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Bypass project approved in Bhagirathi ESZ despite rejection by Supreme Court Committee

Syllabus- GS Paper III- Conservation, ESZs, infrastructure vs ecology, Sustainable Development, Disaster Management; **GS Paper I-** Geographical features → Himalayas' fragility and disaster

Why in News?

- Uttarakhand Government granted in-Principle approval for **Netala bypass project** in the **fragile Bhagirathi Eco-sensitive Zone** (ESZ)

- Previously, **Supreme Court's high-powered committee** (HPC) rejected due to **ecological and social concerns**

Concerns-

- **Strategically important projects v/s Environment**

- **Recent Dharali flash flood**, prone to **slope instability and subsidence**

The Development vs. Environment Debate

- **Case for Development-** Economic Growth & Poverty Reduction, National Security & Strategic Needs, Energy & Urbanization, Human Welfare

- **Case for Environment-** Ecological Fragility, Issues Due to Climate Change, Inter-generational Equity, Livelihood Issues

- **Drivers of environmental degradation-**

  - Growth, Large Development Projects
  - Excessive Urbanization
  - Policy Loopholes
  - Large Industrial Zones, etc.

Sustainable Development Approaches

- **Ecological Approach-** health of ecosystems as a precondition for human well-being

- **Strong Sustainable Development-** strict regulations, government intervention, and strong community involvement

- **Weak Sustainable Development-** make polluters pay and incentivize environmentally friendly practices without fundamentally altering the economic system

- **Treadmill Approach-** human ingenuity and technology will eventually solve any environmental problems

PYQs

- Flooding in urban areas is an emerging climate-induced disaster. Discuss the causes of this disaster. Mention the features of two such major floods in the last two decades in India. (2024)

- Explain the mechanism and occurrence of cloudburst in the context of the Indian subcontinent. Discuss two recent examples. (2022)

- Disaster preparedness is the first step in any disaster management process. Explain how hazard zonation mapping will help in disaster mitigation in the case of landslides. (2019)

- Define the concept of carrying capacity of an ecosystem as relevant to an environment. Explain how understanding this concept is vital while planning for sustainable development of a region. (2019)

Monsoon-related Extreme Weather events increasing India's Climate and Disaster vulnerabilities

Syllabus- GS Paper III- Disaster management, Environment, Climate change adaptation; **GS Paper I-** Impact of monsoon on Indian society, Regional imbalances

Changing nature of Monsoon

- **Recent Extreme Events-** Punjab floods, **landslides and flash floods** in Uttarakhand, Himachal Pradesh and Jammu and Kashmir

Causes-

- **Erratic patterns of rainfall-** more intense bursts of rainfall separated by frequent dry spells

- **Changing El Niño-monsoon relationship- Weakening** of the correlation between El Niño and reduced monsoon rainfall

- **Spatial distribution of monsoon-** decreasing rainfall along the **Ganga basin states** while increasing rainfall in **Gujarat's Saurashtra, Rajasthan**

- **Climate change- Rising sea levels and temperatures,** increasing **water vapour holding capacity of clouds**

Impact of changing monsoon patterns in India

- **Increased Monsoon disasters**

- **Health implications-** E.g., **Heat stress**, dengue, etc.

- **Forecasting challenges**

- **Economic-** 51% of India's farmed area, 40% of agricultural production, with 47% of the population

Solutions

- **Pre-disaster focus** on reducing vulnerabilities through **sustainable infrastructure and effective early-warning systems**

PYQs

- How far do you agree that the behavior of the Indian monsoon has been changing due to humanizing landscapes? Discuss. (2015)

UNGA launches new initiatives for Global AI Governance

Syllabus- GS Paper III- Science & Tech, Ethics in AI regulation; **GS Paper II-** UN reforms, global institutions

UNGA New Initiatives

- **Independent International Scientific Panel on Artificial Intelligence**

  - Promote scientific understanding of AI
  - Evidence-based rigorous, independent, scientific assessments
  - Bridge between cutting-edge AI research and policymaking
  - Global Dialogue on AI Governance to take place in July 2026 in Geneva and in 2027 in New York

