Slums in Floodplains

For Prelims: UN-HABITAT, Smart Cities Mission, Atal Mission for Rejuvenation and Urban Transformation, National Sample Survey Office, Ganga.

For Mains: Urbanisation and associated problems, Social justice and vulnerable sections, rights of slum dwellers.

Source: TH

Why in News?

A global study, published in ***Nature Cities,*** has revealed that **India has the world's highest number of slum clusters** located in flood-prone areas.

What are the Global Trends in Flood Risk and Slum Settlements?

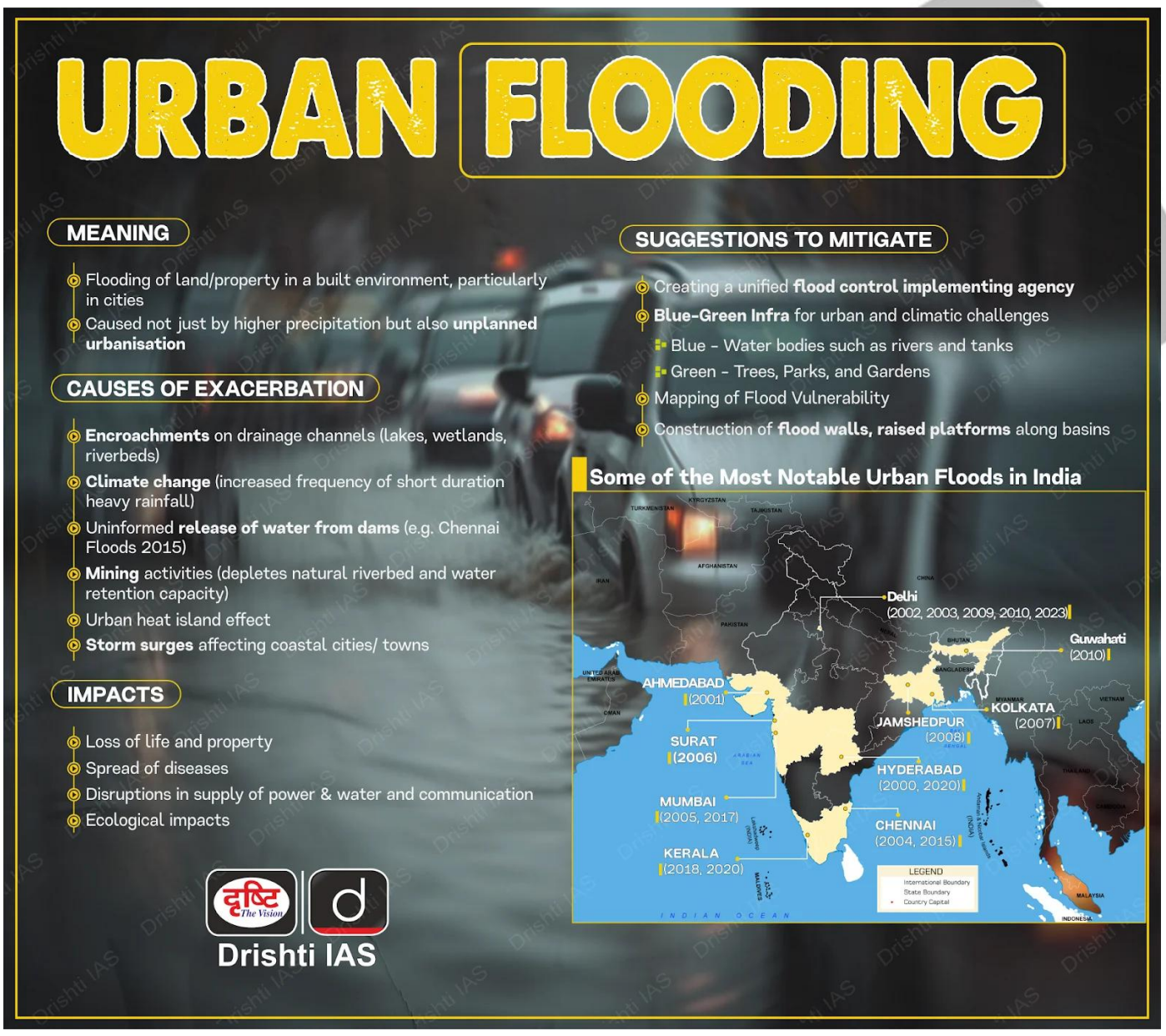
- **Flood-exposed Slum Dwellers: India** tops the global list, with **over 158 million slum dwellers** living in flood-prone areas, particularly in the **Ganga River delta,** which is naturally flood-prone.
    - In India, **40% of slum dwellers live in urban and suburban areas**, where flood risk is high due to overcrowded conditions and poorly managed infrastructure.
    - India, followed by Indonesia, Bangladesh, and Pakistan, has the largest numbers of vulnerable slum populations.
    - Globally, slum-dwellers are 32% more likely to live in floodplains compared to other areas. These zones are **often the only affordable housing option due to low land value.**
        - In cities like Mumbai and Jakarta (Indonesia), high flood risk correlates with high slum density.
- **Disproportionate Vulnerability in the Global South:** 33% of informal settlements in low- and middle-income countries lie in areas already exposed to flooding.
    - Major hotspots outside South Asia include Rwanda, northern Morocco, and coastal Rio de Janeiro.
- **Floods Amplify Socioeconomic Inequities:** Slum dwellers face greater flood impacts like **job loss, displacement, and poor access to healthcare and education due to weak infrastructure** and lack of drainage or preparedness.
    - Socioeconomic factors such as low education and limited access to resources like flood insurance increase their vulnerability.

Factors Responsible for Flooding in India

- **Riverine Floods:** Occur when rivers overflow their banks, usually due to heavy rainfall, snowmelt, or dam failure.
    - Among the river basins, most of the observed flash floods occurred in the **Brahmaputra River basin followed by Ganga and Krishna River basins.** Himalayan regions face higher risk due to **steep slopes.**
- **Urban Expansion:** Cities like Bengaluru and Mumbai are expanding into floodplains, worsening

flood risks. **India ranked 3rd globally (1985–2015) in urban growth into flood-prone areas.**

- **Flash Floods Rising:** **Flash flood** incidents rose from 132 (2020) to 184 (2022), driven by extreme rain and saturated soil. Major incidents seen in **Himachal Pradesh (July 2025)**, **Kerala's Wayanad** (July 2024), Ladakh (June 2024), and Sikkim (October 2023) highlight their growing severity.
    - 75% of **flash floods** are due to a mix of extreme rain and saturated ground, **not rainfall alone.**
- **Climate Change Impact:** **Extreme rainfall events** have doubled (1981–2020); monsoon rains up by 56%, intensifying flood threats.
- **Poor Drainage:** Cities like Delhi, Mumbai, Hyderabad, and Bengaluru **suffer from outdated or blocked drains, causing waterlogging during heavy rain.**
- **Weak Oversight:** Encroachments and plastic waste block stormwater drains exacerbating **urban flooding;** e.g., **Chennai 2015 floods worsened by clogged canals.**
- **Lack of Local Strategies:** Absence of **region-specific flood risk assessments** hampers effective forecasting, land-use planning, and infrastructure upgrades.



