



Commodity masterclass



Rice



9 April 2025





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MESSAGE TO NEW MEMBERS OR PEOPLE TAKING PART FOR THE FIRST TIME:

"Please take note that taking part in the Forum is subject to having read and understood the Forum's competition guidelines and list of Do's and Don'ts. If you have not yet done so, please do so now."

<https://www.theconsumergoodsforum.com/wp-content/uploads/2023/09/The-Consumer-Goods-Forum-2023-Competition-Law-Governance-Guidelines.pdf>

Agenda



Who We Are – **DFI**



Overview on **Commodity Context**



Solutions and Case Study



Questions and Answers & Masterclass Series

Unrecorded section



Discussion on **Opportunities**

Unrecorded section



DFI's Well-known Brands Across Format



10,700+
Outlets

190,000+
Team members

Health & Beauty



Convenience



Food



Home Furnishings



Restaurants



Other Retailing



Loyalty



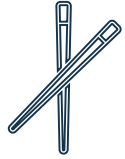
DFI's Diversified Portfolio Across 13 Geographies

- **Health & Beauty**
- **Convenience**
- **Food**
- **Home Furnishings**
- **Restaurants**
- **Other Retailing**



Commodity Context

Rice Feeds the World



>3.5 billion people eat rice as a staple part of their diet



10% global man-made methane emissions related to rice production



