Food and Agriculture Organization of the United Nations

Agri-PDB Platform

# FAST Partnership

## Agri-PDB Platform Learning Event
## “High Integrity Carbon Markets & Agriculture Finance: Building Capacity, Connection, and Action”

FOOD AND AGRICULTURE FOR SUSTAINABLE TRANSFORMATION

# FAST Partnership

**Access to finance**
enhance country capacities to identify and access climate finance and investment.

**Knowledge and capacity**
develop analyses and voluntary guidelines, support capacity development across stakeholders.

**Policy support and dialogue**
ensure agrifood systems are fully embedded and prioritized in climate change policies.

3 Pillars of the FAST Partnership to improve
the QUANTITY and the QUALITY of climate finance to agrifood systems

Food and Agriculture Organization of the United Nations

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# Agenda

- Contextualization of carbon markets: Definition and Types, Supply and Demand
- Voluntary Carbon Market Trends: Quality and Integrity Challenges
- Leveraging carbon markets in agricultural finance and PDBs role
- Risks vs Opportunities
- Enabling conditions, recommendations and key takeaways

# Setting the Stage for Financial Institutions

- Carbon markets hold great potential for the financial sector
- Project developers need capital both as equity and debt
- Project developers need help with marketing, trading, managing risks
- Corporate clients need help sourcing and managing portfolios of carbon credits
- Financial institutions can manage climate risks exposed to policies designed for the net zero global economy
- They play a role in financed emissions (loans, investments, insurance)
- Accelerate the transition to a low-carbon economy

# Live Question poll for the audience:

How do you feel about your level of knowledge regarding Article 6 and carbon markets?

# Why Climate Finance for Agrifood Systems Matters?

- Agrifood systems contribute to ***1/3 of global emissions***
- Current levels of ***public and private climate finance are insufficient*** to meet mitigation and adaptation needs in agrifood systems ~ *USD 1+ trillion gap per year*
- Agriculture holds the ***3rd-largest sectoral mitigation potential***, yet remains underfinanced
- **Agrifood carbon credits** issued between 2003-2023 represent ***only 1% of all VCMs*** ~ *23.2 million agrifood credits issued*

Source: FAO, 2025. Agrifood systems in the voluntary carbon market: Status and prospects

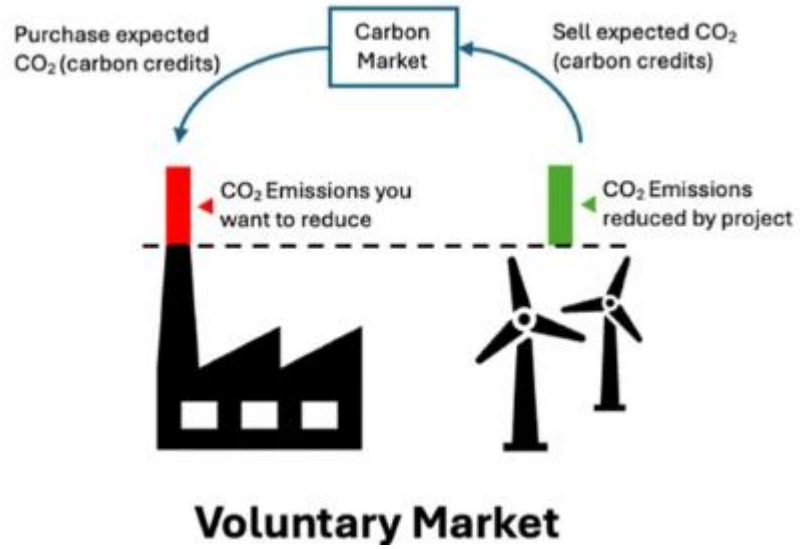
# What are Carbon Markets?

- **Carbon markets** are **systems** where **carbon credits** are **traded**.
- These **credits** represent a **reduction** or **removal** of **greenhouse gases** from the atmosphere.
- *Governments and companies can buy agrifood carbon credits to **offset** their **emissions** or make positive contribution* claims
- PDBs can help the ***carbon markets development*** and the ***carbon credits transaction***

# Types of Carbon Markets

## Voluntary Carbon Markets

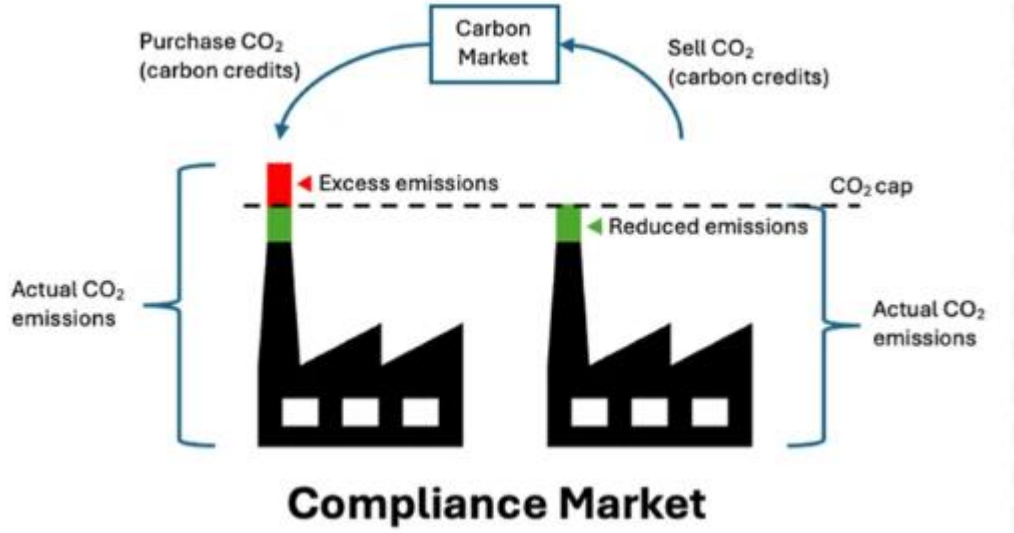
- **Projects** that reduce or remove emissions can **generate carbon credits**.
- **Voluntary** participation
- All sectors