What is the Status of Slums in India?

- **Defining Slums:** The **Pranab Sen Committee (2010)** defined slums as a **compact settlement of at least 20 households**, characterized by poorly built tenements, often of temporary nature, crowded together with inadequate sanitation and drinking water facilities, and typically in unhygienic conditions.
    - **UN-HABITAT** defines slums as **settlements lacking one or more of these conditions**: durable housing, sufficient living area, access to clean water, access to proper sanitation and secure tenure.
- **Slums in India:** As per **Census 2011**, about **17% of India's urban population lived in 1.39 crore slum households.**
    - The **National Sample Survey Office (NSSO),** 2012 survey estimated 33,510 slums nationwide.
    - Major states like **Maharashtra, Andhra Pradesh, Uttar Pradesh and West Bengal** had the highest slum populations.
    - Cities like **Mumbai and Kolkata** have high slum populations, highlighting the strong link between rapid urban growth and informal settlements.
- **Regulation: 'Land' and 'Colonisation' are State subjects**, so housing and slum rehabilitation are led by State/UT governments.
    - The **Slum Areas (Improvement and Clearance) Act, 1956** aims to improve and clear slum areas in select Union Territories and protect tenants in these areas from eviction.
- **Schemes Related to Slums:**
    - **Pradhan Mantri Awas Yojana – Urban (PMAY-U):** The **PMAY** Aims to provide pucca houses with basic amenities to eligible urban beneficiaries, including slum dwellers.
        - As of December 2024, **118.64 lakh** houses have been sanctioned, with 29 lakh for slum dwellers.
    - **Urban Infrastructure Development:** Initiatives like **AMRUT (Atal Mission for Rejuvenation and Urban Transformation) and Smart Cities Mission** focus on improving infrastructure in urban poor areas, including drainage systems, water supply, and sanitation.
    - **Swachh Bharat Mission - Urban (SBM-U):** The **SBM-U 2.0** aims to make the city completely free of garbage.

What Measures can be Adopted for Sustainable Slum and Flood Management?

- **Region-Specific Adaptation**: Develop flood strategies based on **topography** and **soil conditions**, improving **early warning systems** and disaster preparedness.
    - The **National Disaster Management Plan (NDMP)** emphasizes region-specific disaster risk reduction strategies.
- **Restrict Urban Expansion in Floodplains**: Enforce zoning laws under the **Smart Cities Mission** to restrict floodplain development and promote flood-resilient infrastructure.
    - Integrate **Sustainable Urban Drainage Systems (SUDS**) such as permeable pavements, rain gardens, and green spaces to manage stormwater effectively.
- **Upgrading Informal Settlements**: Under PMAY improve **flood resilience** in slums through **elevated housing**, **better drainage**, and **infrastructure upgrades**.
- **Data-Driven Risk Assessment**: Use satellite imagery data from the **National Remote Sensing Centre (NRSC)** and the **India Meteorological Department (IMD),** along with Integrated Flood Warning Systems like **IFLOWS-Mumbai and CFLOWS-Chennai**, to monitor urban growth, map flood risks, identify emerging hotspots, and strengthen flood forecasting.
- **Adopt the Sponge City Concept**: The **Sponge City model** uses natural and engineered systems to absorb and manage rainwater, reducing floods. Shanghai has implemented it with green roofs and permeable surfaces.
    - Mumbai is now adopting this approach to boost flood resilience and recharge groundwater.
- **Climate Change Adaptation & Restoration of Water Bodies** Incorporate climate resilience into urban planning and restore urban lakes and wetlands for improved flood management.
    - Bengaluru's Jakkur Lake restoration shows how eco-restoration can help manage floods effectively.

Conclusion

As the **2030 Agenda for Sustainable Development** deadline approaches, there is an urgent need to address flood vulnerability in slum settlements. Efforts must be accelerated to achieve **SDG Goal 11 (Sustainable Cities and Communities), SDG Goal 6 (Clean Water and Sanitation)**, and **SDG Goal 1 (No Poverty),** especially for communities already living in flood-exposed areas.

Drishti Mains Question:

"The growth of informal settlements in flood-prone zones reflects the failure of urban governance in India." Discuss.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims:

Q. La Nina is suspected to have caused recent floods in Australia. How is La Nina different from El Nino? (2011)

1. La Nina is characterised by an usually cold ocean temperature in equatorial Indian Ocean whereas El Nino is characterised by unusually warm ocean temperature in the equatorial Pacific Ocean.
2. El Nino has adverse effect on south-west monsoon of India but La Nina has no effect on monsoon climate.

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

Ans: (d)

Mains:

Q. Does urbanization lead to more segregation and/or marginalization of the poor in Indian metropolises? **(2023)**

Q. Account for the huge flooding of million cities in India including the smart ones like Hyderabad and Pune. Suggest lasting remedial measures**. (2020)**

Q. Discuss the various social problems which originated out of the speedy process of urbanization in India. **(2013)**

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5 Years of NEP 2020

For Prelims: National Education Policy (NEP 2020), PM SHRI, Right to Education Act, 2009, PARAKH, NISHTHA, PM e-VIDYA, DIKSHA, Vidya Samiksha Kendra, SDG, Centrally Sponsored Scheme, Multidisciplinary Education and Research Universities (MERUs)

For Mains: Key Achievements & Challenges Related to NEP 2020, Government Policies Related to Education, Measures to Strengthen NEP.

Source: PIB

Why in News?

