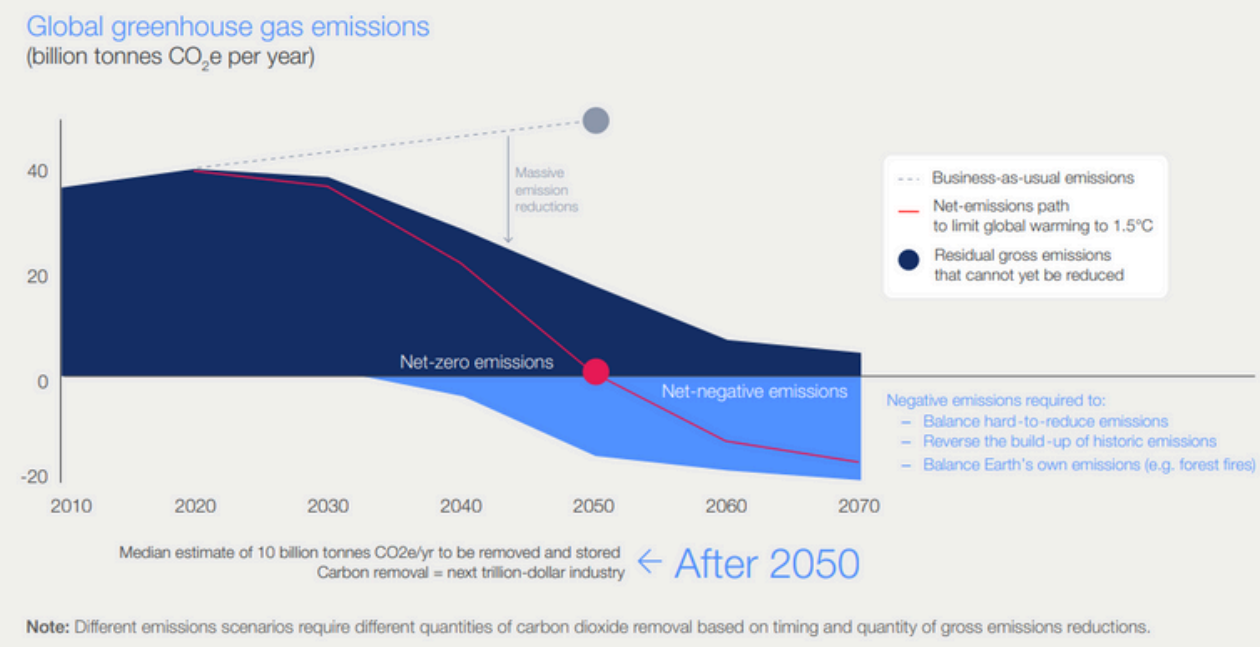
COP30 2025

CRIA
CARBON REMOVAL
INDIA ALLIANCE

UNLOCKING SCALE, CO-BENEFITS, AND GLOBAL IMPACT:

CDR IN INDIA

THE GLOBAL CASE FOR CDR



Beyond net zero: *negative emissions required through carbon removals*

Source: World Economic Forum, 2024

Carbon Dioxide Removal (CDR) is critical for the global climate change agenda. While reductions and avoidance of emissions are essential, they are not sufficient on their own. Durable CDR is necessary to reach Net Zero and reverse the legacy of historical emissions. It is also necessary to address emissions from hard-to-abate sectors.

India, as one of the world's largest emerging economies, will play a pivotal role in shaping the success of global CDR efforts. They country's choices on deploying CDR solutions will have lasting impacts not only domestically but also globally.

INDIA'S CLIMATE VULNERABILITY

125M+ smallholder farmers face climate stress, soil degradation, and food insecurity

Water stress intensifies due to monsoon dependence, falling groundwater, and rising demand

Coastal risks from sea-level rise and cyclones threaten communities

Urban vulnerability grows with unplanned expansion, flooding, heat stress, and water scarcity.

Air pollution & health impacts worsen from crop burning, diseases, and heat stress.

CDR IN INDIA

Offering unmatched advantages, India is uniquely positioned to become a global leader in durable carbon removal. This presents an opportunity to create a transformative economic sector while addressing critical climate challenges.

$90B
Annual Revenue
Potential annual revenue from carbon credit sales

0.9GT
Annual CO_2 Removal
Potential durable CO_2 removal annually from Biochar and ERW

10-30%
Global Contribution
Proportion of global CDR demand India can fulfil

16-35%
Yield Increase
Potential agricultural productivity improvement

INDIA'S DISTINCT ADVANTAGES

Scale

Surplus agri-residues, vast croplands, and extensive basalt reserves make India ideal for large-scale biochar and enhanced rock weathering. Cascade Climate's Weathering Explorer Tool ranks India in the 80–100th percentile for ERW potential. DAC and BECCS are also emerging.

Cost Advantage

Competitive energy, labour, and feedstock costs make India one of the most affordable geographies for deploying durable CDR.

Co-Benefits

CDR in India strengthens agriculture, avoids air pollution, builds resilience for smallholder farmers, creates jobs, and reduces forest fire risks.

- Higher agricultural yields
- Transforming poor-quality soils into productive land
- Improved climate resilience via water retention and soil health
- Enhanced food security
- Lower air pollution from open biomass burning
- Reduced reliance on emission-intensive fertilisers and pesticides

Thriving Ecosystem

India is home to globally recognised innovators - Mati (XPRIZE winner), MASH Makes and Takachar (XPRIZE finalists), Boomitra (Earthshot Prize winner) - and a fast-growing startup ecosystem tailouring CDR models to local crops, regions, and feedstocks.