Graphic source: Launchpad IAS, 2025

## Compliance Carbon Markets

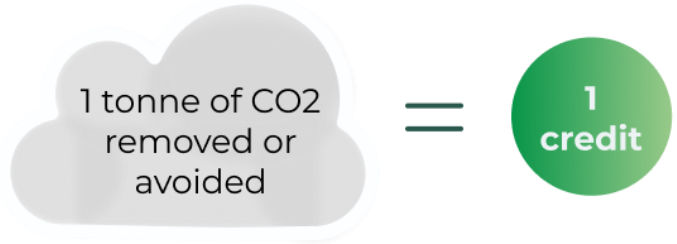
- A regulatory body sets a **CO2 emissions cap** and **issues tradable credits**.
- **Mandatory** participation
- **High-emitting** sectors

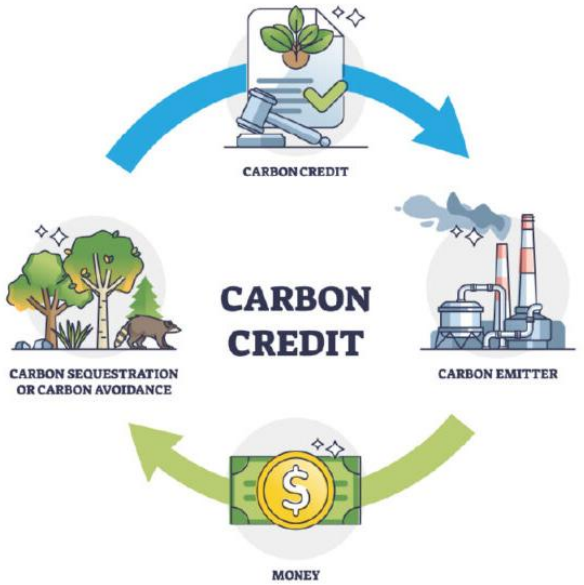



Graphic source: Launchpad IAS, 2025

# What are carbon credits?

- A carbon credit represents a verifiable unit of GHG reduction or removal from the atmosphere, equivalent to 1 tonne of CO2e.
- Carbon **credits** are **generated by activities** that reduce or remove greenhouse gas emissions.
- **Once verified**, these **credits can be traded**.




## Purpose and Function:

Carbon credits are a financial tool to **encourage sustainable practices** and projects that contribute to climate change mitigation.

# Article 6 of the Paris Agreement

## PARIS AGREEMENT 2015

All Parties now have **Nationally Determined Contributions** (NDCs)

**Article 6** provides a mechanism for Parties to meet their NDCs through **cooperative approaches** – i.e., carbon trading

Cooperative approaches can **reduce the global cost of meeting NDCs by more than 50%** by flexibility directing finance towards the most cost-effective mitigation actions (IETA 2019)

## ARTICLE 6

**A6.2** Provides **guidance** on cooperative approaches and on how to account for the transfer of mitigation outcomes (MOs) & the conditions for tranfer

**A6.4** Establishes an **international crediting mechanism** to generate Mos Establishes a centralized mechanism PACM replacing the Clean Development Mechanism (CDM)

