



For IAS/IPS/IFS Coaching - Call us at 7994058393 www.enliteias.com

www.enliteias.com FOLLOW US facebook.com/EnliteIASTrivandrum twitter.com/enlite_ias instagram.com/enliteias

>> Kozhikode

>> Ernakulam

>> Thiruvananthapuram

FRIDAY, 19th SEPTEMBER 2025

Table of Contents

1. National Policy on Geothermal Energy 2025	2
2. Stubble Burning	4
3. National Logistics Policy	
4. Chabahar Port	8
5. Syria	9
6 Al in Governance	

www.enliteias.com FOLLOW US facebook.com/EnliteIASTrivandrum

>> Kozhikode

>> Ernakulam

>> Thiruvananthapuram

1. National Policy on Geothermal Energy 2025

- **Prelims -** National Policy on Geothermal Energy 2025
- Mains GS 2 Governance

Why in the news?

 Government of India notified National Policy on Geothermal Energy to accelerate clean energy transition, supporting India's net zero 2070 commitment

National Policy on Geothermal Energy 2025

• What is it?:

- → It aims to unlock India's largely untapped geothermal energy potential for both power generation and direct-use applications.
- → It is part of India's strategy to accelerate the clean energy transition, support energy security, and meet its **Net Zero by 2070** commitment.
- **Nodal Agency:** The policy was notified by the Ministry of New & Renewable Energy (MNRE).

• Objectives:

- → Establish geothermal energy as a major pillar of India's renewable energy mix, contributing significantly to climate goals and energy security.
- → Strengthen research, development and innovation, including enhancements in detection, exploration, drilling, reservoir management, and direct-use technologies.
- → Adopt best practices globally, via international cooperation, standards, and partnerships.
- → Deploy geothermal solutions not just for electricity, but also for heating/cooling, agriculture (e.g. greenhouses, cold storage), aquaculture, tourism, desalination, and ground source heat pumps (GSHPs).
- → Utilise existing infrastructure where feasible e.g. repurposing abandoned oil and gas wells.

• Key Features:

- → Identification of geothermal provinces and hot springs: Geological Survey of India (GSI) has identified 381 hot springs spread over 10 geothermal provinces (regions include Himalayan province, Naga-Lusai, Andaman & Nicobar Islands, Son-Narmada-Tapi, etc.).
- → Financial & fiscal incentives:
 - ★ 100% FDI allowed in the geothermal sector.





>> Kozhikode

>> Ernakulam

>> Thiruvananthapuram

- ★ Grants, concessional loans, tax incentives for early stage exploration, risk mitigation (for example when drilling fails).
- ★ Long-term leases of up to 30 years for geothermal projects, with possibility of extension depending on resource availability.
- → Regulatory simplification: Encouragement of single-window clearances, streamlined regulations, inter-ministerial coordination. Support from States, public and private sectors.
- → **Pilot projects:** Launch of several pilot and resource assessment projects to test viability, demonstrate technology, and build capacity.

• Challenges:

- → **High upfront and exploration costs**, particularly drilling, and risk of unsuccessful exploration.
- → Site-specific nature of geothermal resources and geological uncertainty.
- → Environmental, land use and regulatory complexities.
- → Need for **technical capacity**, skilled workforce, R&D, institutional framework.

• Expected Outcomes:

- → Strengthen energy access and reliability, possibly with base-load renewable energy.
- → Help diversify India's renewable energy capabilities beyond solar, wind, biomass, hydropower.
- → Support decarbonization especially in heating and cooling, agriculture, etc.
- → Job creation and technology innovation in drilling, geothermal systems, hybrid systems.

>> Kozhikode

>> Ernakulam

>> Thiruvananthapuram

2. Stubble Burning

- Prelims Stubble Burning
- Mains GS 3 Environment

Why in the news?

• The Supreme Court and the Union government clashed over how to address stubble-burning by farmers.

Stubble Burning

• **<u>Definition</u>** - Stubble burning, also known as parali burning, is the practice of setting fire to leftover crop residue in fields after harvest. This is a prevalent practice in North-West India, particularly in states like Punjab, Haryana, and Uttar Pradesh.