POLICY SIGNALS

A policy tailwind is beginning to take shape – India is starting to recognise durable CDR within its national carbon market framework

CARBON CREDIT TRADING SCHEME

Biochar is now part of India's CCTS offset mechanism - one of the first official recognitions of CDR in national policy.

The government has also constituted a technical committee on CCTS, where CRIA has been invited to contribute technical expertise, signalling that durable CDR is entering high-level policy discussions.

OTHER POLICY DEVELOPMENTS

High-Level Engagement: NITI Aayog, Indian Government's policy think tank, hosted a national workshop on *Indian and Global Perspectives on Geoengineering*, where CRIA was invited to share recommendations on advancing CDR.

State-Backed Action: Himachal Pradesh launched India's first state-supported biochar initiative, converting forest biomass like pine needles into biochar - reducing forest fires and boosting soil health.

International Cooperation: India signed its first Article 6.2 agreement with Japan under the Joint Crediting Mechanism (JCM). While CDR is not yet listed, CCUS is; and the list is reviewed every 3 years – creating an opening for inclusion of CDR.

Building Knowledge: The Department of Science & Technology (DST) convened a national roundtable on the techno-feasibility of Enhanced Rock Weathering (ERW) in India, where CRIA presented policy and market perspectives. This milestone marks growing recognition of and an important step toward developing national R&D and governance frameworks for CDR.

CATALYSING THE ECOSYSTEM

CDR in India is still nascent, with limited awareness among policymakers, corporate offset buyers, philanthropies, and financiers.

For India to unlock the true potential and emerge as a global CDR powerhouse, it is imperative to present a clear, locally contextual narrative backed by credible data, impact evidence, and collaboration opportunities to the mainstream stakeholders in a cogent manner.

A neutral and proactive platform like the Carbon Removal India Alliance (CRIA) plays a critical role in convening stakeholders, aligning priorities, and driving India's transition into a global CDR powerhouse.

CARBON REMOVAL INDIA ALLIANCE (CRIA)

The Carbon Removal India Alliance (CRIA) is the only non-partisan industry-led coalition and ecosystem organisation dedicated to catalysing and supporting the growth of a thriving durable carbon dioxide removal sector in India. It exists to accelerate the development, commercialisation, deployment, and co-benefits of CDR technologies in India. Through research, advocacy, dialogues and partnerships, and ecosystem-building, CRIA works at the intersection of climate action and innovation.

Most of the leading Indian CDR project developers are CRIA members.

A Growing Coalition

CARBON REMOVAL PARTNERS
MASH MAKES
Mati
Carbon Drawdown Initiative
TAKACHSSR
Carbonfuture
Circonomy
International Biochar Initiative
Tapovanam Biochar
ALCOM
Longstraw Carbon
The Varhad Group
GROUND UP
MittiLabs
ASQI
BIOCHAR BYTE CATALYST FOR CHANGE
LABS Indigram
CBEII CONFEDERATION OF BIOMASS ENERGY INDUSTRY OF INDIA
MariTide
BiocharIND PRESPL APChemi intellecap

Our Partners

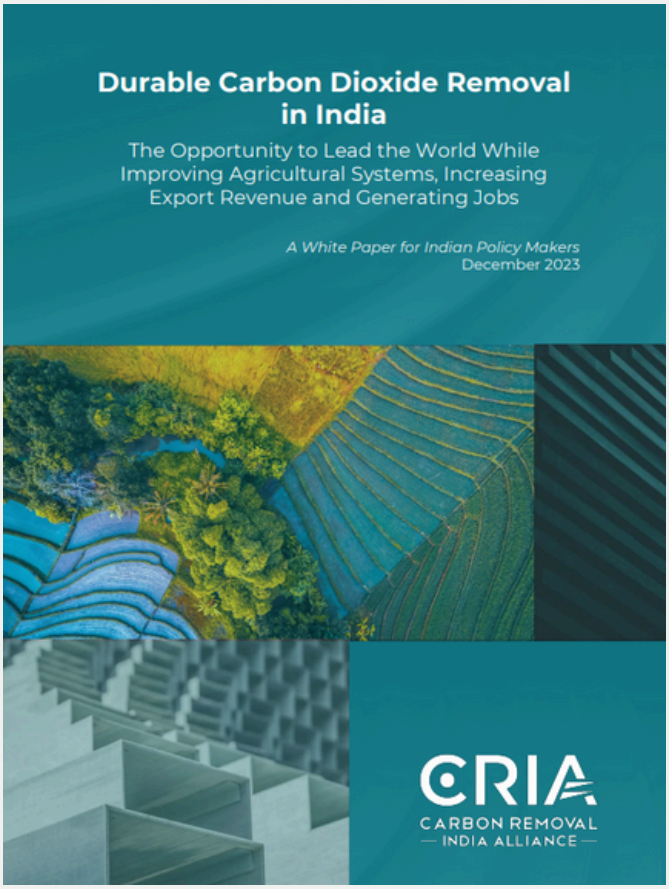
remove
CEEW THE COUNCIL
BioFlux
eCube INVESTMENT ADVISORS PVT LTD

CRIA envisions transforming India into a global nexus of innovation and sustainability, driving the development and deployment of cutting-edge, durable carbon removal technologies.

Through collaborative industry growth, knowledge transfer, and societal engagement, CRIA aims to harmonise economic progress with environmental stewardship, positioning India as a leader in climate resilience and carbon management.

CRIA'S RECENT ENGAGEMENTS

Convening on Biochar for Crop Residue Management & Climate Resilience in Punjab, co-organised by CRIA, GDi Partners (Apr 2025)



CRIA Represents CDR at NITI Aayog Workshop on Geoengineering, New Delhi (Aug 2025)

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