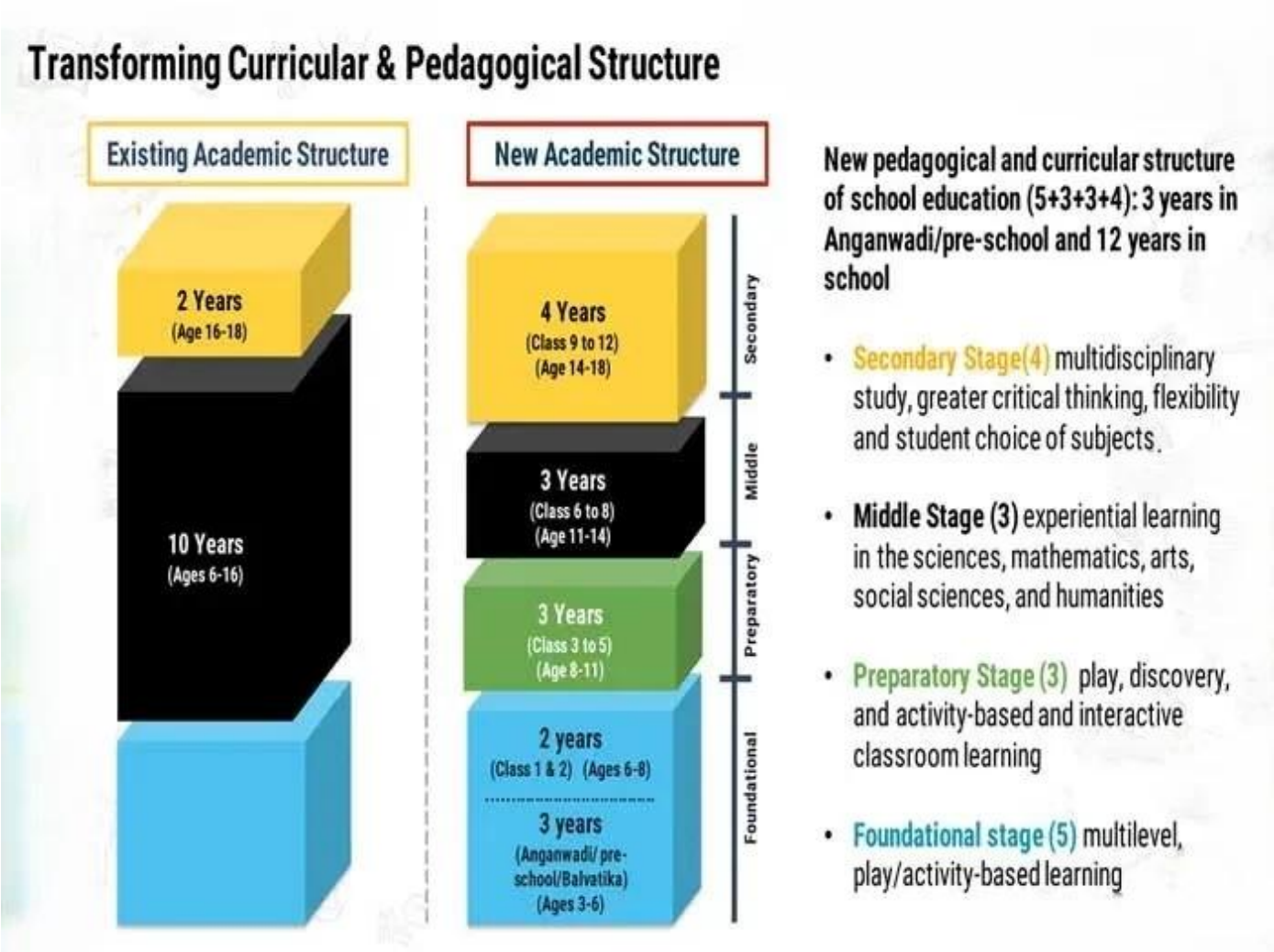
The **Union Education Minister** inaugurated the **Akhil Bharatiya Shiksha Samagam (ABSS) 2025** to mark the **5th anniversary of the National Education Policy (NEP) 2020**.

What are the Key Achievements of NEP 2020?

- **Mother Tongue-Based Education & Curriculum Reform**: The **5+3+3+4 structure** and NCF-SE (National Curriculum Framework for School Education) promote experiential, competency-based learning with mother tongue as the medium of instruction in early years.
- **Inclusivity:** Over **1.15 lakh students** from **SEDG (Socially and Economically Disadvantaged Groups)** and **7.58 lakh girls** have enrolled in **residential schools.**
    - The **PRASHAST App** supports disability screening.
- **Foundational Literacy & Numeracy (FLN)**: **NIPUN Bharat** and **Vidya Pravesh** have reached over **4.2 crore students** across **8.9 lakh schools.**
- **Teacher Training: 4 lakh+** teachers trained under **NISHTHA** via digital platforms like **DIKSHA, and PM e-Vidya.**
- **Multidisciplinary & Holistic Higher Education**: NEP 2020 promotes **Multidisciplinary Education and Research Universities (MERUs)** to provide world-class education.
    - Introduction of **Academic Bank of Credits (ABC)** enables **flexible learning** and **credit transfer** and emphasis on **Multiple Entry and Exit** systems.
    - **72%** of schools have internet access. Initiatives like **Vidyanjali, DIKSHA, PM e-Vidya, e-Jaadui Pitara (AI-powered play-based learning)**, and **AI Bots (e.g., Katha Sakhi, Teacher Tara)** are **enhancing education delivery.**
- **Common Testing: CUET,** introduced in 2022, has become a **key gateway for undergraduate admissions.**

What is the National Education Policy (NEP) 2020?