**A6.8** Addresses **non-market approaches (NMA)** among governments. NMAs are not regulated under A6.2 or A6.4

Source: Climate Transparency Platform, 2025

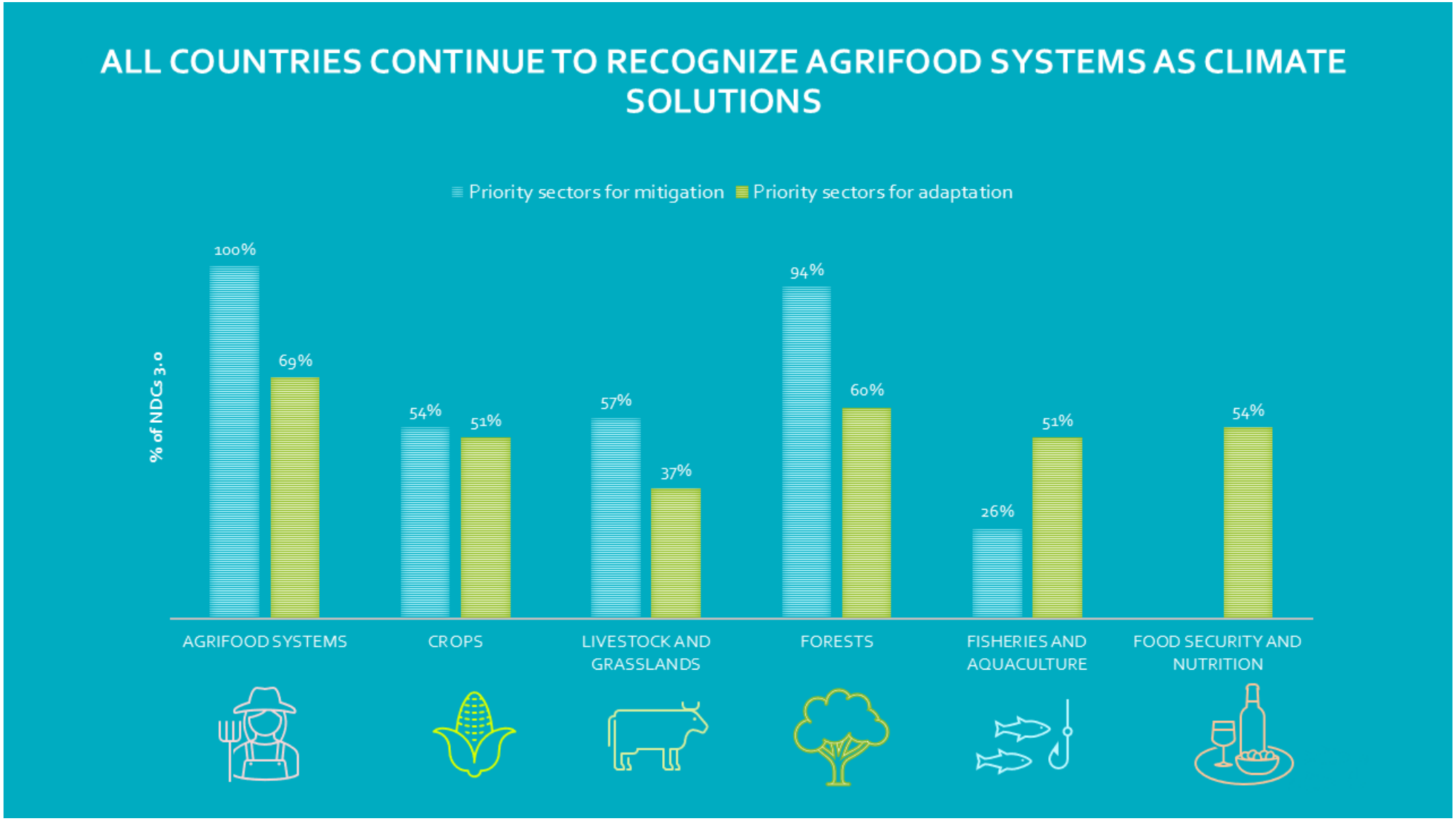
# Article 6: A New Opportunity for Agrifood Systems Finance

The agreed **UNFCCC Article 6 rulebook** unlocks **new opportunities** for countries to:

- Access additional finance
- Invest in NDC implementation
- Support **resilient and low-emission agrifood systems**

