



BAJIRAO IAS ACADEMY



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CLIMATE JUSTICE

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**GENERAL STUDIES PAPER-3
ANALYSIS**

Mineral resources are fundamental to the country's economy and these are exploited by mining. Why is mining considered an environmental hazard? Explain the remedial measures required to reduce the environmental hazard due to mining.

Model Framework (Improved)

Introduction:

Mining drives economic growth by extracting vital mineral resources.

Body:

However, it causes deforestation, land degradation, water and air pollution, biodiversity loss, and health issues.

Conclusion (with remedial measures):

To reduce hazards, enforce strict regulations, adopt eco-friendly technologies, ensure land reclamation, promote afforestation, and involve communities in sustainable mining practices.

Introduction

Mineral resources are vital for industrial growth, infrastructure development, and energy generation, making them central to a country's economy. However, mining—the primary method of extraction—poses significant environmental hazards, undermining ecological sustainability and human health.

Why Mining is an Environmental Hazard

1. Land Degradation

- Open-cast mining causes large-scale deforestation and soil erosion.
- *Example:* Coal mining in Jharkhand has led to loss of forest cover and agricultural land.

2. Water Pollution

- Release of heavy metals and acidic effluents contaminates water bodies.
- *Data:* As per CPCB, mining contributes to 30% of heavy metal pollution in Indian rivers.

3. Air Pollution

- Dust and emissions from mining and transportation lead to respiratory issues.
- *Example:* Bellary iron ore mines in Karnataka saw PM10 levels far above safe limits.

4. Biodiversity Loss

- Mining in ecologically sensitive zones threatens flora and fauna.
- *Example:* Mining in the Western Ghats affects endemic species and wildlife corridors.

5. Groundwater Depletion

- Over-extraction of water for mineral processing reduces water table.
- *Data:* Mining areas in Odisha report 10–15% annual groundwater decline.

Remedial Measures

1. Strict Environmental Regulations

- Enforce Environmental Impact Assessment (EIA) and post-mining land reclamation.

2. Sustainable Mining Practices

- Adoption of eco-friendly technologies and closed-loop water systems.

3. Reforestation and Land Reclamation

- Compulsory afforestation and conversion of exhausted mines into green zones.

4. Community Participation

- Involve local communities in planning and monitoring through social audits.

5. Strengthening Monitoring Mechanisms

- Use of GIS and remote sensing for real-time monitoring of mining activities.

Conclusion

While mining drives economic development, it also poses severe environmental risks. A balance must be struck through sustainable mining practices, robust regulations, and community engagement to ensure long-term ecological and economic stability.

Write a review on India's climate commitments under the Paris Agreement (2015) and mention how these have been further strengthened in COP26 (2021). In this direction, how has the first Nationally Determined Contribution intended by India been updated in 2022?



Model Framework (Improved)

Introduction:

India committed to climate action under the Paris Agreement (2015) through emission reduction and clean energy goals.

Body:

At COP26, India announced the *Panchamrit* strategy, including net-zero by 2070. In 2022, India updated its NDC—raising targets for non-fossil energy use and emission intensity reduction.

Conclusion:

India's commitments reflect enhanced ambition while balancing development and climate responsibility.

Introduction

India, a key stakeholder in the global climate regime, ratified the Paris Agreement (2015) with the commitment to contribute to limiting temperature rise well below 2 °C and to pursue efforts to limit it to 1.5 °C. Since then, India's climate goals have evolved — notably at COP26 (2021) and via the updated first India's Updated First Nationally Determined Contribution (NDC) in 2022.

Body

1. India's Commitments Under the Paris Agreement (2015)

- **Emission-intensity reduction:** India pledged to reduce the emissions intensity of its GDP by 33–35 % (from 2005 levels) by 2030.
- **Non-fossil fuel capacity share:** It committed to achieve about 40 % cumulative installed electric power capacity from non-fossil fuel based energy resources by 2030.
- **Carbon sink:** India aimed to create an additional carbon sink of 2.5-3 billion tonnes CO₂ equivalent through forest and tree-cover by 2030.

- **Progress to date:** For example, installed non-fossil capacity share crossed 40 % ahead of schedule and emission intensity declined significantly.

2. Strengthening at COP26 (Glasgow, 2021)

- India announced the “Panchamrit” set of enhanced targets:
- Increase non-fossil electricity capacity to **500 GW** by 2030.
- Meet **50 % of its energy requirements** from renewable sources by 2030.
- Reduce projected carbon emissions by **1 billion tonnes** from now till 2030.
- Cut emissions intensity of GDP to **45 %** by 2030 (from 2005 levels).
- Achieve **net-zero emissions by 2070**.
- These announcements marked a significant upward revision of ambition compared to the 2015 NDC — reflecting India’s evolving role and responsibility as a major developing economy.

3. Update of India's First NDC in 2022

- In August 2022, India formally submitted its updated NDC to the UNFCCC reflecting the COP26 commitments.

Key revised targets:

- **Emissions intensity of GDP:** enhanced from 33–35 % to **45 %** reduction by 2030 (from 2005 levels).
- **Cumulative installed electric power capacity** from non-fossil fuel-based sources: enhanced from 40 % to **about 50 %** by 2030.
- **Additional features:** greater emphasis on sustainable lifestyles under the “Lifestyle for Environment (LiFE)” initiative, adaptation measures, and aligning development with climate justice.

Conclusion

India's climate commitments have moved from a cautious pledge in 2015 to a more ambitious and globally visible posture by 2021–22.

The strengthened targets at COP26 and the updated 2022 NDC demonstrate India's willingness to raise its ambition while retaining its developmental imperatives.

What are the major challenges to internal security and peace process in the North-Eastern States?
Map the various peace accords and agreements initiated by the government in the past decade.