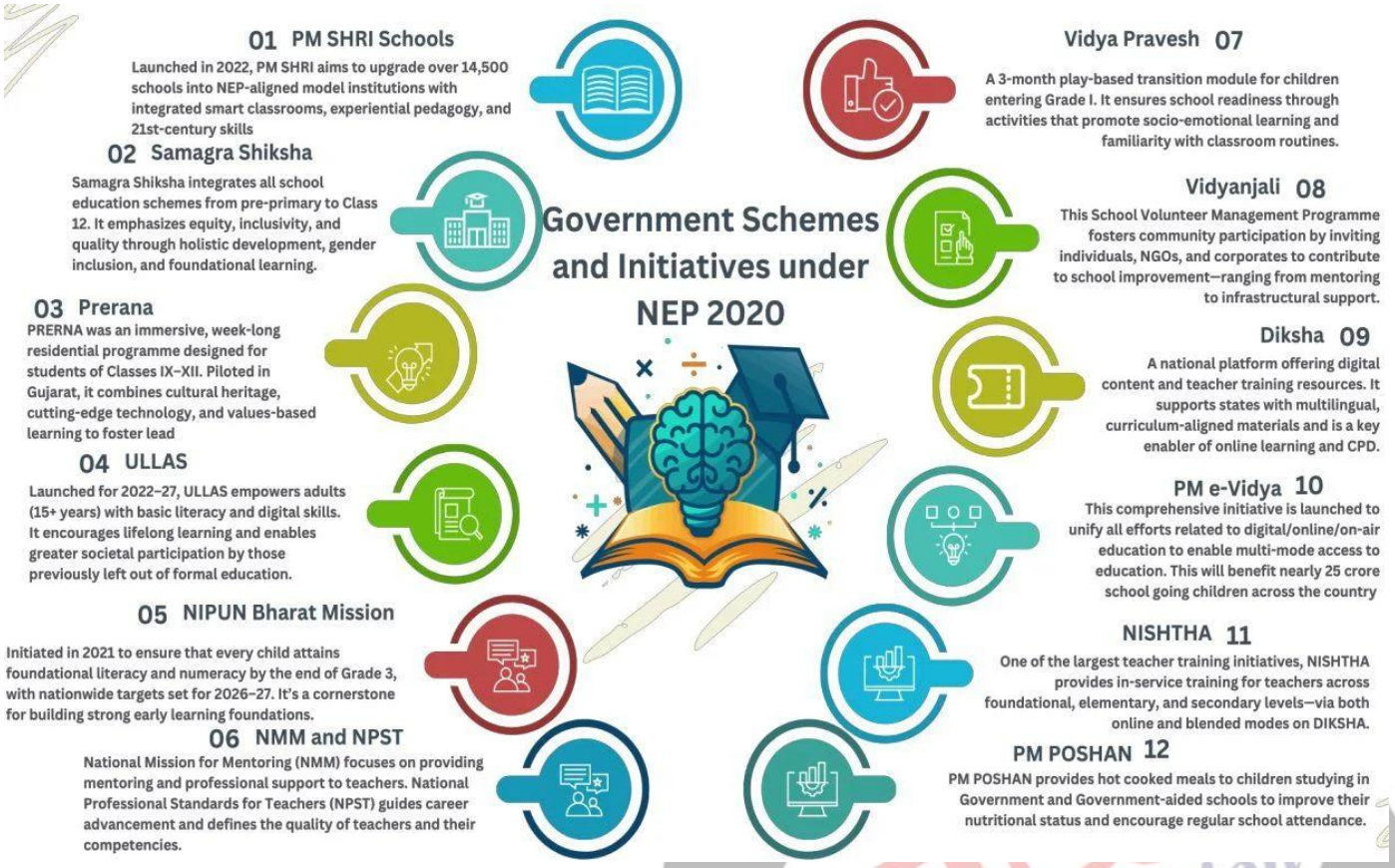
- **About:** The **National Education Policy 2020** aims to address issues of **quality, equity, access**, and **affordability** across **all levels of education**. It replaced the **34-year-old NEP of 1986.**
    - It is based on the recommendations of the **Dr. K. Kasturirangan Committee**.



Targets of NEP 2020

Target Area	Goal
Early Childhood to Secondary Education	Universalization by **2030**
Foundational Literacy & Numeracy	Achieve basic reading and numeracy skills by **2025** (via NIPUN Bharat)
Gross Enrolment Ratio (GER)	100% in school education by **2030**; 50% in higher education by **2035**
Out-of-School Children	Reintegrate **2 crore** children via open schooling
Teacher Training	Prepare all teachers for **assessment reforms by 2023**
Inclusive & Equitable Education	Full implementation by **2030**

- **Key Initiatives:**
  - **PM SHRI Schools**
  - **NIPUN Bharat**
  - **PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development)**
  - **NISHTHA (National Initiative for School Heads' and Teachers' Holistic Advancement)**



What are the Key Challenges Related to the NEP 2020?

- **Lack of Consensus: NEP implementation varies across states**, with opposition from states like Tamil Nadu and West Bengal over provisions like the **three-language formula, mother tongue instruction,** and **common entrance tests.**
- **Infrastructure & Financial Constraints:** There are shortages of **qualified teachers, poor digital infrastructure**, particularly in **rural areas**, and **inadequate Anganwadi preparedness** for quality **Balvatika (pre-primary)** education.
    - Public spending on education remains **below NEP's 6% of GDP target**, with **budgetary allocations falling short** of supporting the policy's **ambitious reforms**.
- **Regulatory & Linguistic Barriers:** The establishment of the **Higher Education Commission of India (HECI),** intended as a successor to the **UGC (University Grants Commission)**, and the rollout of the **National Curriculum Framework for Teacher Education** have both experienced delays.
    - Additionally, **translating educational content** into diverse Indian languages and the **shortage of regionally fluent teachers** pose major implementation challenges.
- **Resistance & Weak Monitoring: Institutional resistance to pedagogical reforms** and apprehensions about **over-centralisation (e.g., CUET)** hamper adoption.
    - Also, the **lack of robust data systems** and **uneven implementation** hinder effective **monitoring and evaluation** of NEP 2020 outcomes.

What Steps are Needed to Strengthen the Implementation of NEP 2020?

- **Enhance Research & Innovation:** Invest in research at the **technology-pedagogy** interface for **evidence-based, context-specific innovations**.
- **Digital Infrastructure Gap:** There is an urgent need to **upgrade school-level ICT infrastructure**, as only **57.2% schools have functional computers** and **53.9% have internet access (UDISE+ 2023–24).**
- **Teacher Training:** Enhance capacity-building for **tech integration**, promoting **creativity,**

critical thinking, and ethical reasoning.
- **Interdisciplinary Collaboration:** Foster cooperation among **educators, technologists, social scientists, and policymakers** to steer **future-ready learning ecosystems**.

Conclusion

NEP 2020 provides a **transformative vision** for a **21st-century education system**. Notable progress includes **Foundational Literacy & Numeracy (FLN)**, **digital access**, and **higher education reforms**. However, **federal disagreements**, **infrastructure gaps**, and **regulatory delays** remain key challenges. With **strategic investment**, **inter-governmental coordination**, and **innovation**, NEP's goals of a **flexible**, **inclusive**, and **future-ready education ecosystem** can be achieved.

Drishti Mains Question:

What are the key features of National Education Policy (NEP 2020). Critically analyze the impact of NEP 2020 on federalism.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Mains

Q. National Education Policy 2020 is in conformity with the Sustainable Development Goal-4 (2030). It intends to restructure and reorient the education system in India. Critically examine the statement. (2020)

Polavaram- Banakacherla Project Dispute

For Prelims: Krishna-Godavari water-sharing issues, Inter-State River Water Disputes, Sarkaria Commission,

For Mains: Inter State Relations, Inter-State River Water Disputes, issues related to Sharing of water Resources.

Source: IE

Why in News?

The Central Government has decided to constitute a **high-level committe**e to resolve the conflict between **Andhra Pradesh (AP) and Telangana** over the proposed **Polavaram–Banakacherla Link Project (PBLP)** and other **Krishna-Godavari water-sharing issues.**

What is Polavaram-Banakacherla Link Project?

