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PVTGs IN INDIA



India's Carbon credit trading Scheme

Assessing India's carbon credit trading scheme targets

The Indian government recently announced greenhouse gas emissions intensity of production targets for entities (such as a steel plant) operating within eight of the nine heavy industrial sectors covered in India's Carbon Credit Trading Scheme's (CCTS) compliance mechanism. The eight sectors are aluminium, cement, paper and pulp, chlor-alkali, iron and steel, textile, petrochemicals and petro refineries. So, is there a way to understand whether these are ambitious targets or not?

The first question one needs to ask is this: should we measure ambition at the entity level, or at the sector level or the level of the economy? Our analysis shows that the ambition of India's carbon market targets should be assessed at the aggregate economy-wide level, and not at the level of individual entities or sectors.

An economy-wide lens is more important

We can look at the Perform, Achieve and Trade (PAT) scheme, which is India's flagship energy efficiency programme for large industries. Under PAT, energy-intensive industries are given targets to reduce their energy use; those which exceed their targets can trade the excess savings with others. We analysed performance data from four sectors under the PAT Cycle I (2012-14) and found a mixed but interesting picture. In some entities, the energy used per unit of production (energy intensity) increased but decreased in others. At the sector level, energy intensity rose in two sectors (paper and chlor alkali) and fell in the other two (aluminium and cement). However, when we combined emissions, output and price data from all four sectors and adjusted for inflation, less energy was used, overall, to produce the same amount of economic output.

This shows that even if energy efficiency rises or falls in some entities or sectors, India's overall energy use can still become more efficient. We



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The ambition of carbon market targets should be assessed at the aggregate economy-wide level, and not at the level of individual entities or sectors

found similar behaviour across other PAT cycles and sectors. These observations give us a useful insight – India's PAT scheme was able to effectively use market mechanisms to achieve energy intensity reduction at an aggregate level. The decrease in overall energy intensity, even as it rose for some entities, shows that the market mechanism worked; those companies were able to buy energy efficiency certificates instead of undertaking costly in-house changes.

But, this in itself does not tell us if the aggregate energy intensity reduction was aggressive or business-as-usual. This does, however, tell us that one should only analyse the aggregate target to infer whether it was aggressive or not. That is, for an externality-driven market, achieving reduction at an aggregate level is far more important than achieving the same at the entity level for 'all' entities. An emissions trading scheme does not bother about individual entities or sectors. It bothers about the economy-level aggregate effect, which is where, ideally, the ambition should be evaluated.

But are not entity or sector-level targets important to reduce emissions as well? A research paper by the Council on Energy, Environment and Water (CEEW) shows that entity or sector-level targets only determine financial transfers across entities and sectors, and not the overall emission intensity decline.

Comparing the new CCTS targets with historical sector-level performance under the PAT scheme also is not the most meaningful approach to assess ambition. Just because the reduction in emissions in the past has been modest at the industry level, it cannot be the case for the future. Our mitigation actions have to progressively become more ambitious than in the past. Therefore, only a comparison with a future trajectory aligned with a pathway towards India's stated Nationally Determined Contributions

(NDC) and a 2070 net-zero future is relevant. While the industry sector-specific CCTS targets cannot be directly compared with the economy-wide NDC target, economy-wide modelling assessments can give useful information in this regard.

Emissions intensity to decline

According to our recent modelling of a 2030 NDC-aligned emissions reduction scenario for India, the carbon dioxide emissions intensity of India's energy sector (per unit of GDP) is expected to decline at an average annual rate of 3.44% between 2025 and 2030. In comparison, the emissions intensity of value added (EIVA) in India's manufacturing sector is projected to decline by at least 2.53% annually over the same period. This suggests that in the near-term, industry may decarbonise at a slower pace than other sectors – particularly the power sector, which has more low-cost mitigation opportunities.

Against this backdrop, the combined average annual EIVA reduction for the eight sectors based on current CCTS targets – indicative of sector-specific commodity price data (a rough proxy for value added), and projected production growth rates – is estimated at 1.68% between 2023-24 and 2026-27. Early signs suggest that the industrial targets under CCTS may not be ambitious enough.

While this is not directly comparable since entities covered under the carbon trading scheme represent only a portion of India's overall manufacturing base, it is still the most relevant benchmark available until detailed modelling is done for all sectors. Ultimately, it is the aggregate decline that will determine whether India's effort is truly ambitious.

