in India?

**Awareness:** Despite promotional campaigns by the Government, the awareness regarding India as a tourist destination remains low. Even among domestic tourists, the choice is limited to few popular destinations which remain overcrowded, while many other potential places receive low footfalls of tourists. The information portals and centres are poorly managed. There is lack of promotional campaigns in foreign countries. The absence of online branding campaigns fail to provide information to attract tourists.

**Infrastructure and Safety:** Many popular destinations lack air connectivity, especially in the hilly regions. Moreover, there is lack of proper hygienic facilities in many places. Lack of cleanliness is off-putting to many tourists. In addition there are safety concerns especially among foreign visitors because of few cases of harassment. Poor experience of some tourists leads to bad word-of-mouth information impacting perception of potential tourists.

**Communication:** Many tourists face communication problem while in India. This makes them dependent on tourist guides or travel operators to curate their travel in India.

**Lack of Skilled Manpower:** There is dearth of skilled manpower especially multi-lingual tour guides or hotel staff. The sector is dominated by small unorganized players who can't spend on



skilling their employees or sensitising them to cultural values of the foreign tourists. This impacts tourist experience.

**Visa Process:** The Government had started the e-visa process (online) which has led to increase in foreign tourists. However, the visa-on-arrival facility is limited to very few countries, limiting foreign tourists.

**Currency Fluctuations:** Another issue is the fluctuations in the currency exchange rates. The inability to know the value of a currency means that long-range tourism prices are especially hard to predict and the fallout from this monetary instability is already impacting multiple tourism support systems.

Although the coronavirus crisis has short-term destructive effects on the tourism industry, it is challenging the practices of the tourism industry and is drawing attention to a succession of issues like poor risk management in the travel industry, viral globalization, and travel of diseases with tourists to cross borders.

#### **What steps have been taken for the development of Tourism Sector in India?**

**Infrastructure:** The Government has been increasing investments in strengthening of the country's road and rail networks and promoting port development is a significant driver for the growth of the Tourism sector. The **Adarsh Station Scheme** is helping modernize railway stations, while the Regional Connectivity Scheme – **UDAN** (*Ude Desh ka Aam Nagrik*), is helping make air travel more economical and widespread to hitherto unserved routes. The **Swadesh Darshan** and **PRASHAD** schemes aim to stimulate growth in niche tourism segments such as religious, heritage, wellness, medical, adventure, MICE, wildlife etc. Under the Swadesh Darshan Scheme, the Government has launched several theme based circuits like Buddhist circuit which covers destinations associated with the life of Lord Buddha.

**Promotional Campaign:** Promotional activities such as the **Incredible India 2.0** campaign focuses on niche tourism products including yoga, wellness, luxury, cuisine wildlife among others. "**Find the Incredible You**" Campaign focuses on the promotion of niche tourism products of the Country on digital and social media.

**Information Helpline:** The government has introduced the concept of **e-tourist and e-medical visas** which has helped increase inbound tourists to the country. Additional initiatives such as **Atithi Devo Bhava**, a 24×7 multi-lingual Tourist Helpline, among others have helped improve the **safety and security** of tourists. On a pilot basis, an '**Incredible India Helpline**' has been set up to guide the tourists.

**Safety:** The Ministry of Tourism has adopted a code of conduct for safe tourism, which contains a set of guidelines to encourage tourism activities to be undertaken with respect to basic rights like dignity, and safety of both tourists and local residents, in particular women and children.

**Investment:** The government allows 100% Foreign Direct Investment in the Travel and Tourism sector through the automatic route to increase investments across the sector. More recently, the GST rate cut on hotel room tariffs across the board has been a positive move for the industry and is expected to boost the sector's competitiveness globally.

**Cleanliness and Hygiene:** Major cleanliness campaign has been launched under the **Swachh Bharat** movement for **protecting and preserving the sanctity of monuments of national**

**heritage.** The Ministry of Tourism has also launched awareness campaign to ensure cleanliness of surroundings and help create a **Swachh Bharat, Swachh Smarak**.

**Assistance to States:** Financial assistance to states, including places of religious importance, for various tourism projects in consultation with them subject to availability of funds, inter-se priority, liquidation of pending utilisation certificates and adherence to the scheme guidelines.

**Digital Database:** In September 2021, the Government launched **NIDHI 2.0** (National Integrated Database of Hospitality Industry), a scheme which will maintain a **hospitality database** comprising accommodation units, travel agents, tour operators and others. NIDHI 2.0 will **facilitate digitalisation of the tourism sector** by encouraging hotels to register themselves on the platform.

**Skilling:** The Ministry of Tourism has introduced the **Incredible India Tourist Facilitator (IITF)** and **Incredible India Tourist Guide (IITG) Certification Programme** to create an online learning platform of well-trained tourist facilitators and guides across the country.