Polavaram-Banakacherla Link Project:

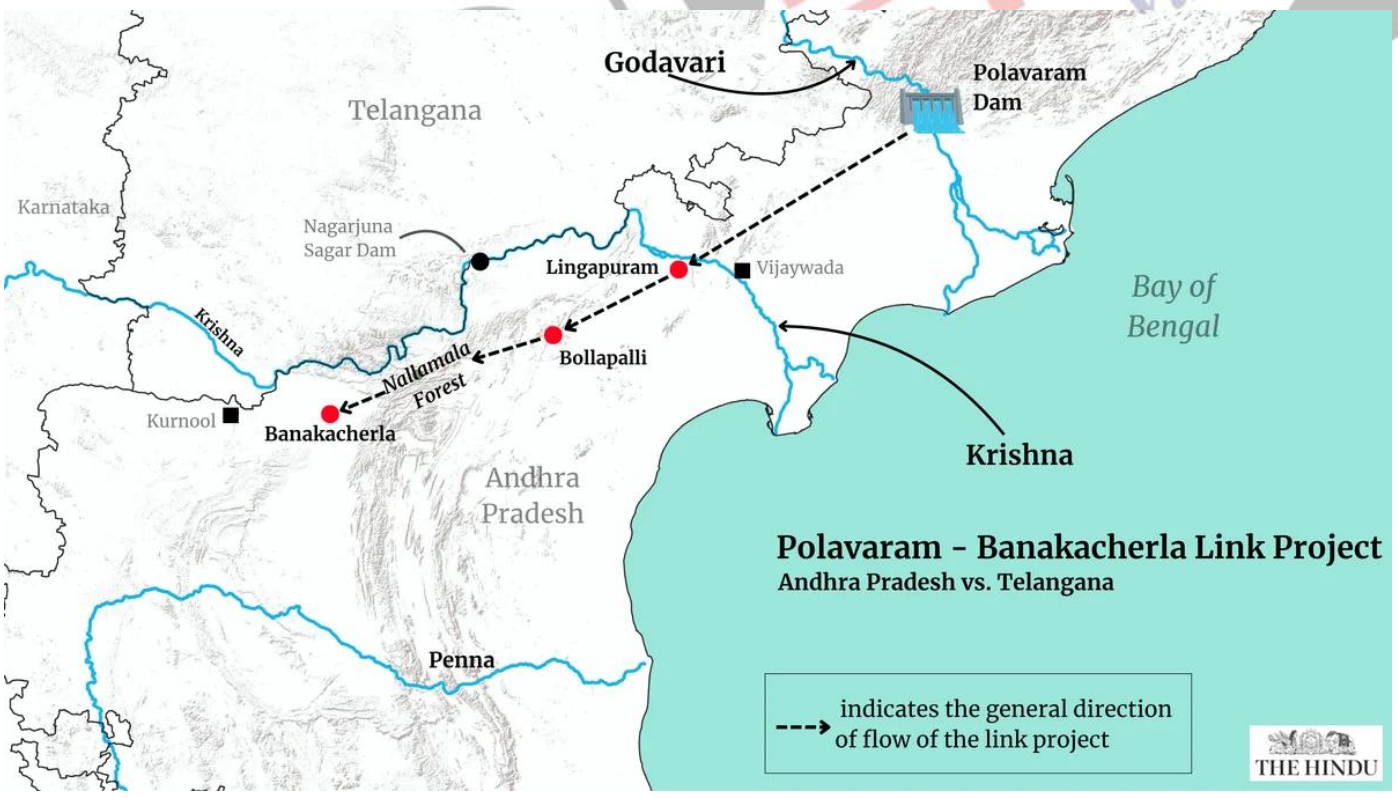
- **Objective:** The project aims to **address water scarcity** in the **drought-prone Rayalaseema region** by diverting **200 TMC** of surplus **Godavari floodwaters** to the **Krishna and Penna**

river basins.

- **Water Transfer Mechanism:** Water will be drawn from the **Polavaram Dam, p**ass through the **Prakasam Barrage**, lifted to the **Bollapalli reservoir,** and tunneled under the **Nallamala forest** to the **Banakacherla reservoir in Rayalaseema.**
- **Significance:** The PBLP will **enhance irrigation, ensure drinking water supply,** and **promote agricultural sustainability,** improving **water security and livelihoods in** southern Andhra Pradesh.

Key Challenges Related to the Project

- **Alleged Violation of 2014 Act:** Telangana claims Andhra Pradesh violated the **Andhra Pradesh Reorganisation Act, 2014,** which mandates **prior approval from the Apex Council, Krishna River Management Board (KRMB), and Central Water Commission (CWC)** for any **new inter-state river projects.**
- **Disputed Surplus Water Claims:** Telangana disputes Andhra Pradesh's claim of **200 TMC "surplus"** Godavari floodwaters, stating that the **allocation has not been adjudicated or approved by any competent authority or tribunal.**
- **Environmental Concerns & Pending Clearances**: While the Polavaram Project received an **Environmental Clearance in 2005,** the Expert Appraisal Committee (EAC) noted the **need for fresh environmental scrutiny and Central Water Commission (CWC) consultation** due to **submergence disputes with Odisha and Chhattisgarh.**
- **Unauthorised Inter-Basin Diversion:** Telangana objects to the **diversion of Godavari waters into the Krishna basin without mutual consent,** warning it could **reduce water availability for its projects.**
- **Breach of Cooperative Federalism:** Telangana views Andhra Pradesh's **unilateral actions as a breach of cooperative federalism**, bypassing essential consensus mechanisms for managing shared river resources.



What is the Mechanism for Inter-State River Water Disputes Resolution in India?

- **Constitutional Provisions:**
  - **Article 262** empowers **Parliament** to enact laws for the **adjudication of disputes** related to the **use, distribution, or control of inter-state river waters**.