- **Global Dialogue on AI Governance**

  - Platform to discuss international cooperation
  - Best practices and lessons learned
  - Open, transparent and inclusive discussions on AI governance
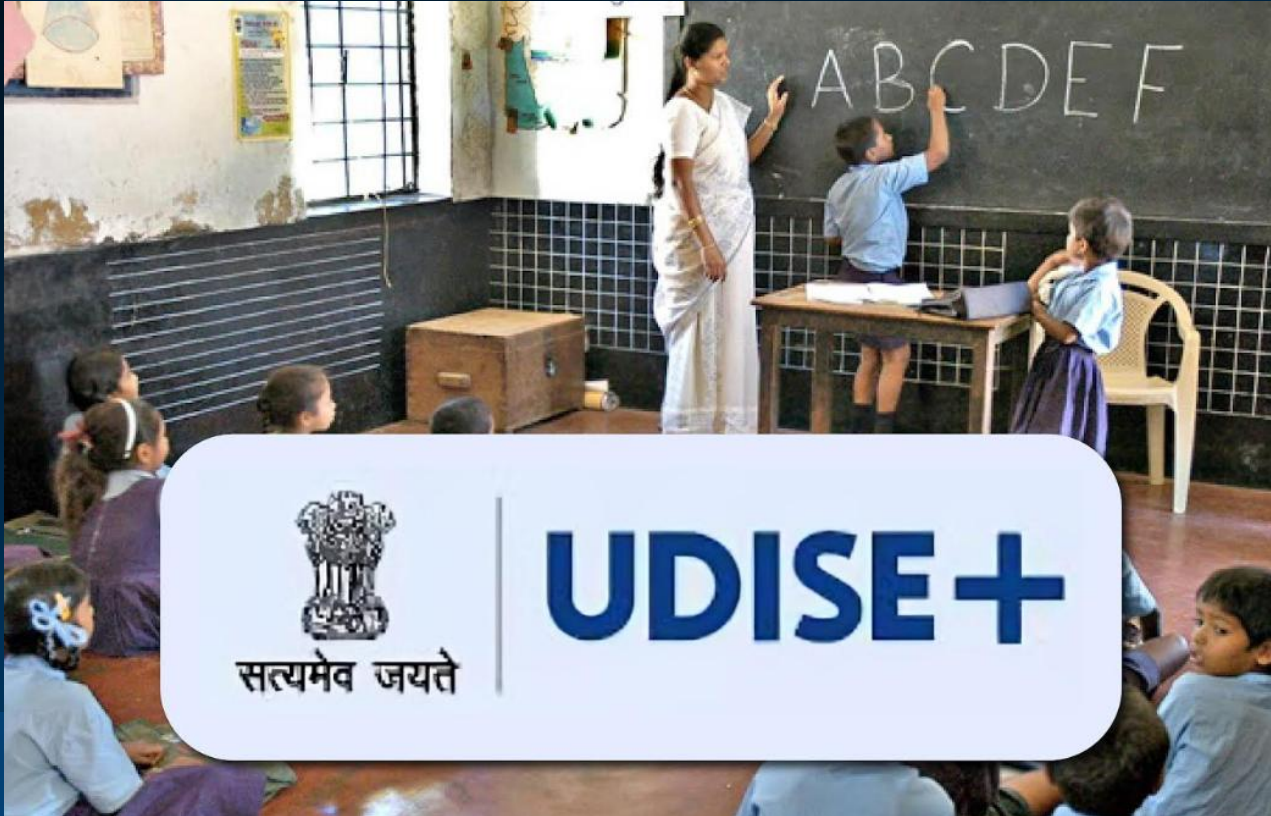
It builds on the "**Pact for the Future**" and the "**Global Digital Compact**"

Significance

- Formal **UN-led global framework** on AI governance

- AI as a **"global public good"**

- Balances **innovation and risk mitigation**

- Supports **equity and inclusivity**

Other UN Mechanisms for Global AI Governance

- **Pact for the Future- Summit of the Future in September 2024**- **achieving the SDGs** and responding to emerging challenges and opportunities

- **Global Digital Compact-** comprehensive global framework for digital cooperation and AI governance