The Ministry of Tourism had launched an initiative called SAATHI (System for Assessment, Awareness & Training for Hospitality Industry) by partnering with the Quality Council of India (QCI) in October 2020. The initiative was focused on effective implementation of guidelines/SOPs issued with reference to COVID-19 for safe operations of hotels, restaurants, and other units.

#### **What more steps can be taken going ahead?**

**First,** The government should continue to promote India's diversity and rich heritage to re-establish its position as a tourist paradise. The promotional campaigns should target both domestic and foreign tourists. Similarly, the extent of theme-based tourist circuits can be expanded.

**Second,** the **skilling initiatives should be scaled-up**. Tourism sector has a potential to provide lot of livelihood opportunities in smaller cities/towns (below tier-2 level). It can help address the issue of jobless growth.

**Third,** there is need to balance the promotion of tourism with safeguarding the physical, social, and cultural environment in the destination areas. The government should also **promote green and sustainable tourism** to tackle issues relating to water crisis, pollution, waste management, etc.

**Fourth,** the Government should further reform the tourist visa norms and processes to facilitate tourism. The Government should also explore the possibility of expanding the visa-on-arrival facility.

**Fifth,** the focus should also be on supporting and promoting the emerging segments of tourism.



Source: IBEF. *Emerging Segments of Tourism*.

**Read More:** [\[Kurukshetra June Summary\] Rural Tourism: India an Incredible Tourism Destination – Explained, pointwise](#)

### Conclusion

The tourism sector in India is gradually recovering from the impact of the pandemic. Even during the pandemic, the sector had shown resilience by adapting its operations to ensure safe practices and social distancing. The sector has huge untapped potential in India. The multiplier effect associated with the tourism sector can help raise the income levels and ensure inclusive growth. A burgeoning tourism industry can prove to be vital in ensuring India's transition to a high income economy.

**Syllabus:** GS III, Indian Economy and issues related to growth.

**Source:** [The Hindu](#), [Hindustan Times](#), [IBEF](#)

**[Yojana September Summary] Ushering Investments (in J&K) – Explained, pointwise**

### Introduction

The Government had changed the status of Jammu and Kashmir 3 years ago. The region was reorganised into Union Territory of Jammu and Kashmir and Union Territory of Ladakh. The long-term strategy of the Government is transform the region and enable its economy to reach its full potential. The Government had formulated the Jammu and Kashmir Industrial Policy 2021-30 for ushering investments in J&K and promote industrial growth in the region.



**Fiscal Status Prior to Reorganization**

In 2018-19, the **expenditure of the State Government was 57% of Gross State Domestic Product** (28% for Himachal Pradesh). This was largely financed by the Union Government, indicating dismal state of affairs. **40% of State's revenue receipts came from the Union Government**. ~25% of the receipts were consumed in the salaries and pensions.

J&K's per capita net State Domestic Product (INR 94,000 per person per year) was almost half of that of Himachal Pradesh (INR 176,000 per person per year). Its **road density was less than 20% of Himachal Pradesh** (with similar terrain), and State had not been able to leverage its huge hydropower potential.

This was an unsustainable scenario. To transform the region it was necessary to attract private enterprise and investments to create livelihood opportunities and improve income levels. This necessitated an appropriate economic strategy for transforming the region.

**Framing Economic Policies**

Jammu and Kashmir has a difficult terrain. The region suffers cost disadvantages due to high transportation costs. As a result the goods produced in the regions have higher prices. Thus, the appropriate strategy for the region is to promote production of goods and services of niche area segments where customers are willing to pay a premium. This can compensate for disadvantages of higher transportation costs. These products/services can be related to the strengths of the region due to its **natural endowments**. It can also include products/services that have evolved with the **local knowledge and traditional skills**.

Both the types of goods/services are abundantly available in the region. These include: **(a)** Handicrafts with exquisite quality that are internationally renowned; **(b)** High quality agro-based products like apples, walnuts, saffron etc.; **(c)** Abundant Hydropower sources; **(d)** Rare minerals.

New investor-friendly industrial policies, designed and adopted in conjugation with the Union Government, take cognisance these natural strength to usher in investments in J&K.

**Attracting investments**

The **J&K Industrial Policy 2021-30** is the flagship policy with respect to investment, industrial and economic growth in J&K. Its promise of a higher incentive for investment in remote areas will help balanced economic development in J&K to leverage its land abundance in areas hitherto neglected.

The choice of industries focused upon under the policy are **heavily labour-intensive** in nature and where the products/services are high in value. These include both the **J&K's traditional strengths** e.g., tourism, handicrafts and horticulture as well as **new sectors** like IT, ITES, healthcare, etc. The Industrial Policy also focuses on synergies with existing strengths like post-harvest management of Horticulture as well as Film Tourism as an add-on to Tourism.

The Industrial Policy has a special **focus on extending financial support**. Past policies too tried to usher in investments in J&K. through generous subsidies and tax exemptions. However, these investments were not linked to J&K's natural strengths. Hence, they were not sustainable without financial support by the Government. The new Policy focuses on natural strengths to avoid repetition of this scenario. The Policy has an explicit **service sector positive list eligible for financial benefits** like tourism, film tourism, healthcare, education and skill development etc. These services contribute ~50% to regions economy.