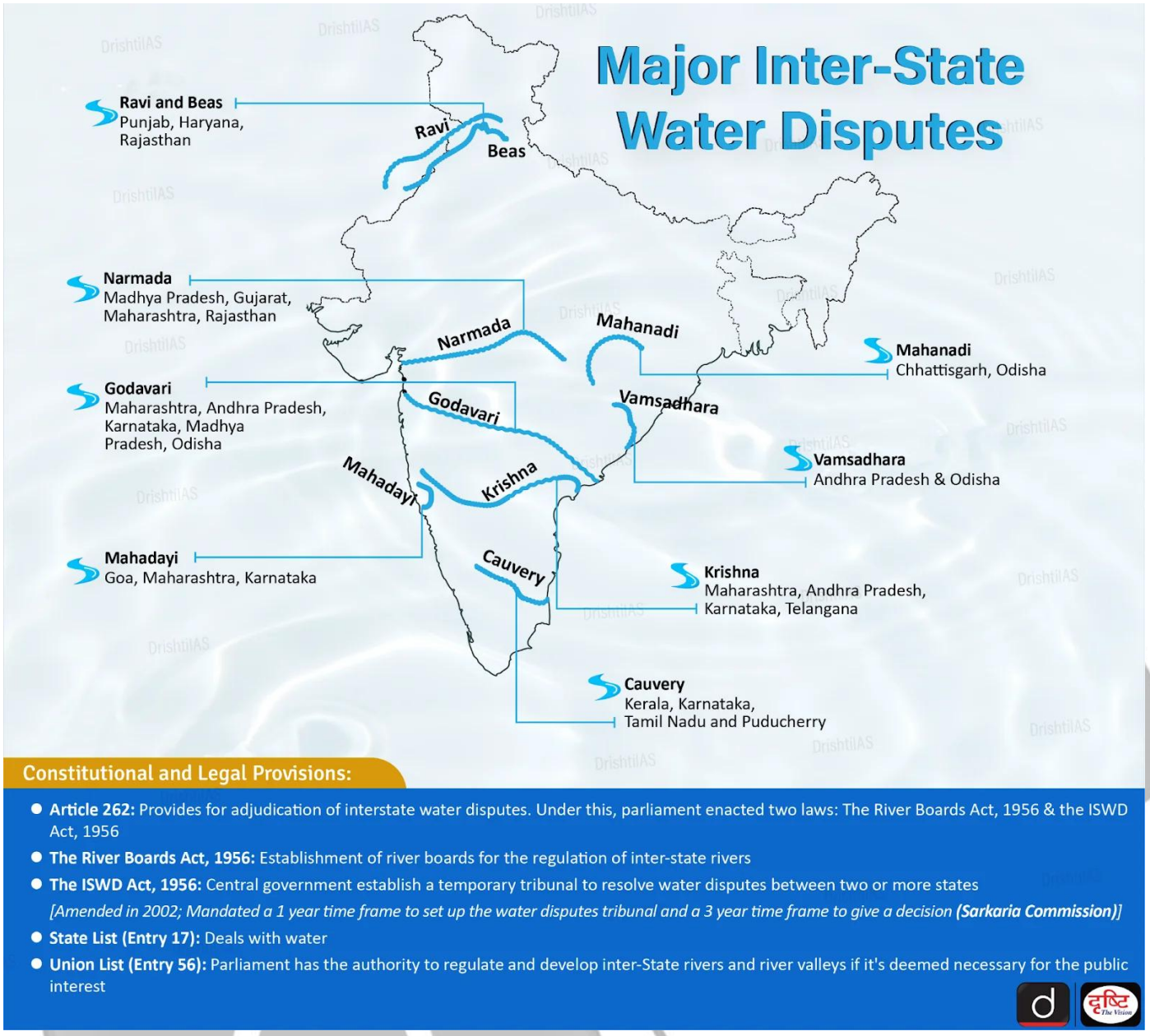
        - **Article 262(1):** Allows Parliament to provide a legal mechanism for such adjudication.
        - **Article 262(2):** Permits Parliament to **bar the jurisdiction of the Supreme Court and other courts** over these disputes.
    - **Entry 17, State List (List II):** Grants states control over water-related subjects like irrigation, canals, drainage, water supply, and hydropower.
    - **Entry 56, Union List (List I):** Empowers the Union Government to regulate and develop **inter-state rivers and river valleys** in the **public interest**, as declared by Parliament.
- **Statutory Provisions:**
    - **River Boards Act, 1956:** Empowers the Central Government to establish **River Boards,** in consultation with states, for the coordinated development and management of inter-state rivers and valleys. **However, no River Board has been constituted under this Act so far.**
    - **Inter-State Water Disputes Act, 1956:** Provides a **legal framework for resolving disputes** between states over inter-state river waters. The process includes:
        - **Initial negotiation** by the Centre with concerned states.
        - If unresolved, **a Water Disputes Tribunal is constituted**, whose **award is final and binding**.
        - The **tribunal's decision cannot be challenged in courts**, though procedural or functional lapses may be reviewed judicially.
        - The act was **amended in 2002**, to include the major recommendations of the **Sarkaria Commission.**
            - The amendments mandated a **one-year time frame** to set up the **water disputes tribunal** and also a **3-year time frame to give a decision.**
- **Role of Supreme Court:** Though **Article 262(2)** bars the **Supreme Court and other courts'** jurisdiction over inter-state water disputes, the **Supreme Court** has intervened in **related matters** (under **Article 136**)**,** such as interpreting or implementing **tribunal awards**.
    - **Eg: Mahadayi Water Dispute (2018)**, **SC settled water allocation between Karnataka, Goa, and Maharashtra**, and directed implementation of the tribunal award.

What are the Key Issues Related to Inter-State Water Disputes?

- **Delayed Tribunal Awards:** Tribunals often take **decades to resolve disputes** (e.g., Cauvery, Krishna). Also **absence of time-bound mechanisms for adjudication** and implementation hampers early resolution. **Eg:** Cauvery Tribunal (1990–2007): 17-year delay in final verdict.
- **Lack of Credible and Real-Time Data:** Disputes often rest on **conflicting data** from states, as there is **no independent basin authority** to **validate claims. Eg:** Mahanadi dispute (Odisha vs. Chhattisgarh) over unverified water flow data.
- **Judicial Overlap Despite Article 262:** Despite the bar on Supreme Court jurisdiction under Article 262, states often approach the Court under Articles 131/136, leading to legal ambiguity and parallel proceedings.
- **Weak enforcement**: Tribunal awards **need central notification to become binding,** but enforcement is often delayed or politically stalled.

What Measures Should be Taken to Effectively Resolve Inter-State Water Disputes?

- **Time-Bound Adjudication:** Amend **Inter-State River Water Disputes Act, 1956** to **fix timelines** for adjudication of disputes and establish a **permanent tribunal** with technical experts.
- **Reliable Data & River Basin Authority:** Set up an **independent river basin organization** for **transparent, real-time water data** to prevent disputes based on conflicting claims.
- **Promote Cooperative Federalism:** Encourage pre-litigation **inter-state negotiations** and utilize platforms like the **Inter-State Council** to build trust and consensus.



Drishti Mains Question:

Despite constitutional provisions and institutional mechanisms, inter-state river water disputes continue to persist in India. Discuss the limitations of the Inter-State River Water Disputes Act, 1956 and suggest reforms.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Mains:

Q. Constitutional mechanisms to resolve the inter-state water disputes have failed to address and solve the problems. Is the failure due to structural or process inadequacy or both? Discuss. (2013)

India's Resolution on the 'Wise Use of Wetlands' Adopted at Ramsar COP15

Source: PIB

Why in News?