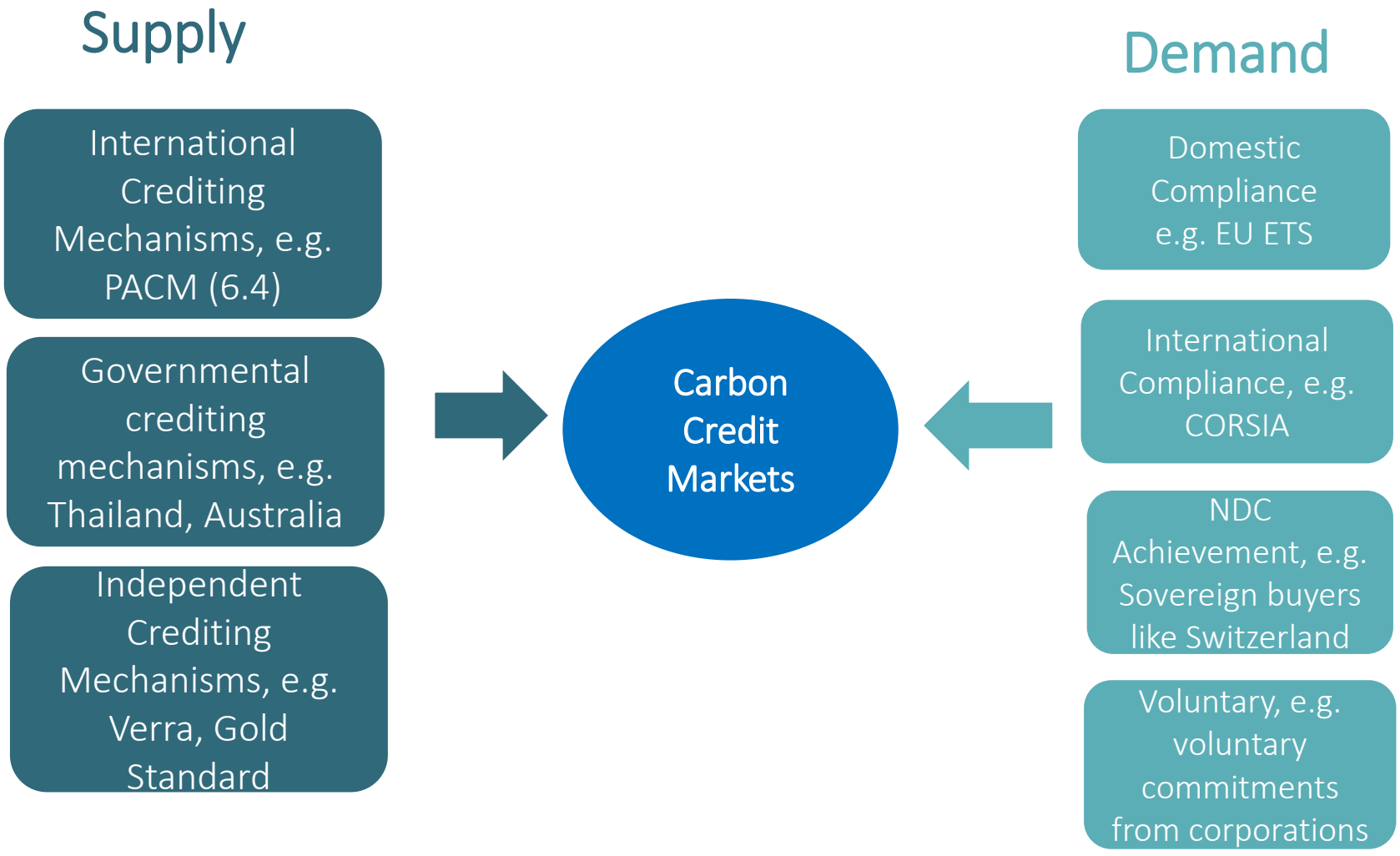
Carbon finance offers significant potential, yet **agriculture and food systems remain only marginally covered** to date (source: FAO, 2025)

# Agrifood systems and NDCs representation




Source: FAO, 2025

# Drivers of Supply and Demand in Carbon Markets




Note: While there is crossover between categories, not all sources of carbon credits are fully fungible across demand segments. For example, international compliance and nationally determined contribution achievement require authorized credits that include a corresponding adjustment.

Source: States and Trends of Carbon Pricing, 2025

# VCM development 2005-2024

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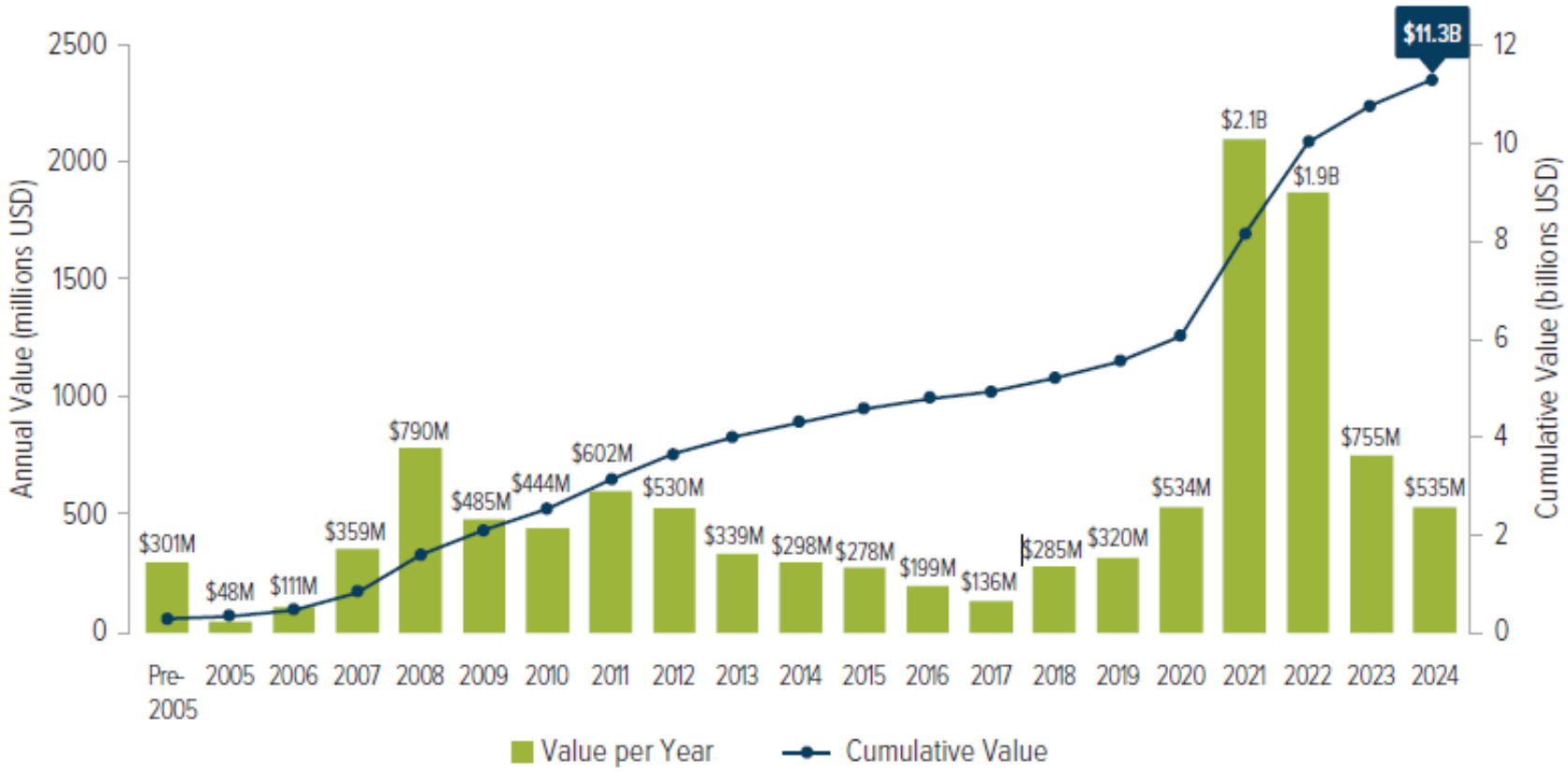