- **AI for Good Global Summit (organized by ITU since 2017)-** AI applications to advance on the SDGs and scale for global impact

- Adoption of the **first global standard on AI ethics in 2021; UNESCO Recommendation on the Ethics of AI**

Unified District Information System for Education Plus (UDISE+) 2024-25 Report released by Ministry of Education

Syllabus- GS Paper II- Education Policy as Part of Social Justice; **GS Paper I-** Society

Major Findings for the year 2024-25

- **Total number of teachers has crossed the 1 crore mark in 2024–25 (rise of 6% from 2022-23)**

- **Pupil-Teacher Ratios (PTRs)** have surpassed NEP's recommended 1:30 ratio
  - Present PTR: **Foundational (10), Preparatory (13), Middle (17), and Secondary levels (21)**

- **Drop out rates:** It has decreased to 2.3% (Preparatory), Middle (3.5%) and Secondary (8.2%)

- **Gross Enrollment Ratio: It has improved to 90.3% (Middle)** and **68.5% (Secondary) levels**

- **Zero enrolment (decreased by 6%) and single-teacher schools (38% decrease)** has shown progressive changes

Comprehensive Data and Trends in Indian School Education (2022-23 to 2024-25)

Category	Indicator	2023-24	2024-25
Infrastructure Facilities	Computer access	57.2	64.7
	Internet	53.9	63.5
	Girls Toilet	97.2	97.3
	Playground	82.4	83.0
	Ramps with Handrails	52.3	54.9
Female Representation	Girls Enrollment	48.1	48.3
	Female Teachers	53.3	54.2

Road Accidents In India 2023 Report released by Ministry Of Road Transport And Highways

Syllabus- GS Paper III- Infrastructure- Critical for infrastructure planning and road safety policy

Key Statistics

- **Total Accidents and Fatalities- 2023- 480,583 road accidents** (increased by 4.2%)
  - **18 - 45 years youth** accounted for **66.4%** of victims during 2023

- **Tamil Nadu** recorded the highest number of road accidents in 2023 followed by **Madhya Pradesh**
  - **Uttar Pradesh** had the most fatalities followed by **Tamil Nadu**

- **Accident prone Highways- NH and SH ~5% of the total road network** accounted for > **53% of total accidents and 59% of fatalities**

- **Road user categories- Two-wheeler riders** constituted the highest percentage of accident deaths (45%) followed by **pedestrians**

Major causes of Road Accidents

- **Human Error-** traffic rule violations(Over-speeding is the largest contributor), driving without a valid driver license and non-use of safety devices

- **Road Environment-** geographical area (residential etc.), road features, weather conditions etc.

- **Vehicular Conditions: E.g.** Age of vehicle and Overloading

Mitigation Measures taken by the Ministry Of Road Transport And Highways

- **Education Measures-** Road Safety Advocacy Scheme, Observance of National Road Safety Month/Week

- **Engineering Measures-** road safety audits, accident spots identification on National Highways etc.
    - **Vehicle Engineering** such as **Airbags, Children safety etc.**

- **Enforcement Measures-** Motor Vehicles (Amendment) Act, 2019, electronic monitoring etc.

- **Emergency care-** protection of good samaritans, compensation for victims, Ambulance provisions etc.

Personality in News- Raja Prithu Rae

- Ruled **Kamrupa (Assam)** during the **early 13th century.**

- He belonged to the **Khen Dynasty**, tracing **lineage to Narakasura**

- Worshipped Goddess Kamteswari (an incarnation of Goddess Durga)

- Khen rulers emerged as local chieftains after the fall of the Pala Dynasty

- **Kamata Kingdom**, also known as **Kamru, Kamrud, Kamrupa, Kamata, Koch, or Koch Hajo**

- **Raja Prithu Rae defeated Bakhtiyar Khilji** who attacked Kamrupa (**Kanai Varasi rock inscription** is proof of the destruction of the Turks)

Quick Updates

Index of Industrial Production

Quick Estimates of the Index of Industrial Production (IIP) shows growth of **3.5% in July 2025**

- **Compiled by:** Central Statistical Organisation (CSO)- MoSPI

- Frequency: Monthly

- Base year: 2011-12

- Scope: **mining (14.37%), manufacturing (highest weight- 77.63%), and electricity (lowest weight- 7.99%) sectors**

- It excludes construction, gas, and water supply due to data constraints.