• Reasons for Stubble Burning:

- → Quick and inexpensive method: Farmers find it to be a quick and cheap way to clear their fields for sowing the next crop.
- → Lack of alternatives: Limited access to or awareness of alternative methods for crop residue management.

• Impacts of Stubble Burning:

- → Air pollution: Stubble burning is a major contributor to air pollution, particularly PM2.5 particles, leading to respiratory problems and health issues.
- → Soil degradation: Burning destroys essential nutrients and microbes in the soil, reducing fertility and long-term productivity.
- → Climate change: Releases greenhouse gases like carbon dioxide, contributing to climate change.

• Government Initiatives:

- → National Policy on Sustainable Agriculture (2015): Promotes crop residue management practices.
- → Sub-Mission on Agricultural Mechanization (SMAM): Provides subsidies for machinery like Happy Seeder that can sow seeds directly into the stubble.
- → Financial incentives: Schemes to encourage farmers to adopt alternative practices like composting or baling.
- → National Green Tribunal (NGT) bans: Imposed bans on stubble burning with penalties for violations.

>> Kozhikode

>> Ernakulam

>> Thiruvananthapuram

www.enliteias.com

facebook.com/EnliteIASTrivandrum

3. National Logistics Policy

- **Prelims** National Logistics Policy
- Mains GS 3 Economy

Why in the news?

National Logistics Policy completes three years of its implementation, strengthening
 India's Logistics sector

National Logistics Policy

• What is it?:

- → It is a cross-sectoral, multi-jurisdictional effort to transform India's logistics ecosystem that aims to reduce costs, improve efficiency, integrate digital systems, and make India a global logistics hub.
- Launche: Launched by the Government of India in September 2022.

• Need for the Policy:

- → Indian logistics costs are high: about 13-14% of GDP (some sources even 14-18%), which is significantly above international benchmarks (8-10%) for developed countries.
- → Inefficiencies: delays in customs, paperwork, multimodal coordination, lack of infrastructure (warehouses, cold chains, connectivity) etc.
- → India's ranking in Logistics Performance Index (LPI) needs improvement.

• Objectives:

- → Reduce logistics cost: Bring down from ~13-14% of GDP to nearer global benchmarks (~8-10%) by 2030.
- → Improve LPI ranking: Join top 25 (or even top 10) countries in LPI by 2030.
- → Integrated, seamless, efficient logistics network: Includes reliability, green & sustainable practices, leveraging technology, skilled manpower.

• Major Features:

→ Digital Transformation / Integrated Digital System (IDS): To unify and digitize processes across the logistics value chain- tracking, documentation, interface, data sharing.



facebook.com/EnliteIASTrivandrum twitter.com/enlite_ias instagram.com/enliteias

>> Kozhikode

>> Ernakulam

>> Thiruvananthapuram

- → Unified Logistics Interface Platform (ULIP): A single window/digital platform for logistics stakeholders (transporters, warehouse operators, customs etc.) to interact, access information, file clearances etc.
- → Ease of Logistics (E-LOG): Making logistics operations easier: simplifying regulations, minimizing paperwork, reducing procedural delays, enhancing multimodal integration.
- → System Improvement Group (SIG): An institutional framework to continuously monitor, review, and improve the logistics system- feedback loops, stakeholder involvement.
- → Infrastructure & Modal Mix Improvement: Promoting multimodal transport (road, rail, waterways, ports), building multimodal logistics parks, improving warehousing, cold chain infrastructure etc.
- → Green & Sustainable Logistics: Emphasis on reducing pollution, promoting environmentally friendly practices (eg, green freight, efficient last-mile connectivity).
- → Human Resource Development: Skill upgradation, capacity building, aligning logistics workforce capabilities with sector needs.

Progress So Far:

- → The Unified Logistics Interface Platform (ULIP) is operational and has enabled API integration across more than 30 digital systems, facilitating huge volumes of digital transactions.
- → The Logistics Data Bank (LDB) has been used to track many EXIM (export-import) containers via Inland Container Depots (ICDs) (real-time visibility). As of August 2025, more than 75 million EXIM containers have been tracked across 101 ICDs.
- → Improvements in LPI and Measures of State Performance: India's ranking in the World Bank's Logistics Performance Index (LPI) improved from 44th in 2022 to 38th in 2023.
- → Strong alignment of NLP with flagship programs like PM GatiShakti,

 Dedicated Freight Corridors, Multi-Modal Logistics Parks (MMLPs).