Ecosystem Marketplace: State of the Voluntary Carbon Market 2025

# Market Scenarios

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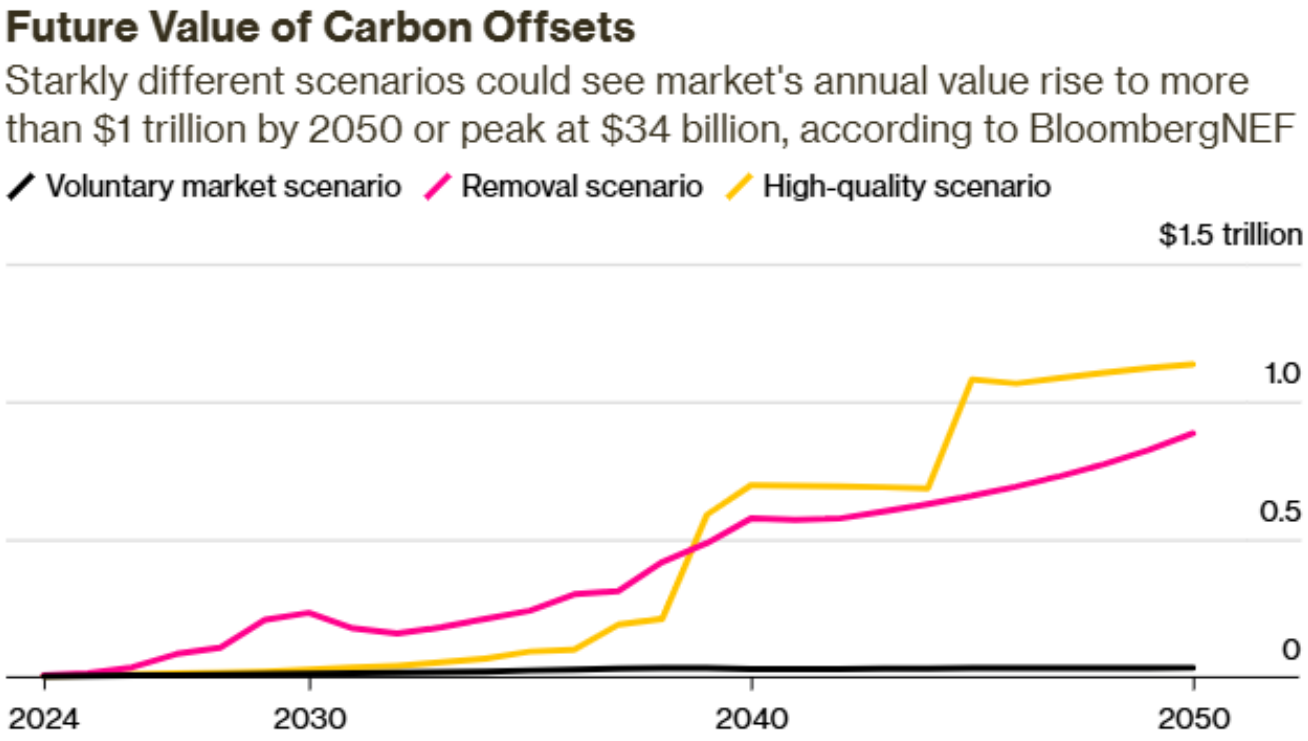

