

Carbon Farming: A New Income Stream for Indian Farmers?

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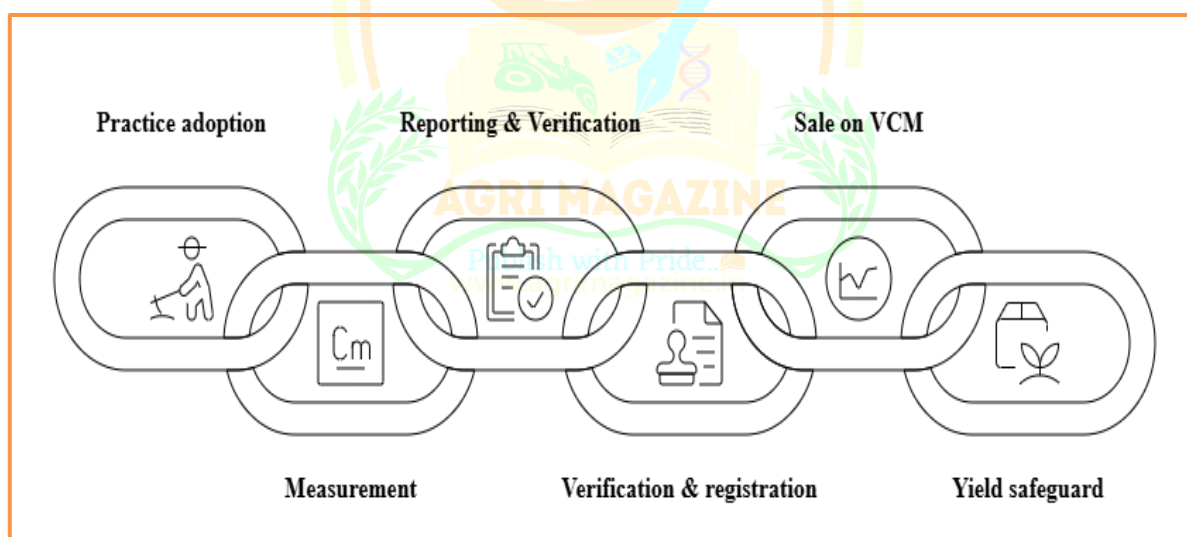
India's millions of farm households sit at the intersection of two urgent global crises, climate change and rural income stagnation, and carbon farming is emerging as a mechanism that claims to address both simultaneously. By rewarding farmers for practices that sequester carbon in soil and biomass, carbon markets promise to convert climate mitigation into cash flow. But how real is this opportunity, and what stands between pilot projects and mainstream adoption?

What Is Carbon Farming?

Carbon farming refers to agricultural practices- reduced tillage, agroforestry, cover cropping, residue management, and biochar application that increase carbon sequestration in soil and plant biomass rather than releasing it as CO₂. Farmers who adopt these practices generate verifiable emission reductions, which are converted into tradeable carbon credits, each representing one tonne of CO₂ equivalent avoided or sequestered. These credits are sold on voluntary carbon markets (VCMs) to corporations seeking to offset their emissions, creating a potential new revenue stream layered on top of conventional crop income.