India's resolution on the **''Promoting Sustainable Lifestyles for the Wise Use of Wetlands''** was adopted at the 15th **Conference of the Contracting Parties (COP15) to the Ramsar Convention on Wetlands**, held at Victoria Falls, Zimbabwe.

What is India's Resolution on the Wise Use of Wetlands?

- **About:** India's resolution builds upon **UN Environment Assembly Resolution 6/8 on 'Promoting Sustainable Lifestyles'** adopted in 2024 and promotes a **whole-of-society approach** to wetlands conservation.
- **Key Provisions:**
  - **Alignment with Global Frameworks:** India's resolution aligns with **Resolution XIV.8**. It also supports the **10-Year Framework on Sustainable Consumption and Production (10YFP)**.
    - Resolution XIV.8, adopted at the **COP14 of the Ramsar Convention** on Wetlands, outlines a **"new CEPA approach",** which focuses on **Communication, Education, Participation, and Awareness (CEPA)** for wetland conservation and wise use.
    - 10YFP is a global framework adopted at the **Rio+20 Conference in 2012** to accelerate the shift towards **sustainable consumption and production (SCP) patterns.**
  - **Integration of sustainability:** Urges voluntary integration of sustainable lifestyle-based interventions into wetland plans, programmes, and investments.
  - **Mission LiFE Linkage:** Builds on India's **Mission LiFE (Lifestyle for Environment)**, a movement for pro-planet behaviour, launched at **UN Climate Change Conference in Glasgow (COP26).**
  - **Behavioral Change Focus:** Encourages **conscious consumption**, **waste reduction**, and actions that **minimise environmental degradation**.

Wise Use of Wetlands

- The **Ramsar Convention (1971)** defines **wise use of wetlands** as "the maintenance of their **ecological character,** achieved through the implementation of ecosystem approaches, within the context of sustainable development".
- **India's Approach to Wise Use:** India released the **"Wetland Wise Use – An Implementation Framework (2024)",** which aims to clarify the concept of wise use and provide a practical roadmap for achieving it across wetlands in the country.
  - Under initiatives like **Mission Sahbhagita and the Save Wetlands Campaign,** over 2 million citizens have volunteered in the past three years, leading to the mapping of more than 1.7 lakh wetlands and boundary demarcation of nearly 1.2 lakh.
  - Additionally, the **National Plan for Conservation of Aquatic Ecosystems (NPCA)** continues to guide restoration and sustainable management of aquatic ecosystems.
  - The **Amrit Dharohar Scheme** supports wetlands through eco-tourism, community-based livelihoods, biodiversity conservation, and carbon storage.

What are the Key Outcomes of Ramsar COP15?

- **Victoria Falls Declaration:** It underscores the need for political commitment, increased resource mobilisation, and investment in wetland management.
- **Adoption of 13 Resolutions:** The parties also agreed to **strengthen flyway conservation for migratory birds**, establish the **Global Waterbird Estimates Partnership**, and protect species like river dolphins.
    - Notably, a resolution on **wetland restoration** was adopted, urging the **development of national policies for restoring degraded freshwater ecosystems.**
    - A resolution was adopted to refine criteria for designating Wetlands of International Importance, based on **IUCN Red List data** and input from **IUCN Specialist Groups.**
    - Resolutions also recognised the role of **indigenous knowledge and local communities** in sustainable wetland management.
- **5th Ramsar Strategic Plan:** Parties adopted the 5th Strategic Plan with 4 goals and 18 targets. The STRP (Scientific and Technical Review Panel) will monitor progress.

Drishti Mains Question:

The concept of 'wise use' of wetlands is central to the Ramsar Convention. Examine India's approach towards ensuring the wise use of wetlands.

Read more: Global Wetland Outlook 2025

UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims

Q. “If rainforests and tropical forests are the lungs of the Earth, then surely wetlands function as its kidneys.” Which one of the following functions of wetlands best reflects the above statement? **(2022)**

a. The water cycle in wetlands involves surface runoff, subsoil percolation and evaporation.

b. Algae form the nutrient base upon which fish, crustaceans, molluscs, birds, reptiles and mammals thrive.

c. Wetlands play a vital role in maintaining sedimentation balance and Soil stabilization.

d. Aquatic plants absorb heavy metals and excess nutrients.

Ans: (d)

Q. If a wetland of international importance is brought under the ‘Montreux Record’, what does it imply?(2014)

(a) Changes in ecological character have occurred, are occurring or are likely to occur in the wetland as a result of human interference

(b) The country in which the wetland is located should enact a law to prohibit any human activity within five kilometres from the edge of the wetland

(c) The survival of the wetland depends on the cultural practices and traditions of certain communities living in its vicinity and therefore the cultural diversity therein should not be destroyed

(d) It is given the status of ‘World Heritage Site’

Ans: (a)

Mains

Q. What is wetland? Explain the Ramsar concept of ‘wise use’ in the context of wetland conservation.Cite two Examples of Ramsar site from India. (2018)

Banking Laws (Amendment) Act, 2025

Source: PIB

Why in News?

Key provisions of the **Banking Laws (Amendment) Act, 2025** have come into force, aiming to enhance **banking governance**, improve **audit transparency**, strengthen **depositor protection**, and bring **cooperative banks** under a **more robust regulatory framework.**

What is Banking Laws (Amendment) Act, 2025?

- **About**: The **Banking Laws (Amendment) Act, 2025** is a legislative reform enacted to **modernize and strengthen the legal, regulatory, and governance** framework of the **Indian banking sector.**
    - The bill related to it was passed by Lok Sabha in December 2024 and by Rajya Sabha in March 2025.

- **Key Amendments:**
  - It introduced 19 **amendments** across following **5 core banking legislations**:
    - **Reserve Bank of India Act, 1934,**
    - **Banking Regulation Act, 1949,**
    - **State Bank of India Act, 1955,**
    - **Banking Companies (Acquisition and Transfer of Undertakings) Act, 1970 & 1980.**
- **Key Reforms:**
  - **Revised Substantial Interest Threshold:** The threshold for determining **'substantial interest'** has been revised from **Rs 5 lakh to Rs 2 crore (**which remained unchanged since 1968**)**, aligning with **present-day economic realities.**
    - **'Substantial interest'** refers to a **director's or officer's significant financial stake** in a firm, which may cause a **conflict of interest**. It is determined by the **paid-up share capital held** by them or their relatives exceeding the specified limit.
  - **Cooperative Bank Reforms: Director tenures** in **cooperative banks** extended from **8 to 10 years** (excluding **chairperson** and **whole-time directors**), aligning with the **97th Constitutional Amendment Act, 2011** and **promoting governance continuity.**
    - Under 97th CAA, 2011, the **right to form cooperative societies** was included as **Right to Freedom under Article 19(1).**
  - **Investor Protection & Fund Transparency: Public sector banks (PSBs)** can transfer **unclaimed shares, interests, and bonds** to the **Investor Education and Protection Fund (IEPF)**.
    - It is in parity with **Companies Act, 2013** norms to enhance **transparency and depositor awareness.**
  - **Audit Quality in PSBs:** Authorizes PSBs to **determine and provide remuneration to statutory auditors.**
    - It aims to **attract high-quality audit professionals**, improve **audit standards**, and promote **financial transparency** in public sector banking.