# Market share by sector vs mitigation potential

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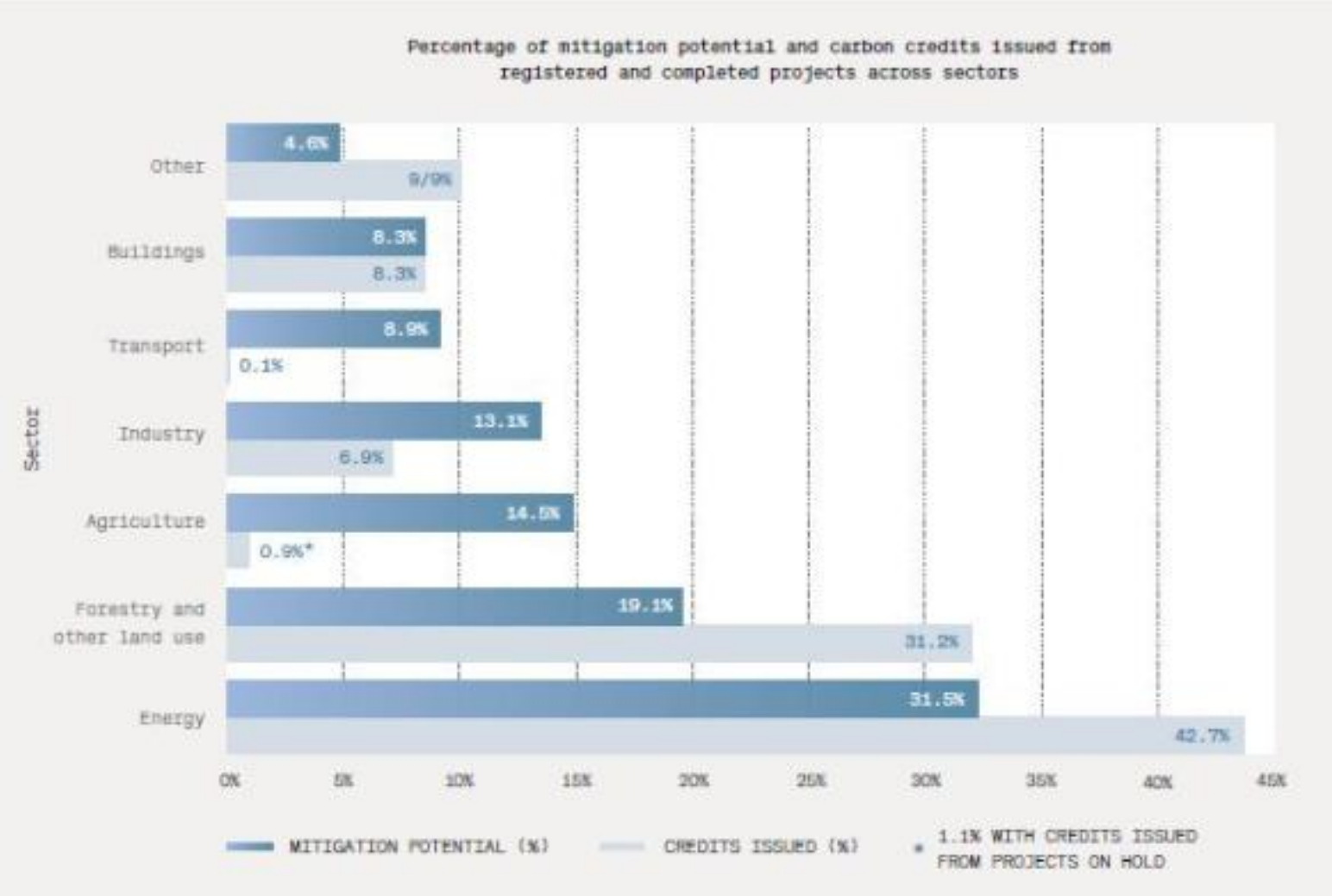

# Broad scope of agrifood systems in Agrifood Systems in the Voluntary Carbon Market: Status and Prospects

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**CH4 and N2O emissions**:
flooded rice, livestock, N fertilizers


**$CO_2$: Energy:**
- Fertilizer production
- Irrigation management
- On-farm energy use
- Transportation

**$CO_2$: Ag Waste and energy:**
- Manure management & methane digesters
- Agricultural residues for energy
- Compost
- Dairy waste
- Biochar production & use

**Carbon removal:** agroforestry (A/R), grassland management, cropland soil carbon sequestration



**$CO_2$, $CH_4$, $N_20$: Food systems:**
- Food loss and waste
- Dietary shifts

*Not included* : agriculturally-driven deforestation, cookstoves, landfill

# Rationale for PDBs involvement in carbon finance

Emerging markets and developing economies face a ***climate financing gap*** of USD 2 trillion per year by 2030 to meet their climate targets and transition to cleaner energy systems.

↓

Carbon markets offer a potential means of ***bridging this financing gap***.

↓

PDBs play a key role in the transition to low-carbon development through carbon markets by ***mobilising private capital*** and ***improving project bankability***.

Source: CPI, 2025

# Carbon Market Integrity: Why It Matters for Agri PDBs?

- **Real climate impact**
  Credits must deliver additional, measurable and durable emission reductions or removals—especially critical in agriculture and land use.

- **Robust MRV & transparency**
  Conservative methodologies, independent verification, and traceable data are key to protect public finance credibility.

- **Permanence & risk management**
  Agriculture and nature-based projects face reversal risks; integrity requires buffers, long-term monitoring, and resilience measures.

- **No double counting, alignment with NDCs**
  Clear accounting is essential for public institutions operating at the interface of projects and national climate targets.