The Carbon Credit Mechanism

Carbon credit generation in agriculture typically follows a defined pipeline-

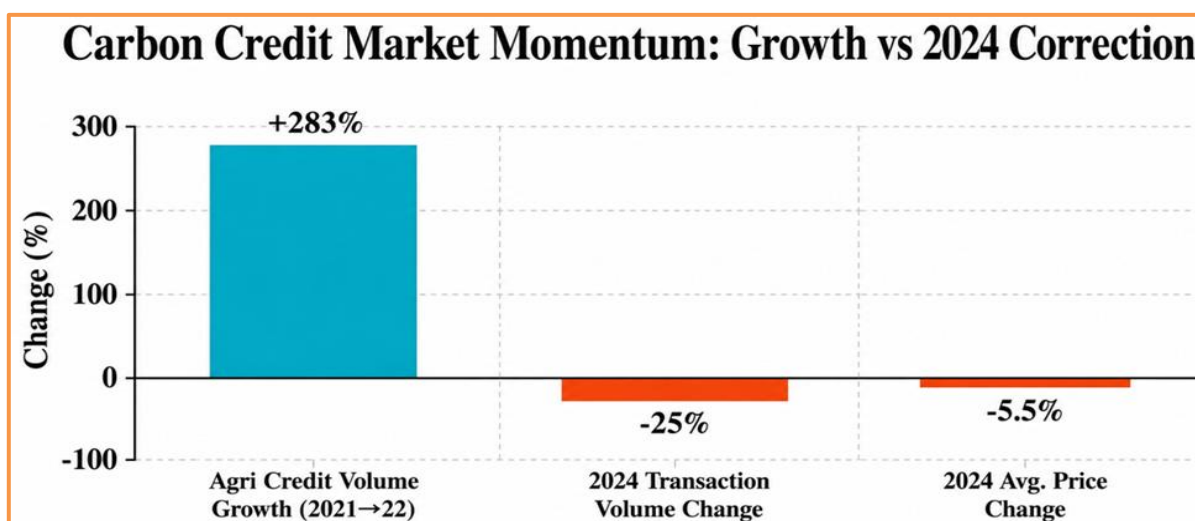
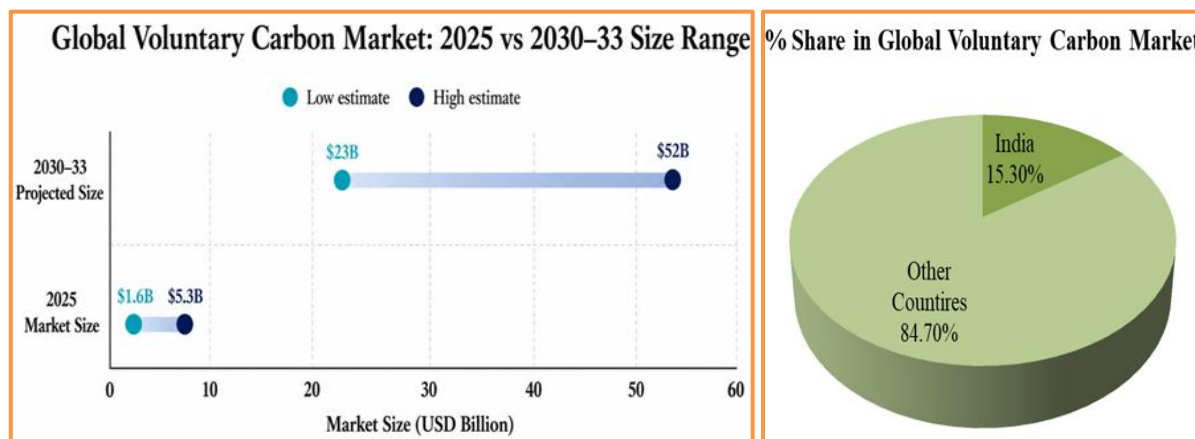


- Practice adoption- Farmers shift to regenerative methods (no-till, intercropping, composting, biochar).
- Measurement, Reporting & Verification (MRV)- Soil organic carbon changes tracked via satellite/AI or field sampling under approved methodologies (e.g., Verra's VM0042).
- Verification & registration- Independent registries (Verra, Gold Standard) certify and issue credits.

- Sale on VCM- Credits sold to corporate buyers; revenue shared with farmers, often through aggregator/agribusiness intermediaries.
- Yield safeguard- Verra disqualifies projects if yield penalty from practice change exceeds 5%.