Model Framework (Improved)

Introduction:

The North-East, despite its strategic importance, faces persistent internal security challenges.

Body:

Key issues include insurgency, ethnic tensions, border disputes, and weak governance. In the past decade, peace accords like the Bodo, Bru-Reang, Karbi, and ULFA agreements have aimed at conflict resolution.

Conclusion:

Sustained peace requires effective implementation, development, and inclusive dialogue with all stakeholders.

Introduction

The eight states of India's North-Eastern region, lying between international borders and complex terrain, have long faced multifaceted internal-security challenges.

Concurrently, the government has advanced multiple peace accords and agreements over the past decade to stabilise the region and integrate erstwhile insurgents. This answer outlines the key challenges and then maps the major peace initiatives since 2014.

Body

A. Major Challenges to Internal Security & Peace Process

1. Multiplicity of insurgent groups and complex demands

- Numerous militant organisations operate, often with overlapping or competing agendas (e.g., United Liberation Front of Asom (ULFA), National Liberation Front of Tripura (NLFT), National Socialist Council of Nagaland (IM) (NSCN-IM)).
- Splinter groups and factions hinder negotiations and pose renewal risks of violence.

2. Ethnic and identity-based conflict

- Competing tribal, ethnic and community claims (for land, autonomy or resources) strain peace efforts. E.g., Manipur's inter-community tensions overlap with broader insurgency dynamics.
- Under-development and sense of alienation amplify grievances.

3. Geographical and border challenges

- Difficult terrain and porous international borders (with Myanmar, Bangladesh) allow insurgents to slip across safe havens and sustain logistics.
- Logistical challenges hamper law-enforcement, surveillance and development outreach.

4. Governance, development deficits & trust-deficit

- Weak governance, limited infrastructure and low economic opportunities create space for insurgency.
- Past broken promises and inadequate rehabilitation lead to distrust between state and former militants or communities.

5. Inter-state and intra-state boundary/territorial disputes

- Disputes between states and within hill-plains regions generate instability and complicate peace processes.

Major Peace Accords & Agreements in North-East India (2014–2024)

Year	State/Region	Accord/Agreement	Key Features
2014	Meghalaya	ANVC MoS (24 Sept 2014)	751 cadres surrendered; ended ANVC insurgency in Garo Hills.
2019	Tripura	NLFT (SD) MoS (10 Aug 2019)	88 cadres & 44 arms surrendered; ended major NLFT faction violence.
2020	Assam	Bodo Peace Accord (27 Jan 2020)	~1,615 cadres surrendered; created Bodoland Territorial Region.
2020	Tripura	Bru–Reang Agreement (16 Jan 2020)	Permanent settlement of 37,000 displaced Bru families; resolved refugee crisis.
2021	Assam	Karbi Anglong Agreement (4 Sept 2021)	Over 1,000 cadres surrendered; ended decades-old Karbi insurgency.
2022	Assam	Adivasi Accord (2022)	Armed groups from 8 Adivasi/tea-tribe communities surrendered; tribal integration.

Why is maritime security vital to protect India's sea trade? Discuss maritime and coastal security challenges and the way forward.

Model Framework (Improved)

Introduction:

India relies heavily on maritime routes for trade, energy imports, and strategic outreach.

Body:

Challenges include piracy, terrorism (e.g., 26/11 attacks), smuggling, and porous coastal borders. Institutional overlap weakens coordination.

Conclusion:

Strengthening maritime domain awareness, coastal policing, port infrastructure, and regional naval cooperation is essential to secure trade and ensure national security.

Introduction

India, with a coastline of over **7,500 km** and 12 major ports, handles **around 95% of its trade by volume** and **70% by value** through the sea. Maritime security is, therefore, a critical pillar of India's economic growth, energy security, and strategic influence, particularly in the **Indian Ocean Region (IOR)**.

Why Maritime Security is Vital for India's Sea Trade

1. Economic Dependence on Sea Lanes

- India's trade routes pass through crucial chokepoints like the **Strait of Malacca** and **Bab-el-Mandeb**.
- Disruption here can cripple trade and raise fuel import costs.

2. Energy Security

- Over **80% of India's crude oil** is imported via maritime routes.
- Securing Sea Lines of Communication (SLOCs) is vital to avoid supply shocks.

3. Strategic Interests in the Indo-Pacific

- China's growing presence via its "String of Pearls" strategy necessitates India's maritime vigilance.

Maritime and Coastal Security Challenges

1. Piracy and Sea-Borne Crime

- Incidents near the Gulf of Aden and Eastern African coast still pose risks.

2. Terrorism and Infiltration

- Post 26/11 Mumbai attacks, vulnerabilities in coastal policing became evident.

3. Illegal Fishing and Smuggling

- Loss of marine wealth and revenue due to foreign vessels in Indian EEZ.

4. Institutional Fragmentation

- Multiple agencies (Coast Guard, Marine Police, Navy, Customs) with overlapping roles reduce operational synergy.

Way Forward

1. Integrated Maritime Security Architecture

- Strengthen **National Maritime Domain Awareness (NMDA)** project for real-time surveillance.

2. Coastal Policing Reforms

- Modernize marine police, improve training and inter-agency coordination.

3. Regional Cooperation

- Enhance cooperation through **IORA** and **QUAD**, conduct joint naval exercises like **MALABAR** and **MILAN**.

4. Infrastructure and Blue Economy

- Develop port infrastructure under **Sagarmala Project**, boost shipbuilding, and ensure secure trade corridors.

Conclusion

Maritime security is not just about defence, but also about protecting India's economic arteries. With rising trade volumes and strategic interests in the Indo-Pacific, India must build a resilient, coordinated, and forward-looking maritime security framework to ensure safe seas and sustained growth.



Thank you

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