 These help with multimodal connectivity, reducing bottlenecks.



www.enliteias.com
FOLLOW US
facebook.com/EnliteIASTrivandrum

>> Kozhikode

>> Ernakulam

>> Thiruvananthapuram

- → The warehousing sector is growing rapidly: strong investments, modernization, adoption of better practices. Estimates say the warehousing sector may reach USD 35 billion by 2027, with ~15-16% annual growth.
 - ★ State-level measures are coming up: e.g. states like West Bengal giving *industry status* to logistics, approving logistics corridors, etc., encouraging private investment.

• Existing Gaps:

- → Logistics Cost Reduction: Despite progress, logistics costs are still high (~13-14% of GDP) vs target benchmarks (8-10% or lower depending on estimates).
- → Adoption of green logistics (EVs for freight, energy efficient warehouses, less polluting modes) is still at nascent stages. Policy proposals exist but actual large-scale implementation is limited.
- → Infrastructure: The share of non-road modes (rail, waterways etc.) in freight movement needs more boost; road is still dominant, which is costlier and less efficient in many cases.
- → Although digital platforms (ULIP, LDB etc.) are up, the coverage (especially in smaller states, remote ICDs, smaller firms / MSMEs) is uneven. Data quality, real-time tracking for non-EXIM / domestic logistics is less mature.

• Way Forward:

- → Push for greater modal shift (from road to rail / waterways / coastal shipping) to reduce cost and carbon footprint.
- → Further expansion and fine-tuning of digital systems so that domestic supply chains get similar visibility and ease of operations as EXIM ones.
- → Enhance state-level implementation, including enabling regulations, incentives, and last-mile connectivity.
- → Promote green logistics more vigorously: set clearer targets, provide incentives (tax / subsidy), ensure infrastructure for EVs, cold chains etc.
- → Strengthen skilling in the sector: logistics workforce, tech adoption, etc.

>> Kozhikode

>> Ernakulam

>> Thiruvananthapuram

www.enliteias.com

4. Chabahar Port

- Prelims Chabahar Port
- Mains GS 2 International Relations

Why in the news?

• The U.S. announced that the country was revoking its waiver of sanctions over the Iranian port of Chabahar.

Chabahar Port

- Location: Located on the southeastern coast of Iran, along the Gulf of Oman.
- Infrastructure & Development
 - → India's participation through India Ports Global Limited (IPGL).
 - → Includes development of Shahid Beheshti terminal.
 - → Agreement signed in 2016; India took over operations in 2018.
 - → India has supplied equipment like cranes and invested in capacity building.

• Strategic Importance for India

- → Access to Afghanistan & Central Asia: Provides an alternative trade route, avoiding Pakistan's land route restrictions.
- → Counter to Gwadar Port (Pakistan): Balances China's presence in Gwadar (part of CPEC).
- → Connectivity Projects: Integrated with International North-South Transport Corridor (INSTC), linking India—Iran—Russia—Europe.
- → Energy Security: Facilitates crude oil and natural gas imports from Iran and Central Asia.
- → Regional Diplomacy: Enhances India—Iran ties while strengthening relations with Afghanistan.

Challenges

- → US Sanctions on Iran: Slow progress due to restrictions on banking, insurance, and investments.
- → Geopolitical Tensions: Iran—US rivalry, instability in Afghanistan, and regional power competition.
- → China Factor: Beijing's deepening engagement with Iran (25-year strategic partnership) competes with India's role.



facebook.com/EnliteIASTrivandrum twitter.com/enlite_ias

>> Kozhikode

>> Ernakulam

>> Thiruvananthapuram

5. Syria

- Prelims Location of Syria
- Mains GS 2 International Relations

Syria



Why in the news?

 Syria, Israel advance security talks as U.S. pushes peace settlement.