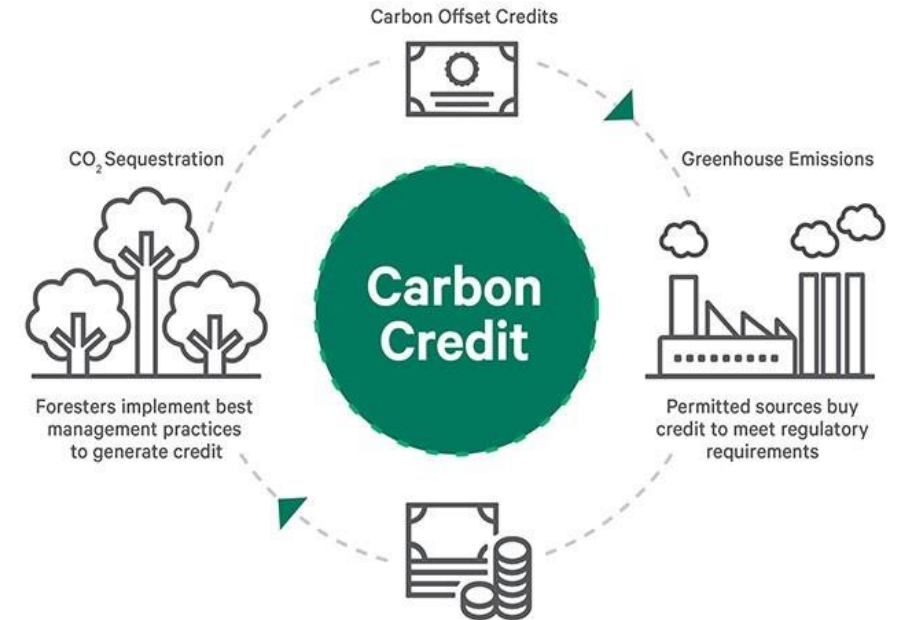
The views expressed are personal

Carbon Credit Trading Scheme (CCTS)

- ❑ The Indian government announced greenhouse gas emissions intensity targets for entities in eight of the nine heavy industrial sectors participating in the Carbon Credit Trading Scheme's compliance mechanism.

What is CCTS?

- ❑ The Carbon Credit Trading Scheme (CCTS) is a market-based framework developed under the **Indian Carbon Market (ICM)** to regulate and trade carbon credits.
- ❑ It aims to **accelerate India's transition to a low-carbon economy** by assigning a monetary value to greenhouse gas (GHG) emissions.
- ❑ **Objective:** The primary aim of CCTS is to decarbonise industrial sectors by shifting focus from energy efficiency (**PAT Scheme**) to **GHG emissions** intensity reductions.
- ❑ The CCTS is overseen by the **Bureau of Energy Efficiency (BEE)** and the National Steering Committee for Indian Carbon Market (NSCICM), ensuring transparent and accountable governance.



Transition from PAT to CCTS

- ❑ India's earlier Perform, Achieve, and Trade (PAT) scheme emphasised energy efficiency improvements in energy-intensive sectors through Energy Saving Certificates (ESCerts).
- ❑ The CCTS supersedes PAT, focusing on direct GHG emissions intensity and issuing Carbon Credit Certificates (CCC), each representing 1 tonne of CO₂ equivalent reduced.
- ❑ **Target sectors (Compliance Mechanism):** CCTS mandates participation from eight high-emission sectors: aluminium, cement, pulp & paper, chlor-alkali, iron & steel, textiles, petrochemicals, and refineries.
- ❑ These sectors account for ~16% of India's total GHG emissions.
- ❑ **Power sector exclusion:** The power sector, which contributes ~40% of India's total GHG emissions, is currently excluded from the compliance mechanism but may be included in later phases.

India's Open Ecosystems

Why must India recognise its open ecosystems?

Why are lands classified as 'wastelands' important? Are pastoral communities dependent on them?

Abi Tamim Vanak
Anuja Malhotra

The story so far:

Deserts are often imagined as failures of nature, and barren wastelands in need of redemption. This worldview fuels grand ambitions to "green" the desert, through afforestation, irrigation schemes, or even climate engineering. This gives way to the idea that deserts are broken ecosystems. So pervasive is this vilification, that land degradation is also known as "desertification", and June 17 every year is celebrated as World Day to Combat Desertification and Drought.

Are deserts important?

