

ENVIRONMENT

PRE-CONTEXT

CARBON MARKETS

THE HINDU, PG.NO: 8.

News: "Giving shape to India's carbon credit mechanism".

- **About Carbon Markets:**
 - Carbon markets promote climate action by enabling the **trading of carbon credits**, which are earned through reducing or removing GHGs from the atmosphere.
 - Credits are achieved by actions like shifting from **fossil fuels to renewable energy sources and enhancing or conserving carbon-rich ecosystems** such as forests.
- **Emission control mechanisms:**
 - **2 methods:**
 - Perform, Achieve, Trade (**PAT**) method, setting targets for efficient use of energy to reduce emissions.
 - Carbon Market System.
 - **India currently follows PAT method.**
 - **Now India is making its transition from PAT** to its own carbon market system similar to European Union Emission Trading system (ETS).
- **PAT method:**
 - India launched this in 2012 as one of its eight missions comprising the **National Action Plan on Climate Change**.
 - **Bureau of Energy Efficiency** is the regulator to reduce specific energy consumption in energy-intensive industries.
 - It uses market-based mechanism where excess energy savings can be certified and traded.
- **Emission Trading (Cap and Trade):**
 - Market based approach to controlling emissions by setting emission caps for polluters.
 - **Focus solely on emission ceilings**, no energy efficiency standards are considered.
 - **Provides economic incentives** for reduction of emissions to polluters.
 - **Energy Conservation (Amendment) Act of 2022** provided a statutory mandate for such a Carbon Credit Trading Scheme (CCTS).
 - Through this, India aims to align its climate commitments under the Paris Agreement with broader economic goals.
- **Issues associated with Carbon Markets:**
 - **Inadequate accountability in credit generation**, leading to instances of greenwashing.
 - **Authenticity of generated carbon credits concern** Eg. Double counting of carbon credits.
 - **Absence of independent third-party verifiers** to assess the quality of carbon reduction projects.
 - **High costs of establishing monitoring**, reporting, and verification systems.
- **Clean Development Mechanism:**
 - One of the flexible mechanisms **Kyoto Protocol**.
 - CDM allows **industrialised countries** to carry out **climate-friendly projects in developing countries**.
 - **Certified Emission Reduction (CER) units** are awarded in return to industrialised nations.
 - These CER units can be traded or used to meet their own emission reduction goals.

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- By 2011, **India had become the world's second-largest supplier of these CER units**, following China.
- **India Nationally Determined Contributions: related to energy**
 - **Reduce emissions intensity** by 45% by 2030 from 2005 level.
 - Generation of **50% of total electricity from non-fossil fuel sources** by 2030.
- **Bureau of Energy Efficiency (BEE)**
 - Statutory body under **Energy Conservation Act 2001**.
 - Works under **Ministry of Power**.
 - Primary objective of reducing energy intensity of the Indian economy.
 - Assigns Energy codes for **Commercial buildings**.
 - Develops **minimum energy performance standards** for equipment and appliances under Standards and Labelling.

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GOVERNANCE

PRE-CONTEXT

CENSUS

THE HINDU, PG.NO: 8.

News: "Counting right."

- A **census is a periodic official count of a population**, which gathers details like age, gender, and occupation.
- It helps govt. in planning and resource distribution.
- **Census:**
 - **First Census** in India was completed in **1881**, initiated by **Viceroy Lord Mayo**.
 - **First census after independence was in 1951**, latest being 2011.
 - In India census is conducted by **Office of Registrar General and Census Commissioner of India**, under **Ministry of Home Affairs**.
 - It is an **Union list item of 7th schedule** and conducted under **provisions of Census Act 1948**.
- **Caste Census:**
 - Last "**Caste census**" was in **1931**.
 - **Caste Census is not backed by any specific statute (law)** but Census is conducted under **Census Act 1948**.
 - **India has counted and published caste data** from 1951 to 2011 **of the Scheduled Castes and Scheduled Tribes only**.
 - **Socio-Economic and Caste Census** was conducted in 2011 but never released.

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AGRICULTURE

PRE-CONTEXT

FERTILISERS

THE HINDU, PG.NO: 14.

