



CARBON MARKETS IN INDIAN AGRICULTURE – ECONOMY

NEWS: Carbon markets hold the potential to transform Indian agriculture, turning sustainable farming practices into a lucrative opportunity for farmers while combating climate change.

WHAT'S IN THE MARKET?

Introduction to Carbon Markets in Agriculture

1. Potential Impact:

- Carbon markets can transform Indian agriculture into a sustainable and profitable sector.
- Combats climate change while providing additional income for farmers.

2. Role of Carbon Pricing:

- Acts as a tool to mitigate climate change through compliance and voluntary markets.
- Encourages sustainable practices like agroforestry and reduced greenhouse gas (GHG) emissions.

Types of Carbon Markets

1. Compliance Markets:

- Governed by regulations from governments or international bodies (e.g., UN).
- Imposes emissions caps on companies; excess emissions lead to carbon credit purchases or taxes.

2. Voluntary Markets:

- Operates without regulation.
- Allows organisations to trade credits via mechanisms like Clean Development Mechanism, Verra, and Gold Standard.

Recent Developments

1. Global Momentum:

- COP29 (2024) approved a centralised carbon market under the UN.

2. India's Initiatives:

- Plans for its own compliance and voluntary carbon markets announced in 2023.
- Collaboration with NABARD, ICAR, and state universities resulted in five carbon credit projects listed in Verra.



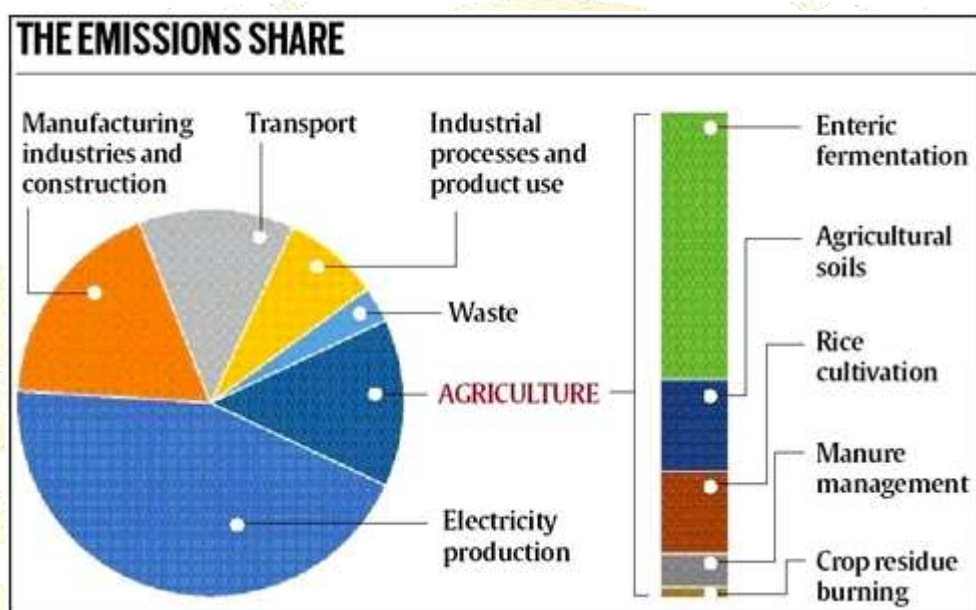
Principles of Carbon Markets

1. Additionality:

- Ensures emission reductions occur only due to carbon credits.
- Excludes farmers already practicing sustainable methods.

2. Permanence:

- Guarantees long-term benefits of practices like reduced tillage.
- Ensures carbon benefits are not reversed due to returning to traditional methods.



Challenges in Current Projects

1. Scale of Operations:

- Over 50 projects targeting 1.6 million hectares aim to generate 4.7 million carbon credits annually.
- However, no projects have yet issued credits or paid farmers.

2. Socio-economic Inclusiveness:

- Marginalised communities, small farmers, and women are underrepresented.
- Higher landownership by non-marginalised castes in carbon projects.

3. Implementation Gaps:

- Lack of communication (45%), training (60%), and financial incentives (28% stopped sustainable practices by Year 2).
- Nearly all participants (99%) have not received payments for carbon credits.



Positive Observations

1. Adoption of New Practices:

- Techniques like zero tillage, intercropping, reduced fertilizers, and micro-irrigation adopted.
- Satisfies additionality condition, showing potential for genuine GHG reductions.

2. Performance of Startups:

- Carbon Core startups focused on carbon credits performed better but lacked inclusivity.

Recommendations for Improvement

1. Social Inclusion:

- Offer higher prices for credits from projects involving smallholders and marginalised communities.

2. Farmer Support:

- Ensure effective communication, training, and timely payments.

3. Collaborations:

- Work with research institutions to select suitable regions and minimize yield penalties.

4. Focus on Implementation:

- Address implementation challenges to build trust and ensure long-term farmer participation.

Future Prospects

1. Technological Advancements:

- Remote sensing, satellite imagery, drones, and sensors can improve monitoring and efficiency.

2. Sustainability Goals:

- Collaboration between policymakers, researchers, and private entities is essential for inclusivity, transparency, and farmer rewards.

3. Building a Thriving Market:

- Focus on long-term scalability by ensuring trust, high-quality credits, and inclusivity in carbon farming projects.

Source: <https://www.thehindu.com/opinion/op-ed/strengthening-the-roots-of-an-agri-carbon-market/article69001526.ece>