In truth, deserts are ancient, diverse, and resilient biomes, finely tuned to extremes. They occupy nearly one-third of the Earth's terrestrial surface, and are home to uniquely adapted plants, animals, and

human cultures. It is ironic that humans disregard deserts, when several early civilisations were set in desert climates, whether in early Mesopotamia, Egypt, or the Indus valley. Indeed, some historians argue that it is these very harsh desert conditions that prompted humans to develop complex societies and technologies that could invent ingenious ways of irrigation to survive in otherwise inhospitable conditions.

What about other open spaces?

India's relationship with open spaces is full of contradictions. On the one hand, we fetishise them. Real estate ads routinely promise sweeping lawns with names like Savana or Utopia. But when it comes to the country's own vast open natural ecosystems such as grasslands, savannas, scrublands and open woodlands, we have done the opposite. These landscapes have been systematically ignored in policy or worse,

actively erased. On official maps, millions of hectares of these ecosystems are classified as wastelands, a term inherited from colonial land-use categories. In policy terms, a wasteland is land waiting to be fixed, often by planting trees, converting it for agriculture or paving it over for industry. What should be protected and stewarded has instead become a target for transformation. India's deserts, grasslands and savannas are home to species found nowhere else: the Great Indian Bustard, the caracal, the Indian wolf etc. These ecosystems also store carbon, not in big trees above ground but rather, deep in the soil.

Equally important are the communities dependent on them. Millions of pastoral groups such as the Dhangar, Rabari, Kuruba etc. depend on these ecosystems for grazing. When we fence off grasslands or plant "forests" on them, it's not just ecology we damage but also livelihoods, mobility, and local knowledge systems. In

many cases, pastoralist groups are also stewards of biodiversity and ecosystem health. However, Indian grasslands and pastoralist systems have not received the desired protection and management.

What should be the road ahead?

Rather than trying to turn deserts into forests, we should study how life thrives without abundance. This is not to say that land degradation should not be addressed. Reversing degradation in drylands requires careful restoration that respects native vegetation, focuses on soil and moisture conservation, and draws from indigenous knowledge of land management. Low-tech solutions like water harvesting, rotational grazing, and protecting natural regrowth often outperform greenwashing projects that aim to plant millions of trees to "green" the desert. We need policies that recognise ecosystem diversity, reward soil carbon storage, and support pastoralist land use. A functioning desert or savanna, with its intricate food webs, seasonal rhythms, and cultural continuities, is far more alive than a failed monoculture plantation. Perhaps it is time to rename World Day to Combat Desertification and Drought to World Day to Combat Land Degradation, and give deserts their respectable name back.

The authors are with the Ashoka Trust for Research in Ecology and the Environment.

Context:

- ❑ There is urgent need to re-evaluate India's land-use policies, as vast natural open ecosystems like deserts, grasslands, and savannas continue to be wrongly classified as "wastelands."
- ❑ This misclassification has led to ecological damage and threats to pastoralist livelihoods, sparking calls for policy reform and ecosystem recognition.

The problem

❑ India's deserts, grasslands, scrublands, and savannas are often **misclassified as “wastelands”**—a colonial legacy that continues in land policy today. This has led to:

1. Afforestation drives on natural grasslands
2. Infrastructure development in ecologically sensitive open habitats
3. Neglect of pastoral communities who depend on these ecosystems

❑ Instead of valuing these landscapes, the state has sought to “fix” them, overlooking their **ecological importance and cultural relevance**.

Desertification” is wrongly seen as synonymous with land degradation. This reinforces the idea that **deserts are degraded lands**, which is not accurate.

Why Are Deserts and Open Ecosystems Important?

Deserts and drylands cover 33% of Earth's land area. Unlike tropical forests, grasslands and deserts store carbon in soils, making them vital for climate regulation. They are home to uniquely adapted flora and fauna, such as: *Great Indian Bustard*

Jarawa Tribe in Andaman Islands

'Reaching Jarawa tribe of Andaman Islands for Census will not be tough'

Bindu Shajan Perappadan

Abhinav Lakshman

NEW DELHI

Conducting the 2027 Census among the six main indigenous tribes in the Andaman and Nicobar Islands will not be tough as the Union government has already made contact and is running several welfare measures for these tribes, says physician Ratan Chandra Kar, speaking to *The Hindu*.

The government has announced that the 16th Census will take place in two phases, with the reference date of October 1, 2026 in snow-bound areas such as Ladakh, and March 1, 2027 in the rest of the country.

Dr. Kar, who played an important role in providing healthcare to the Jarawa tribe of the Andaman Islands, began his work with the tribes in 1998, combating a devastating measles outbreak in 1999 that threatened the tribe's existence.