News: "For farmers, daily pursuit of scarce DAP in sowing season"

Current scenario:

- India is the second-largest consumer of fertilisers globally — **MoCF annual reports 2023**.
- **Urea:** 15-20% of its total is imported.
- **Diammonium Phosphate (DAP) and Muriate of Potash (MOP):** 60-70% of phosphorus and 80-90% of potash requirements are met through imports.
- **India's fertiliser imports between 2018-21** were mostly from countries such as China, Russia, Saudi Arabia, UAE, Oman, Iran, and Egypt.

Challenges for indigenous production of fertilisers:

- **Limited Reserves:** India possesses about 3% of the world's phosphate rock reserves, primarily located in Rajasthan, Andhra Pradesh, and Madhya Pradesh.
- **Urea production in India is heavily reliant on LNG:** (Liquefied Natural Gas) where its prices have been volatile, making domestic urea production costlier compared to imports.
- **Energy Shortages:** Frequent power outages and energy shortages disrupt fertiliser manufacturing processes.
- **Emission Standards & stricter environmental regulations:** increase compliance costs and necessitate investments in cleaner technologies.

Types:

Chemical fertilisers:

- These are **synthetically produced**, containing specific nutrients like nitrogen, phosphorus, and potassium.
- They offer quick results but can lead to soil degradation if overused.

Organic fertilisers:

- **Derived from natural resources** like plants, animals, microorganisms etc.
- Eg. Compost, Manure and Biochar.

Bio fertilisers:

- These **contain beneficial microorganisms** that enhance nutrient uptake and soil fertility for example nitrogen, fixing bacteria, phosphate, solubilising bacteria, mycorrhizal fungi etc.

Nutrient Based Subsidy 2010

- **Central Sector Scheme.**
- Implemented by **Ministry of Chemicals and Fertilisers**.
- Subsidy under this scheme covered **Phosphate, Potash and Sulphur**.
- It **doesn't include Urea based fertilisers**.
- **Ideal** Nitrogen, Phosphorus, Potassium ratio for Indian soils should be **4:2:1** but in Punjab 61:19:1 it is **overused**.

Nitrogen:

- Urea is a **Nitrogen rich compound**.
- Urea is primarily produced from **natural gas** in a **two-step process** involving **ammonia** production and subsequent reaction with **carbon dioxide**. This process is known as **Haber-Bosch process**.
- Therefore, for Urea production **India has to import natural gas**.

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- **Ministry of Chemicals and Fertiliser's** statutorily fix **the price of Urea** under Essential Commodities Act, 1955.
- Urea subsidy is a **Central Sector Scheme**.

Phosphorus:

- Produced from **phosphate rock**. It is sedimentary in nature.
- **Second, most commonly used fertiliser** in India after urea.
- **~85 percent** demand is met via **import as Diammonium Phosphate (DAP)**
- DAP is considered one of the world's most commonly used phosphate fertilisers.
- **Budget 2024:** promotion of Nano DAP across all parts of India.

Potash:

- It is **not freely available in elemental form**. Produced from potassium containing minerals.
- India's total potash needs are imported from **Russia, Ukraine** in the form of **Muriate of Potash (MOP)**.
- Recent studies highlights extract of **potash from sugarcane molasses**.

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POLITY

PRE-CONTEXT

MINORITY EDUCATIONAL INSTITUTIONS

THE HINDU, PG.NO: 10.

News: "Can AMU finally claim a 'minority' status?"

What is a 'minority institution'?

- **Article 30(1):** guarantees **religious and linguistic minorities** to establish and manage educational institutions of their choice.
- **Article 30(2):** State must ensure **"equality of treatment"** in granting aid to all educational institutions, regardless of their minority status.
- **Article 15(5):** Minority institutions are exempted from providing reservations for SCs and STs, and may **reserve up to 50% of seats for students** from their own community.
- **T.M.A. Pai Foundation (2002) case:** the Supreme Court clarified that a **'minority' status should be determined based on the demographic composition of the concerned State**, rather than the national population.