Read more:

- **Cooperative Bank**
- **Trends and Progress of Banking in India 2023-24**

UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims

Q. With reference to 'Urban Cooperative Banks' in India, consider the following statements: (2021)

1. They are supervised and regulated by local boards set up by the State Governments.
2. They can issue equity shares and preference shares.
3. They were brought under the purview of the Banking Regulation Act, 1949 through an Amendment in 1966.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Ans: (b)

Q. With reference to the 'Banks Board Bureau (BBB)', which of the following statements are correct? (2022)

1. The Governor of RBI is the Chairman of BBB.
2. BBB recommends for the selection of heads for Public Sector Banks.
3. BBB helps the Public Sector Banks in developing strategies and capital raising plans.

Select the correct answer using the code given below:

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Ans: (b)

Beetle-Fungus Threat to Rubber Trees

Source: TH

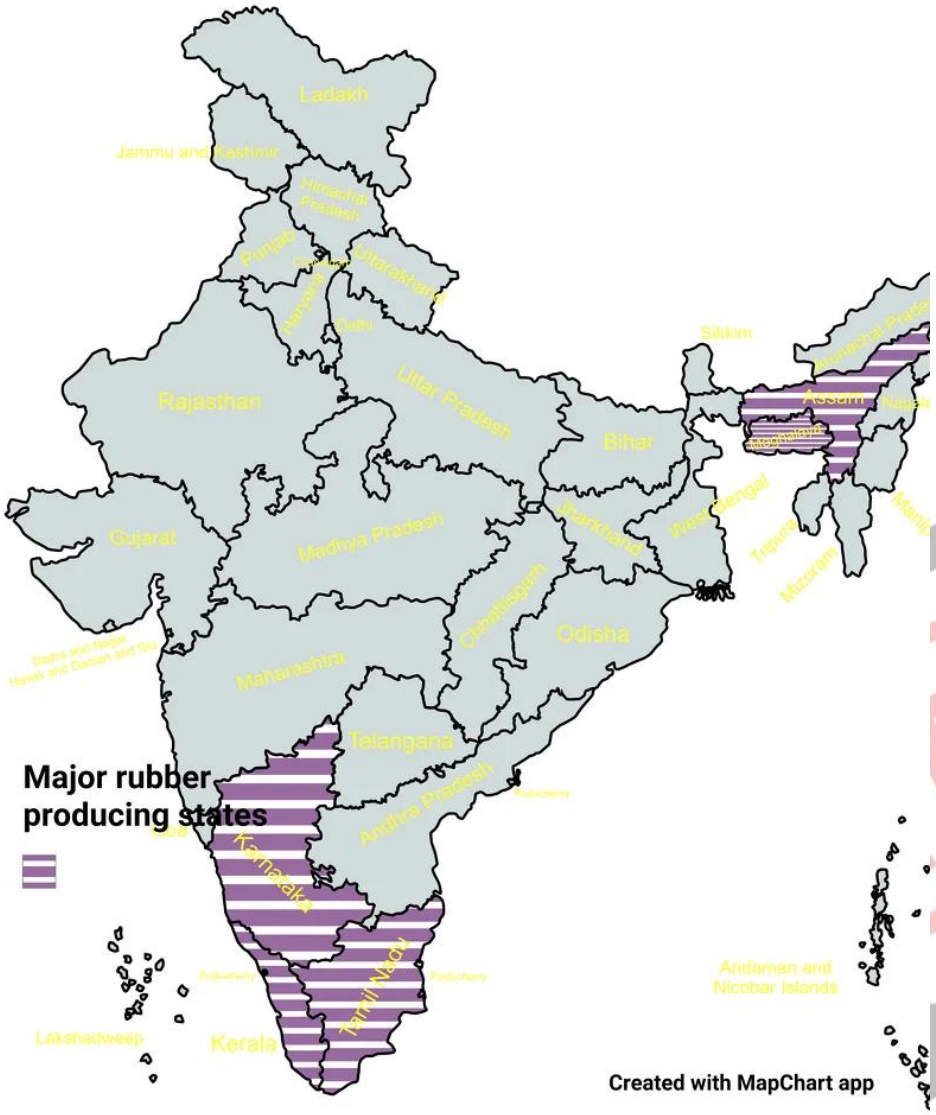
The **rubber plantation** **of Kerala** is facing a major threat from a **beetle-fungi association** of **ambrosia beetle (*Euplatypus parallelus*)** and fungi **Fusarium ambrosia** and **Fusarium solani**.

- **Pathogenesis & Impact:**
  - **Ambrosia beetles** introduce ***Fusarium* fungi into tree xylem,** b**locking water flow and causing leaf fall, trunk drying, reduced latex yield**, and **tree death.**
  - It **damages tissues and leads to slow healing in trees.**
- **Ecological & Health Concerns:**
  - Ambrosia beetles threaten ove**r 80 broadleaf tree species** such as **cashew, teak, coconut, and coffee**.
  - The Fusarium fungus affects **plants, animals, and humans**, posing health risks to those with weakened immunity.
  - The threat may intensify if beetles **co-associate** with **more virulent fungi**, expanding their impact.
- **Control Challenges & Mitigation:**
  - Infections are hard to manage as fungi spread through tissues, soil, and beetles, suppressing other microbes.
  - **Mitigation** includes beetle traps, removing infected parts, antifungals, and biocontrol methods like antagonistic fungi, microbial consortia, and GM rubber plants.

Rubber

- **Rubber** is an **elastic material** derived from the **latex or milky sap** of **rubber trees** (*Hevea Brasiliensis*).
  - India is the **3rd largest producer, 4th largest consumer of natural rubber,** and **5th largest consumer of natural + synthetic rubber** globally.
  - **Kerala (90%)** followed by **Tripura (around 9%)** are leading producer states.
  - **Rubber** grows best in **20°–35°C temperatures, over 200 cm annual rainfall, loamy**

or laterite soil, and **sloped or elevated terrain.**



Read More: Boosting India's Rubber Industry

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