**Budgetary provisions** have also supplemented the core philosophy of the Industrial Policy. The aim of the budgetary provisions has been to **amplify and strengthen the intent of the Policy**. Budgetary provisioning is expected to yield disproportionately high returns. This year's budget is specifically suited to usher in investments and support economic development in J&K.

#### Tourism

J&K has beautiful picturesque landscape, and region has been long associated with tourism. However, the **region has never figured among top 10 States/UTs in terms of tourist arrivals**. The current Budget has provided resources for the **development of 75 new destinations**. It seeks to expand region's tourism economy. **Smart convergence** is being undertaken with other initiatives like: **(a)** Revival of **traditional fairs and Sufi festivals**, many in remote, lesser-known destinations; **(b)** J&K Tourist Village Network Scheme to incentivise local youth to promote rural tourism; **(c)** Targeted public investments in road and urban infrastructure to make the locations more accessible and increasing the sustainable carrying capacity of these destinations.

#### Horticulture

The budget's accent on horticulture addresses both the productivity and the income issue of the horticulture sector. The thrust of the budget initiatives has been on: **(a)** Cold storage capacity expansion; **(b)** Increase in productivity of apple through **high-intensity orcharding**; **(c)** Support to **high value and low volume agro-products** like aromatic and cash crops and vegetables. If productivity is increased to international standards, it can lead to the **quadrupling of the size of this sector**. Enhancing value addition to fruits (currently very low) can significantly increase employment and economic development in J&K.

#### Foreign Trade and Investment

A unique strand of the strategy has been to seek **leveraging of India's recent Comprehensive Economic Partnership Agreement (CEPA) with the UAE** to seek markets, investments and tourists. Given the proximity and familiarity of UAE with J&K, the Gulf Investment strategy seeks to build on these links.

#### Impact on J&K Bound Investment

There has been a heightened interest in the region by investors due to: **(a)** End of constitutional uncertainty in the region; **(b)** Improving law and order situation; **(c)** Thrust on infrastructure; **(d)** Focused strategy for ushering investments and economic development in J&K.

The UT Government has reported that it has received **investment proposals worth around INR 51,000 crores**. The **employment potential** of these investments is **~2.37 lakhs**. The total spending of the Industrial Policy is ~ INR 28,400 crores spread over 10 years. This has a huge potential of ushering investments in J&K. Overseas investors have also shown interest especially from the UAE.

## GROWTH VALLEY

### SUMMARY OF LAND ALLOTMENT APPLICATION CASES OF INVESTMENT INTO J&K (UP TO APRIL 11, 2022)

Division	No. of applications proposed	Investment in (in ₹ crore)	Quantum land (kanals).	Employment
Jammu	1,105	27,968	19,125	1,09,136
Kashmir	3,339	24,187	19,897	1,32,580
<b>Total</b>	<b>4,444</b>	<b>52,155</b>	<b>39,022</b>	<b>2,41,716</b>

### APPROVED INVESTMENT

Division	No of units	Total investment (in ₹ cr)	Employment potential	Land allotted
Jammu	1,595	21,553	71,603	12,353
Kashmir	2,706	14,691	65,376	5,617
<b>Total</b>	<b>4,301</b>	<b>36,244</b>	<b>1,36,979</b>	<b>17,970</b>

Source: The Times of India

### Appropriate Investor Strategy

The investors always look for profitability. Profitability of investments in J&K will depend on close linkage of the business plan with natural, traditional and human capital endowments of the region. Such investments do not require fiscal incentives from the Government for long. J&K has witnessed huge rush of tourists this season. This demonstrates the profitability of the **tourism sector**. **Start-ups in horticulture and post-harvest value addition** can be another profitable area. Investments in both areas leverage the natural endowments of the UT amplified with local knowledge and tradition.



Other upcoming promising areas are **IT and ITES**, which can take advantage of the region's considerable local talent pool. Services sector especially **Education, Health and Holistic Wellness sectors** offer lot of promise as well.

### **Towards a Bright Future**

The aim of the Government's economic strategy has been to effect transformational economic development in J&K. The new J&K will be host to world-class tourist destinations. Its horticulture sector will develop to produce best-in-quality fruit products. It will enhance the exports of handicrafts that are a product of millennia of experience and culture. It will eventually generate ~33% of India's hydropower. It will be home to many IT, ITES, Pharma and textiles based industries, with a robust education, health and wellness ecosystem.

The strategy of the government is so designed to make the above possible. Private investors would be rewarded if they align their investment strategy accordingly and make their investment in the UT profitable.

**Syllabus:** GS III, Indian Economy and issues related to growth; Inclusive growth and issues arising from it, Challenges to Internal Security.

**Source:** Yojana September 2022