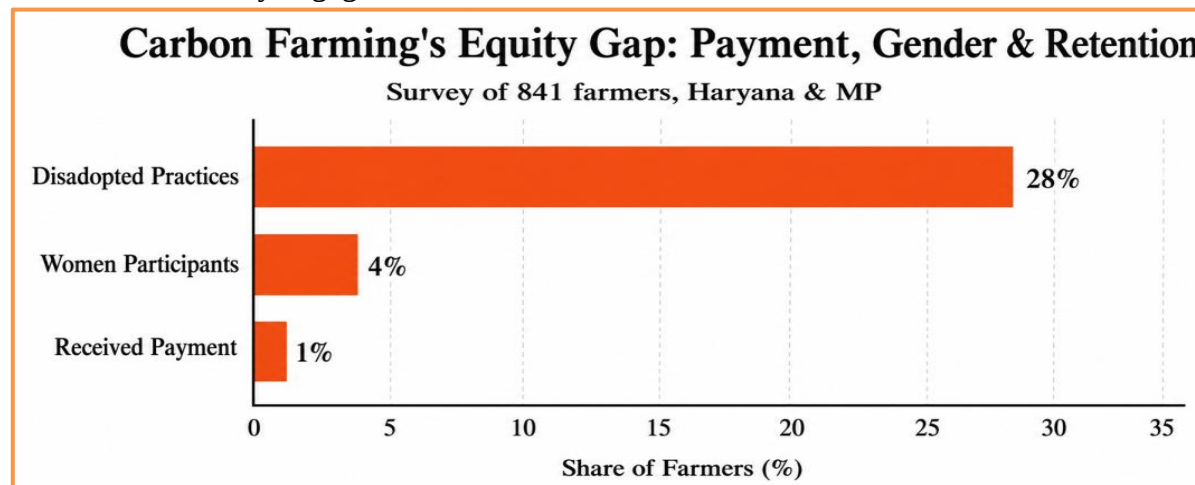
Global and Indian Market Size

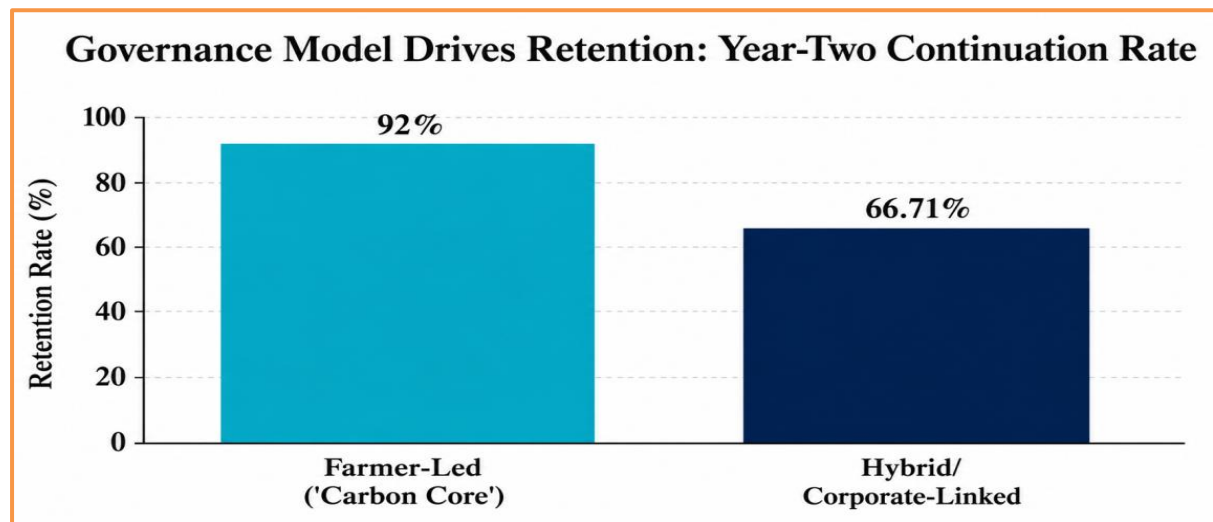
The global voluntary carbon market remains small relative to its hype, but growth projections are steep, and India is capturing a meaningful share.