Aligarh Muslim University:

- In **1875**, Muslim reformer and educationist **Sir Syed Ahmed Khan** established the **Muhammadan Anglo-Oriental (MAO) College in Aligarh** to offer **modern British education rooted in Islamic values to Muslims**.
- In **1920**, the Aligarh Muslim University Act (AMU Act) passed:
 - Under the Act, **only Muslims** were permitted to be members of the **university's governing body**.
 - Students from other religious communities were also admitted.
- **1965 Amendment to AMU Act:** allowed **President of India to nominate members to governing body** (no more limited to Muslim community).

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- In 2005, the university introduced a policy reserving 50% of seats for Muslim students.
 - Allahabad High Court struck down the policy on the ground that the university did not qualify as a minority institution, since it was established through Central legislation i.e AMU Act 1920.

2024 Supreme Court Verdict:

- Educational institutions established before the Constitution's adoption are **entitled to the protections granted in Article 30(1)**.
- **Statutory enactments recognizing institutions** do not compromise their minority character.
- **An institution retains its minority character** even if its administration is no longer community-based.
- **Recognising an institution as one of national importance** does not inherently diminish its minority character.

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SECURITY

PRE-CONTEXT

LINE OF ACTUAL CONTROL

THE HINDU, PG.NO: 8.

News: "The LAC agreement, the détentes and the questions"

About LAC:

- The concept of the LAC emerged after the **1962 Sino-Indian War**, it separates Indian-controlled territory from Chinese-controlled territory in Himalayan region.
- Unlike the Line of Control (**LoC**) with **Pakistan**, the **LAC with China is not a legally recognized international boundary**.
- **LAC passes through** Ladakh, Kashmir, Uttarakhand, Himachal Pradesh, Sikkim, Arunachal Pradesh.
- **LAC is divided into three sectors:**
 - **Western Sector (Ladakh Region):** The most contentious area, including Aksai Chin.
 - **Middle Sector (Himachal Pradesh and Uttarakhand):** least disputed sector.
 - **Eastern Sector (Arunachal Pradesh):** China claims this area as part of South Tibet (McMahon Line).
- Grabbing of land inch-by-inch is known as '**Salami Slicing**'.

Recent Incidents:

- **Doklam Standoff (2017):** A 73-day military standoff near the India-Bhutan-China tri-junction.
- **Galwan Valley Clash (2020):** First deadly confrontation in over four decades, resulting in casualties on both sides.
- **Current Situation:** China has agreed to restore troops to pre-2020 levels.

Geographical features along LAC:

- **Mountain Ranges & Glaciers:**
 - Karakoram Range, Saltoro Ridge, Ladakh Range, Greater Himalayas.
 - Eastern Himalayas.

Rivers:

- Shyok River, Indus (passes through Ladakh), Pangong Tso (lake in Ladakh).
- Sutlej (Western sector).
- Brahmaputra (Eastern sector).

Strategic Points: Glaciers, Valleys and Plains:

- Siachen Glacier (North of Depsang Plains).
- Daulat Beg Oldie (Air strip of Indian Army).
- Depsang Plains (Eastern Ladakh).
- Karakoram Pass.
- Galwan Valley (Eastern Ladakh).
- Chang Chenmo Valley (eastern Ladakh).
- Nubra Valley (located north to Leh).

- Finger-4 (on banks of Pangong Tso).
- Demchok (Village).
- Spiti Valley (in Himachal Pradesh).

- Doklam Plateau (Sikkim-Bhutan Border).
- Tawang Valley (Arunachal Pradesh).
- Yangtse (Arunachal Pradesh).

Infrastructure:

- **National Highway 1:** Strategic movement towards western LAC.
- Darbuk-Skyok-DBO road.
- **Atal Tunnel:** enhances connectivity in Ladakh near LAC.

Wildlife sanctuaries and National Parks:

- Hemis National Park (Ladakh).
- Khardung La Wildlife Sanctuary (Ladakh).
- Eaglenest Wildlife Sanctuary (Arunachal Pradesh).
- Changlang Tiger Reserve (Arunachal Pradesh).

Tribes:

- **Changpa or Rebo** a semi-nomadic community of Changthang region.

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