- **Strong social safeguards for farmers**
  Integrity means protecting land rights, food security, and fair benefit-sharing for smallholders.

- **Strategic role of Agri PDBs**
  PDBs can act as quality gatekeepers—de-risking projects, setting standards, and scaling high-integrity carbon finance.

Source: CPI, 2025

# Developments in the VCM to Address Integrity and Quality

- Integrity Council for the Voluntary Carbon Market (ICVCM) Core Carbon Principles (**Supply side integrity**)

- Voluntary Carbon Markets Integrity Initiative (VCMI) Codes of Practice. (**Demand side integrity**)

But to address other barriers, particularly around access to capital, the financial sector has a key role to play.

Agri PDBs can bridge this gap by **crowding in private finance**, de-risking high-integrity projects, and enabling **farmer access** to carbon markets (advisory, asset, risk management services for example)

Source: CPI, 2025

# Live Question poll for the audience:

In your view, what is the biggest opportunity for Public Development Banks in carbon markets?

- Supporting the development of credible and high-integrity carbon markets
- Mobilising finance and de-risking carbon projects
- Supporting countries to meet their climate targets
- Developing new revenue streams

# PDBs' Potential Role in Carbon Markets

- **Strategic guidance**: Support countries in ***aligning*** carbon markets ***with national climate and development strategies and*** facilitate cross-sector coordination.

- **Technical Assistance:** Provide guidance on ***market design***, internationally recognized methodologies (e.g. VCS, Gold Standard); ***MRV systems***, including data collection, verification, and digital tools; ***procurement*** with a focus on high quality and integrity carbon credits

- **Market Integrity**: Promote high-integrity carbon credits by embedding international ***best practices and standards*** (e.g. Core Carbon Principles) into their financing criteria and engaging with policymakers and standard setters

- **Risk Management:** Introduce financial instruments such as price floors, guarantees, pilot projects to ***stabilize market participation***.

- **Knowledge sharing** on origination, issuance, trading and due diligence transparency

Source: CPI, 2025. Role of Public Development Banks in Supporting Domestic Carbon Markets

# Opportunities for PDBs in Carbon Markets

**Climate Leadership:** Carbon markets allow PDBs to directly support ***mitigation, resilience***, and ***sustainable development***—while strengthening their leadership role.

**Mobilising private capital:** PDBs can use carbon revenues, guarantees, and structured finance to ***improve bankability***, ***mobilise private capital***, and support the transition to low-carbon assets.

**Unlocking new commercial pathways and portfolio diversification** beyond existing business models, supporting long-term growth and facilitating entry into emerging decarbonization-driven markets.

**Revenue Generation:** Banks can generate revenue through transaction fees from ***carbon credit trades,*** *offering* ***carbon credit derivatives***, and financing carbon projects.

**Mitigating stranded asset risk** by building resilience into portfolios through a transition towards low-carbon assets.

**Deepening client engagement** by helping clients navigate carbon markets to add strategic value and strengthen long-term relationships.

Source: VCMI, 2025. Catalyzing Carbon Markets: The Role and Opportunity for Financial Institutions &
https://agronomist.pl/articles/role-of-banks-in-the-voluntary-carbon-market

# Live Question poll for the audience:

What is the biggest challenge to PDBs engagement in carbon markets?

- Uncertain and volatile demand and prices
- Project performance and integrity risks
- Regulatory and legal uncertainty
- Reputational risk and public scrutiny
- Lack of bankable financing structures
- Limited technical capacity and carbon markets understanding

# Carbon Market Risks for PDBs

**Uncertain and volatile demand and prices**

**Project performance and integrity risks**: additionality, permanence, leakage, double counting

**Regulatory and legal uncertainty**: unclear rules, fragmented frameworks, accounting and liability concerns

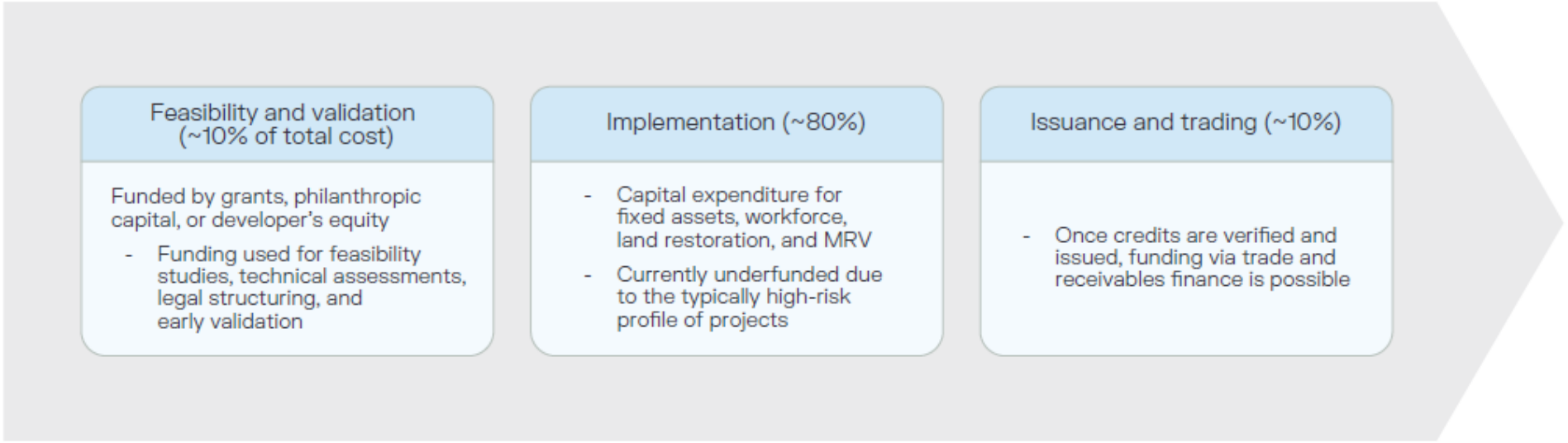
**Reputational risk and public scrutiny**: greenwashing concerns, negative media attention, unclear use of credits