- **8 Core Industries (40.27%)-** Refinery Products, Electricity, Steel, Coal, Crude Oil, Natural Gas, Cement, Fertilisers

SEBI's Cybersecurity and Cyber Resilience Framework

SEBI clarified that its **Cybersecurity and Cyber Resilience Framework** (CCSRF) applies only to the systems of the entities regulated by SEBI

- **Issued in** 2015 for Market Infrastructure Institutions (MIIs)

- Strengthen the cybersecurity measures

- Stock Brokers and Depository Participants, Mutual Funds /Asset Management Companies, KYC Registration Agencies, Portfolio Managers, etc.

Liquefied Natural Gas

UAE (Abu Dhabi National Oil Company) has signed a 15-year agreement with **Indian Oil Corporation (IOC)** to supply 1 million tonnes per annum of Liquefied Natural Gas (LNG)

- **Natural gas** that has been **cooled** to a **liquid** state, at about **−260° F (−162° C)**

- Process of converting natural gas into LNG is called **liquefaction**

- Reduces its volume by 600 times

- Facilitates safe **transportation**, long-distance **shipping** and **storage**

- The **USA** is the **largest exporter of LNG** in the world followed by **Australia and Qatar**

Extended Range Attack Munitions

The US has approved the delivery of **Extended Range Attack Munitions** (ERAMs) to Ukraine

- **Next-generation air-launched, precision-guided missiles**

- **Range:** 240 to 450 kilometers

- **Warhead:** Carries a 500-pound high-explosive warhead, able to destroy hardened bunkers, fuel depots, or ammunition storage

- **Guidance:** A combination of GPS, inertial navigation, and a terminal seeker provides accuracy within about ten meters

Nuakhai Festival

Prime Minister extended wishes to the people of India on the occasion of Nuakhai

- **Navanna or Nuakhai- agro-based religious festival** celebrated primarily in Western Odisha.

- **Origin**: According to Oral tradition, it was introduced by **Raja Ramai Dev of Patna (1355-1380 CE)**.

- **Significance**: It centers on the **worship of food grain or rice** and expresses gratefulness for a good harvest, symbolizing life itself.

PMJDY

Prime Minister marks 11 transformative years of Pradhan Mantri Jan Dhan Yojana. It is considered one of the **biggest financial inclusion initiatives in the world**

- >56 crore Jan Dhan accounts

- Total deposit balance of 2.68 lakh crore rupees

- >38 crore free-of-cost RuPay cards

- 67% of the accounts are opened in rural or semi-urban areas

- ~56% of the accounts are opened by women

Cotton

The Government has **extended** the **import duty exemption on cotton** until 31st December 2025.

Features-

- **White-Gold**
- **Natural fiber** and a **semi-xerophyte tropical crop**
- Grown in the **kharif season in semi-arid** regions of India
- **Range- Well drained deep alluvial soils (North)** to **black clayey soils** (Central) and in black red soils (South) region in India
- **Semi-tolerant to salinity and sensitive to water logging**
- Requires high temperature, light rainfall and ~210 frost-free days and bright sunshine for its growth
- 2nd largest producer of cotton after China
- Only country which grows all four species of cotton
- **Major States:** Gujarat, Maharashtra, Telangana, Rajasthan, Madhya Pradesh

AQLI

The 2025 Annual Update of the Air Quality Life Index (AQLI) has been released.

- It is a **pollution index** that measures the impact of **particulate air pollution on life expectancy.**

- **Created by Michael Greenstone** (Professor), and his team at **Energy Policy Institute at the University of Chicago (EPIC)**

- **India:** Air pollution meeting WHO guidelines could extend Indian residents' lives by **3.5 years on average**, with Delhi seeing an **8.2-year gain** (highest).

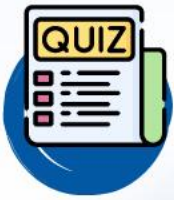- **South Asia** continues to be the **most polluted region in the world.**