The Jarawas are one of the world's oldest surviving tribes and are mostly hunter-gatherers, living in nomadic bands of 40 to 50 individuals.

Explaining the population growth trajectory of the tribe, he says the Jarawa met the local population in September 1998.



The Jarawas, one of the world's oldest surviving tribes, are mostly hunter-gatherers.

of the Central government's successful attempt to establish meaningful contact with them, winning their trust and developing friendly relations," Dr. Kar says.

He explains that in 1998, the population count was more of a "guess or estimate" based on limited contact but that the population count as of 2025 is "far more accurate" given the extent of contact made since then and the use of satellite imagery for this purpose.

Dr. Kar adds that the government has been able to provide sustained, targeted, and proactive medical care as and when required and because of this "we have successfully countered all such occurrences of new diseases/infections (measles, malaria, con-

Context:

- ❑ The Government of India has announced that the **16th Census of India** will be held in **two phases** beginning in 2026, and experts say it will be **possible to include even remote tribal groups like the Jarawas** in the exercise, despite their isolated and protected status.

Tribe	Population (in 2011)	Per cent to total tribe population
<i>Tribes of Andaman Islands</i>		
Sentinelese (estimated)	15	0.05
Onges	101	0.36
Jarawas	380	1.36
Great Andamanese	44	0.16
<i>Tribes of Nicobar Islands</i>		
Shompens	229	0.83
Nicobarese	27168	97.25
Total	27937	100

About Jarawas

- ❑ The Jarawas are one of the **six indigenous tribes of the Andaman and Nicobar Islands**, and are classified as a Particularly Vulnerable Tribal Group (PVTG) by the Government of India.
- ❑ They are among the **oldest surviving hunter-gatherer communities in the world**, believed to be direct descendants of the first humans who migrated out of Africa nearly 50,000–60,000 years ago.
- ❑ The Jarawas live in the **South and Middle Andaman Islands**, especially within the Jarawa Tribal Reserve (JTR).
- ❑ Their **forest homeland is legally protected** and largely inaccessible to outsiders without government permission under the Andaman and Nicobar Protection of Aboriginal Tribes Regulation (ANPATR), 1956.
- ❑ Population: **Around 400–500 individuals**. They live in small nomadic bands of 40–50 people, moving between seasonal camps.
- ❑ They are **recognised as a Scheduled Tribe (ST)** under the Constitution

About PVTGs

PVTGs are the most vulnerable and backward tribes in India.

There are 75 PVTGs in 18 States and 1 Union Territory (Andaman & Nicobar Islands).

Key Features:

- Pre-agricultural level of technology
- Low literacy
- Economic backwardness
- Declining/stagnant population.

Examples:

- Jarawa, Onge, Great Andamanese
- Bonda, Dongria Kondh (Odisha)
- Baiga (MP), Chenchu (AP/Telangana), Birhor (Jharkhand)



Who are Qualified as Ordinarily Resident

Who are qualified as 'ordinarily resident'?

What does Section 20 of the Representation of the People Act, 1950 state? Why are migrant workers vulnerable when it comes to classifying themselves as ordinarily resident in a particular constituency? Are NRIs allowed to vote? What does the Registration of Electors Rules, 1960 govern?

EXPLAINER

Registration &

The story so far:

The Election Commission of India (EC) has initiated a Special Intensive Revision (SIR) of the electoral rolls in Bihar. This has kindled the debate around the term 'ordinarily resident' for the purpose of being included in the electoral rolls of a constituency.

Who is 'ordinarily resident'?

The electoral rolls are prepared by the EC as per the provisions of the Representation of the People Act, 1950 (RP Act). Section 19 of the RP Act requires that a person is 'ordinarily resident' in a constituency for inclusion in its electoral roll.

Section 20 provides the meaning of the term 'ordinarily resident'. It specifies that a person shall not be deemed to be 'ordinarily resident' in a constituency only because he/she owns or possesses a dwelling house therein. However, a person temporarily absent from his/her place of residence shall continue to be 'ordinarily resident' therein. Persons who are (a) members of armed forces of the Union, (b) armed police force of a State serving outside that State, (c) employed by the Government of India in a post outside India or (d) holding a constitutional office declared by the President in consultation with the EC are considered, along with their spouse, to be 'ordinarily resident' in the constituency where they would have been 'ordinarily resident' but for such posting. Section 20A was added in 2010 to enable non-resident Indians who have shifted out of India, even for long term, to register and vote in the constituency in which their address as per passport is located.