Syria

- Location: Syria is a Western Asian country located in the Eastern Mediterranean and the Levant.
- · Capital: Damascus
- **Borders Countries:** Turkey , Iraq , Jordan, Israel and Lebanon.
- Maritime Border Countries:
 Cyprus lies to the west across the Mediterranean Sea
- Major Rivers in Syria: Euphrates, Tigris
- **Disputed Territories:** Golan heights with Israel



©7994058393

More information call **7994058393**

www.enliteias.com FOLLOW US facebook.com/EnliteIASTrivandu

>> Kozhikode

>> Ernakulam

>> Thiruvananthapuram

6. AI in Governance

- Prelims AI in Governance
- Mains GS 3 Science and Technology

Why in the news?

• The Comptroller and Auditor General of India is planning to develop an AI model designed to help auditors, thereby improving efficiency in auditing processes.

AI in Governance

• What is it?

→ Artificial Intelligence (AI) in governance refers to the use of machine learning, natural language processing, computer vision, and data-driven models to enhance decision-making, service delivery, policy design, and citizen engagement.

• Applications of AI in Governance:

- → Policy and Decision Support: AI tools facilitate faster and accurate decision making activities.
 - ★ Big-data driven simulations for urban planning and climate adaptation.
 - ★ AI-based weather forecasting models to improve disaster preparedness.
 - ★ Predictive analytics for **agriculture yields** (e.g., **AMED API** by ISRO for crop forecasting).

→ Service Delivery and E-Governance:

- ★ Automated **beneficiary verification** in welfare schemes like PM-KISAN, MGNREGS.
- ★ AI chatbots for grievance redressal (e.g., UMANG app, RBI's chatbot "AskRBI").
- ★ AI-enabled language translation for multi-lingual governance (Bhashini under Digital India).

→ Healthcare:

- ★ AI-based **disease surveillance systems** (Integrated Health Information Platform).
- ★ Predictive models for **maternal and child health** (Reproductive & Child Health portal).
- ★ AI-powered telemedicine platforms in rural areas.





>> Kozhikode

>> Ernakulam

>> Thiruvananthapuram

→ Law Enforcement & Judiciary:

- ★ AI-driven facial recognition in policing and border security.
- ★ Supreme Court's AI tool "SUPACE" assists judges with legal research.
- ★ e-Courts Project uses AI for case management and translation of judgments.

→ Infrastructure & Smart Governance:

- ★ Smart cities mission: AI-based traffic control, waste management, and energy optimization.
- ★ Drones and AI for infrastructure monitoring and environmental compliance.
- ★ AI in logistics and supply chain management (supporting National Logistics Policy 2022).

• Benefits:

- → Efficiency: Reduces human error, improves speed of service delivery.
- → Transparency: Automated workflows minimize discretion and corruption.
- → Inclusivity: Natural language processing tools enable access for non-English speakers.
- → **Data-driven governance**: Facilitates evidence-based policymaking.

• Challenges:

- → **Data privacy**: Lack of a strong data protection law raises concerns.
- → Bias and discrimination: AI models risk perpetuating social inequalities.
- → **Digital divide**: Unequal access to technology can exclude vulnerable groups.
- → Accountability: Difficult to assign responsibility for AI-driven decisions.
- → Capacity gap: Shortage of skilled manpower in AI within government.

Way Forward:

- → Enact a comprehensive data protection and AI ethics law.
- → Develop **Responsible AI frameworks** ensuring fairness, accountability, transparency.
- → Invest in AI R&D, skilling, and indigenous compute infrastructure.
- → Encourage public-private partnerships for scalable solutions.
- → Promote AI-enabled citizen participation in governance.

• Indian Initiatives:

→ IndiaAI Mission (2024)- ₹10,000+ crore outlay for AI startups, compute infrastructure, and governance applications.







>> Kozhikode

>> Ernakulam

>> Thiruvananthapuram

- → National Strategy for AI (NITI Aayog, 2018)- "AI for All" vision.
- → **Bhashini Mission** AI-based language translation for inclusive digital governance.
- → Responsible AI for Youth (2020)- building capacity among students.
- → AI in Digital Public Goods- e-RaktKosh, COWIN, DigiLocker integrations.

• Global Examples:

- → Estonia: AI-based e-governance for tax filing, citizen services.
- → **Singapore**: AI in Smart Nation program (transport & urban planning).
- → UK: AI in predictive policing and NHS healthcare delivery.