Farmer-Level Realities

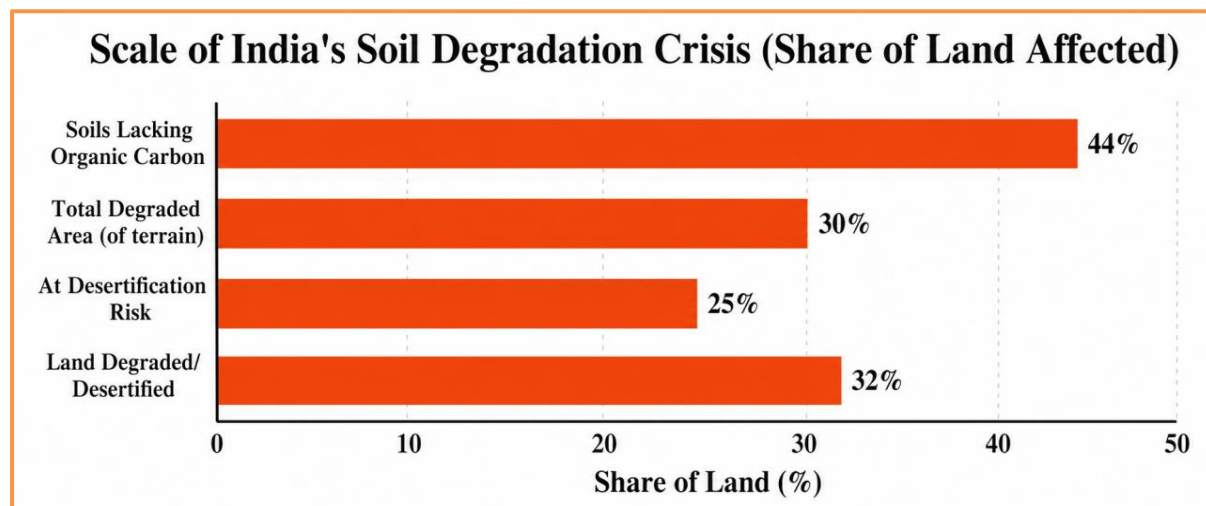
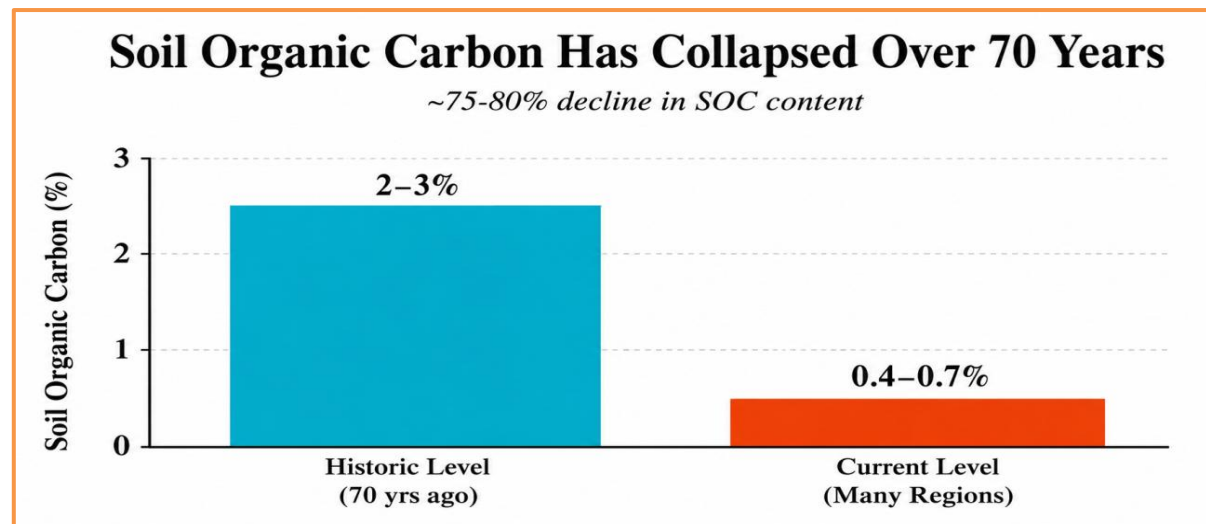
Survey data from actual carbon farming participants reveals a gap between projected and realized benefits which is a critical context for an "opportunities vs. challenges" narrative. This data suggests project design and governance model, not just carbon price- determining whether farmers stay engaged and to what extent.