The Registration of Electors Rules, 1960 (REG), notified by the Central government in consultation with the EC, governs the preparation of, and



On a roll: An advertisement van for the SIR in Patna, Bihar, on July 3. <https://www.bhaskar.com/article/7548122>

inclusion/exclusion of names in the electoral rolls as per the provisions of the RP Act.

What are potential issues?

The requirement of being 'ordinarily resident' for inclusion in the electoral roll of a constituency is to ensure that the voter maintains real ties with the constituency that preserves representative accountability. It is also aimed at preventing fraudulent registrations.

The Gauhati High Court in the *Amaneshwar Singh* case (1999), indicated that the term 'ordinarily resident' shall mean a habitual resident of that place. It must be permanent in character and not temporary or casual. It must be a place where the person has the intention to

their home State at regular intervals. They exercise their right to vote in that place where their families and children live and where their properties exist. While they may not be residing permanently in such residence, the philosophy behind being 'ordinarily resident' as opined by the courts is broadly fulfilled with respect to that residence for such migrant workers.

Any migrant has the right to shift his/her vote to their new place of residence anywhere in India if they so desire. However, removal of migrant voters from the electoral roll of their original residence by following a strict interpretation of the term 'ordinarily resident' can vitiate the democratic process. It may result in their disenfranchisement as most of them would not be keen, and neither welcome, to register as voters in their temporary place of work.

What can be the way forward?

The RP Act provides the option to service voters, persons holding a declared office and NRIs to retain the vote in their constituency even though they may not be permanently residing in such place. While it may not be an apple-to-apple comparison, it must be noted that most labourers, short term or long term, migrate on account of lack of opportunities in their region. They continue to have close connections with their original residence and choose to retain their right to vote in such constituency. The RP Act or the REG may be suitably amended to preserve the choice of migrant labourers. Suitable mechanisms, acceptable to all stakeholders, to enable participation of migrant labourers in the elections should be explored. The issue of migrants moving more than once in different constituencies should be addressed separately through Aadhaar seeding.

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THE GIST

Section 20 of the RP Act requires that a person is 'ordinarily resident' in a constituency for inclusion in its electoral roll.

The Gauhati High Court in the *Amaneshwar Singh* case (1999), indicated that the term 'ordinarily resident' shall mean a habitual resident of that place. It must be permanent in character and not temporary or casual. It must be a place where the person has the intention to dwell permanently.

The RP Act provides the option to service voters, persons holding a declared office and NRIs to retain the vote in their constituency even though they may not be permanently residing in such place.

Ordinarily Resident

- Recently, the Election Commission's Special Intensive Revision (SIR) in Bihar has sparked discussions on electoral inclusion, particularly for migrant populations, focusing on the balance between electoral roll integrity and inclusive democratic participation.

Who is an 'Ordinarily Resident'?

1. According to Section 19 of the RP Act, only a person who is an 'ordinarily resident' in a constituency can be enrolled in its electoral roll.
2. Section 20 of the RP Act defines the term 'ordinarily resident'. It states that merely owning or possessing a house in a constituency does not qualify a person as an ordinarily resident.
3. A person temporarily absent from their regular residence (for work, travel, etc.) is still considered ordinarily resident in that location.

Specific categories covered under Section 20:

1. Armed forces personnel.
 2. Members of the State armed police serving outside the State.
 3. Central government employees posted abroad.
 4. Persons holding a constitutional office declared by the President in consultation with the EC.
 5. Their spouses are also considered ordinarily resident in the original constituency.
-
1. The Election Commission of India (ECI) is responsible for preparing electoral rolls under the Representation of the People Act, 1950 (RP Act).


Why 'Ordinarily Resident' Status Matters

The requirement ensures that the voter has a genuine and habitual connection with the constituency.

It maintains electoral integrity, reduces fraudulent registrations, and ensures accountability in representation.

The Gauhati High Court (1999, Manmohan Singh Case) ruled that:

1. The person should be a habitual and permanent resident.
2. There must be an intention to dwell in that place.
3. A reasonable person must accept the individual as a resident.



What is Electoral Roll Revision?

- ▶ **Article 324** of the Constitution gives ECI power over electoral rolls.
- ▶ **Under Section 21 of the RPA, 1950**, rolls are revised annually.
- ▶ **SIR = special one-time revision** with door-to-door verification.

Last SIR in Bihar: 2005

2025 Assembly elections → SIR being done again now.
Objective: Update rolls after 20 years of rapid migration and outdated records.



Thank you

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