**Lack of bankable financing structures**: few scalable, commercially viable financing mechanisms

**Limited technical capacity** and carbon markets understanding

Source: VCMI, 2025. Catalyzing Carbon Markets: The Role and Opportunity for Financial Institutions

# Cost structure – Associated Risks




(Image 1) The Financing Challenge: the Valley of Death - Carbon reduction and removal projects typically move through three stages

## Enablers to Unlock Financing

- Grants and philanthropic capital, used during early feasibility to prepare projects for scale
- Development finance institutions to provide first-loss capital, loan guarantees, or concessional debt to crowd in private lenders
- Dedicated, specialized investment managers that can centralize due diligence
- Development companies to source, structure, and bundle multiple smaller projects
- Blended project portfolios
- Structured offtakes with insurance

Source: VCMI, 2025. Catalyzing Carbon Markets: The Role and Opportunity for Financial Institutions &
https://agronomist.pl/articles/role-of-banks-in-the-voluntary-carbon-market

# Bridging FAO and PDBs through Carbon Markets

- **Public Development Banks (PDBs)** are key to scaling climate finance, de-risking investments and crowding-in private capital for agrifood systems
- **Carbon markets** can complement PDB financing by providing results-based revenues aligned with NDCs and national priorities
- **FAO supports countries upstream** by building readiness for Article 6 and carbon markets: policy frameworks, MRV systems, safeguards and integrity
- **This enables PDBs to engage downstream**, using carbon revenues to enhance bankability, blending and scale of agrifood investments
- **FAO–PDB collaboration links readiness to finance**, aligning public finance, carbon markets and private capital
- **Outcome:** scalable, high-integrity agrifood investments delivering climate, development and food security benefits

# Enabling Conditions, Recommendations

## Enabling Conditions:

- Advocacy and policy engagement from the financial sector – to reduce market risk and improve project bankability (address quality and integrity issues)
- Regulatory clarity on the legal status of carbon credits
- Alignment across integrity frameworks + Robust legal and institutional infrastructure for credit issuance/transfer

## Some Non-exhaustive Recommendations

1. Provide clear market signals by integrating high-quality carbon credits into institutional climate strategies
2. Endorse the voluntary use of high-quality carbon credits as a complementary tool in addition to decarbonization strategy
3. Actively contribute to scaling up high-integrity carbon markets

# Key Takeaways

- Strategic investment in mitigation to minimize future climate risks and costs (blended finance/concessional capital)
- High quality carbon credits can deliver real and measurable co-benefits (social impact)
- Reduce risks and promote market integrity (de-risk mechanisms)
- Financial institution capital has a role not jut in funding high quality projects but also in building the infrastructure to enable scalability: insurance, verification, market-making and long term investment.
- Strategic commercial advantage for Agri-PDBs in an emerging and rapidly evolving asset class.

Food and Agriculture Organization of the United Nations

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# Agrifood Systems in the Voluntary Carbon Market: Status and Prospects

https://doi.org/10.4060/cd5192en

Overview and insights on major features of the current and evolving VCM for agrifood

- Overview of agrifood in VCM standards
- Agrifood VCM methodologies
- Agrifood VCM projects
- Review of data platforms for MRV of projects.
- Integrity critiques specific to agrifood projects.
- Case studies of innovative & scalable agrifood projects.
- Agrifood project innovations.
- Project design lessons.
- Database of standards, methodologies and projects.

# Any Questions?

# List of Sources


- Climate Transparency Platform, 2025. *Introduction to Article 6*
- CPI, 2025. *Role of Public Development Banks in Supporting Domestic Carbon Markets*
- FAO, 2025. *Agrifood systems in the voluntary carbon market: Status and prospects*
- VCMI, 2025. *Catalyzing Carbon Markets: The Role and Opportunity for Financial Institutions*
- WB, 2025. *States and Trends of Carbon Pricing*
- New Carbon Market Rules Recognize Community Rights - Namati

# USEFUL LINKS

Contact your carbon market specialists:

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# THANK YOU

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**ABOUT FAST**

The Food and Agriculture for Sustainable Transformation (FAST) Partnership is a multi-stakeholder platform established in 2022 that works to strengthen the quantity and quality of climate finance in agrifood systems for the most vulnerable.