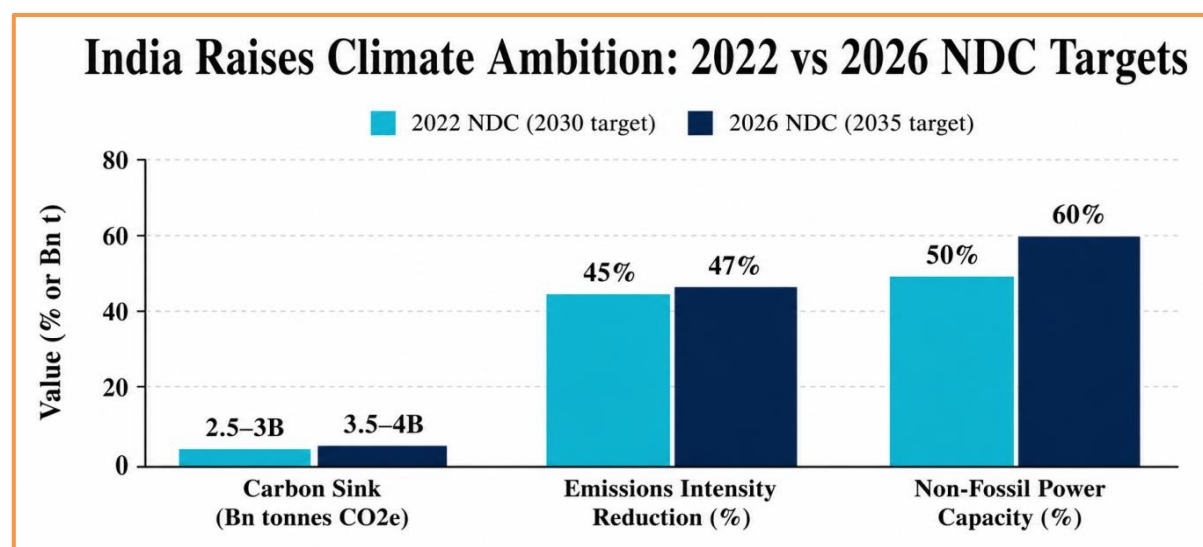
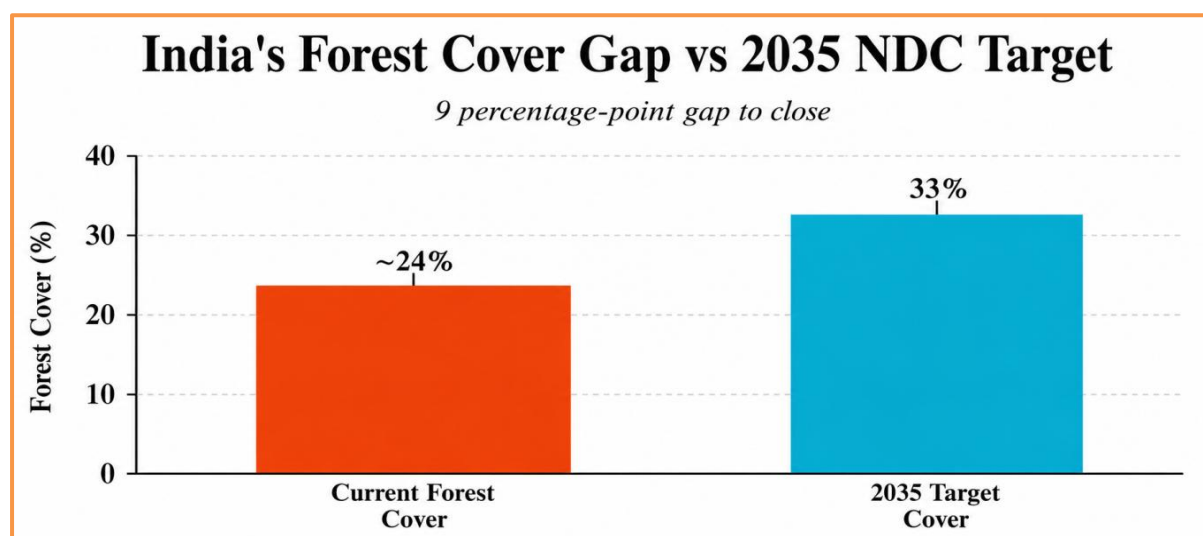
Regenerative Agriculture's Soil Health Rationale

Carbon farming's case rests partly on the severity of India's soil degradation, which practices like reduced tillage and agroforestry aim to reverse



Policy Tailwinds- India's Climate Commitments

India's updated Nationally Determined Contribution (NDC), approved in March 2026, raises the ambition level for forest and tree-based carbon sinks, a signal of policy alignment that could eventually extend to agricultural soil carbon.



Conclusion

Carbon farming sits at a genuinely promising but still unproven junction for Indian agriculture. The macro case is compelling: a global voluntary carbon market projected to grow multi-fold by the early 2030s, India already capturing over 15% of that market, and 50+ domestic projects spanning 16.5 million hectares signal real momentum. This aligns naturally with India's own soil crisis: nearly a third of its land degraded and organic carbon levels collapsing, making regenerative practices like reduced tillage, agroforestry, and biochar as much an agronomic necessity as a climate strategy. India's raised NDC targets further suggest policy tailwinds that could eventually translate into stronger institutional backing for agri-carbon programs. Yet the farmer-level evidence tempers the optimism considerably. Survey data showing that 99% of participating farmers had received no monetary payment, coupled with a 28% practice-dropout rate and just 4% women's participation, reveals that the mechanism's promise has outpaced its execution. The contrast between 93% retention in farmer-led "Carbon Core" models versus 66-71% in corporate-linked hybrids points to a clear lesson: governance design, transparent payment timelines, and farmer-first structuring matter more than carbon price alone in determining whether this becomes a durable income stream or another well-intentioned pilot that fails to scale. Ultimately, carbon farming's success in India will depend less on global market size and more on closing the gap between credit issuance and cash in farmer's hands, turning a climate finance instrument into genuine rural income security.

References (Hyperlinked)

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9. [How will India's new Nationally Determined Contribution accelerate climate action?-The Hindu](#)