One-third of the world's freshwater used in rice production

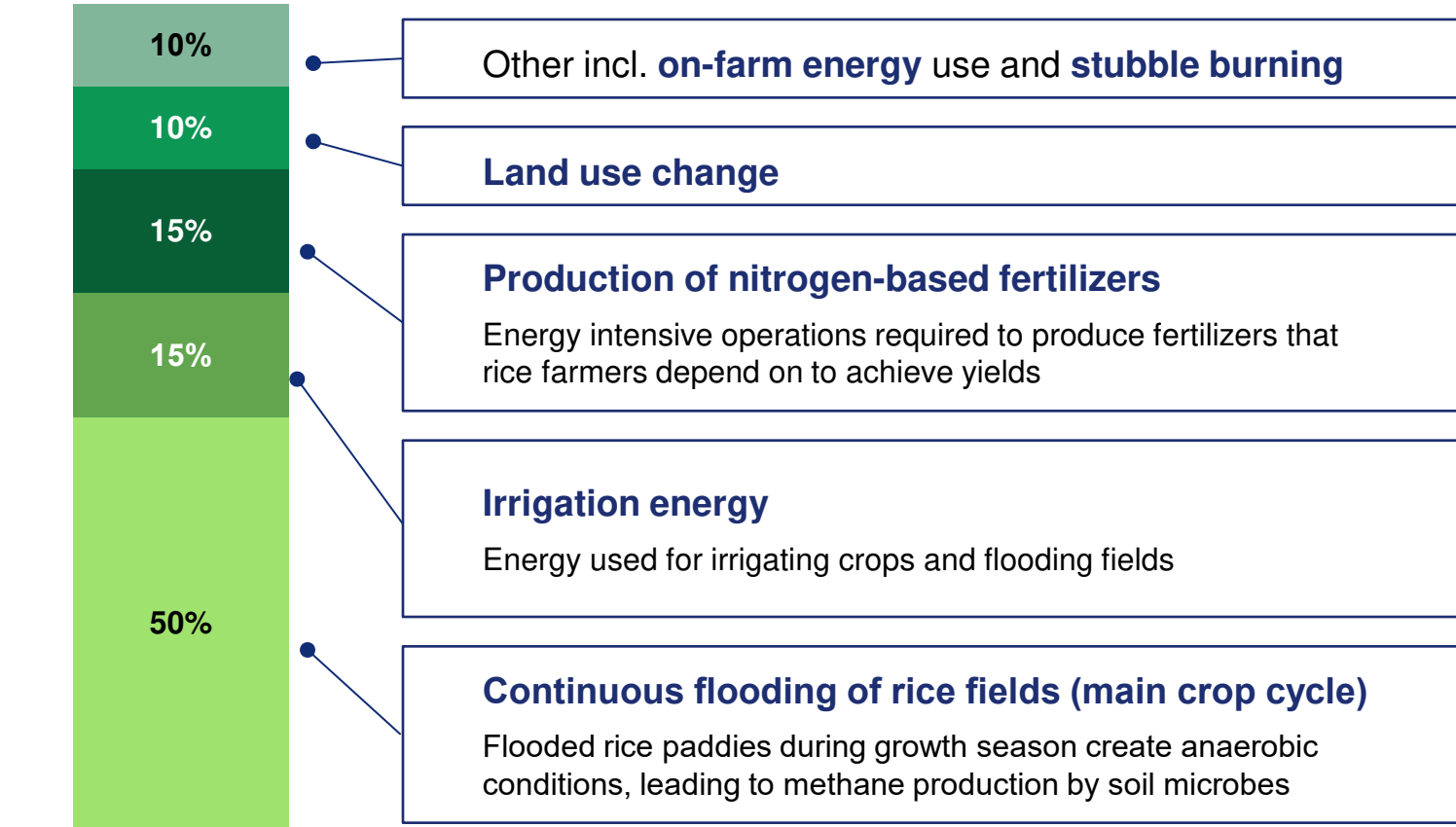


150 million smallholder farmers rely on rice production for a living



Methane from Flooding - Main Emissions Driver

Emissions breakdown



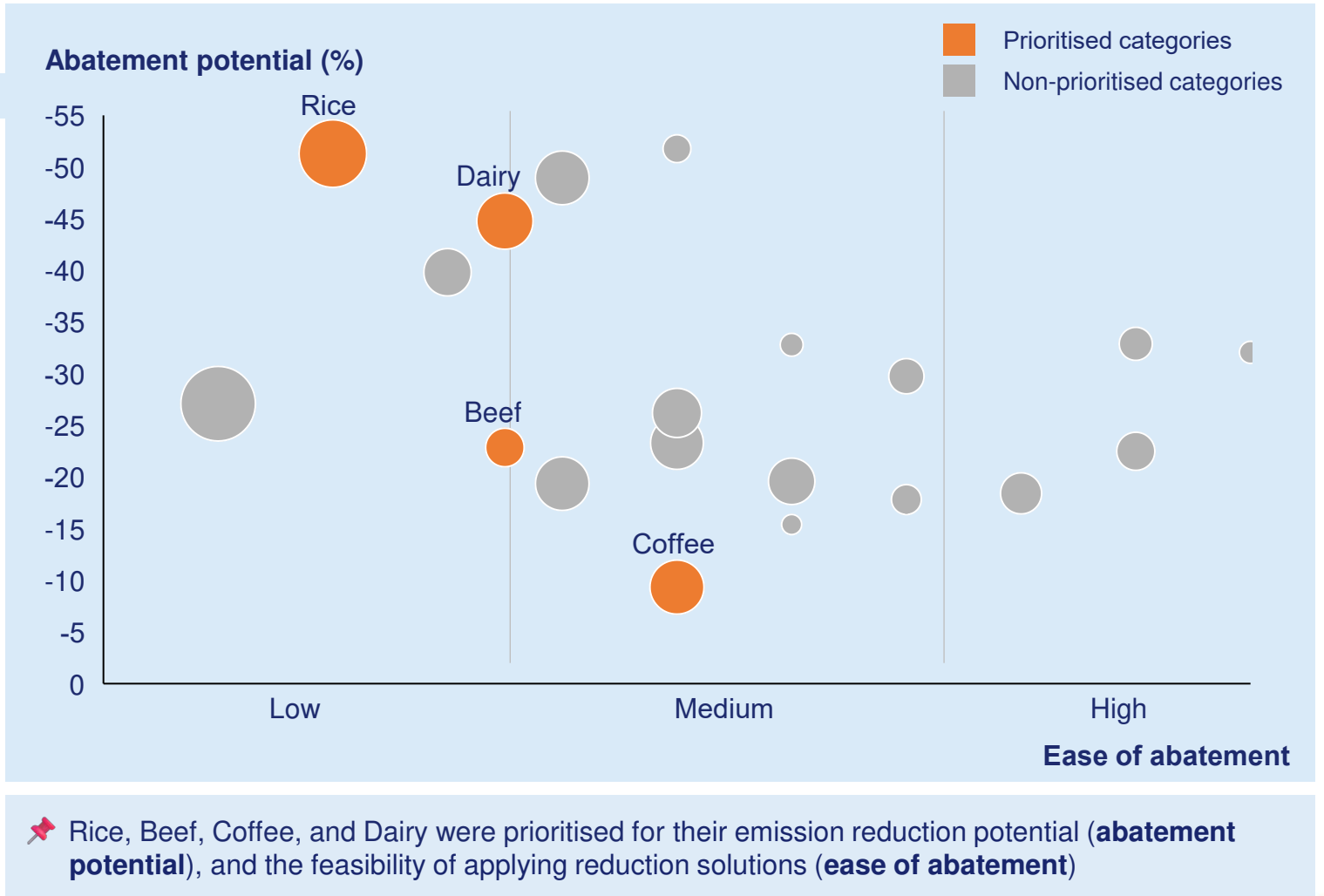
Source: Quantis WFLDB 3.10, WWF

Reducing rice emissions is a high-impact lever for global decarbonisation

1.5%
of global emissions
(48% of total GHG from croplands)

DFI's Scope 3 Strategy: Prioritised Categories

Scope 3 categories		% Total Scope 3 Emissions
Cat 1	Purchased Goods & Services	67%
Cat 2	Capital Goods	2%
Cat 3	Fuel & Energy related activities	4%
Cat 4	Upstream Transportation	1%
Cat 5	Waste Generated	1%
Cat 6	Business Travel	0%
Cat 7	Employee Commuting	1%
Cat 9	Downstream Transportation	2%
Cat 11	Use of Sold Products	1%
Cat 12	End of Life Treatment	5%
Cat 14	Franchises	2%
Cat 15	Investment	14%
Total		100%



Solutions

A person wearing a blue long-sleeved shirt and a pink floral hat stands in a lush green rice field. They are gesturing with their hands, possibly explaining something. The field is filled with tall, green rice plants. In the background, there is a line of trees, including palm trees, and a clear sky with some clouds. A white horizontal line is positioned above the word "Solutions".

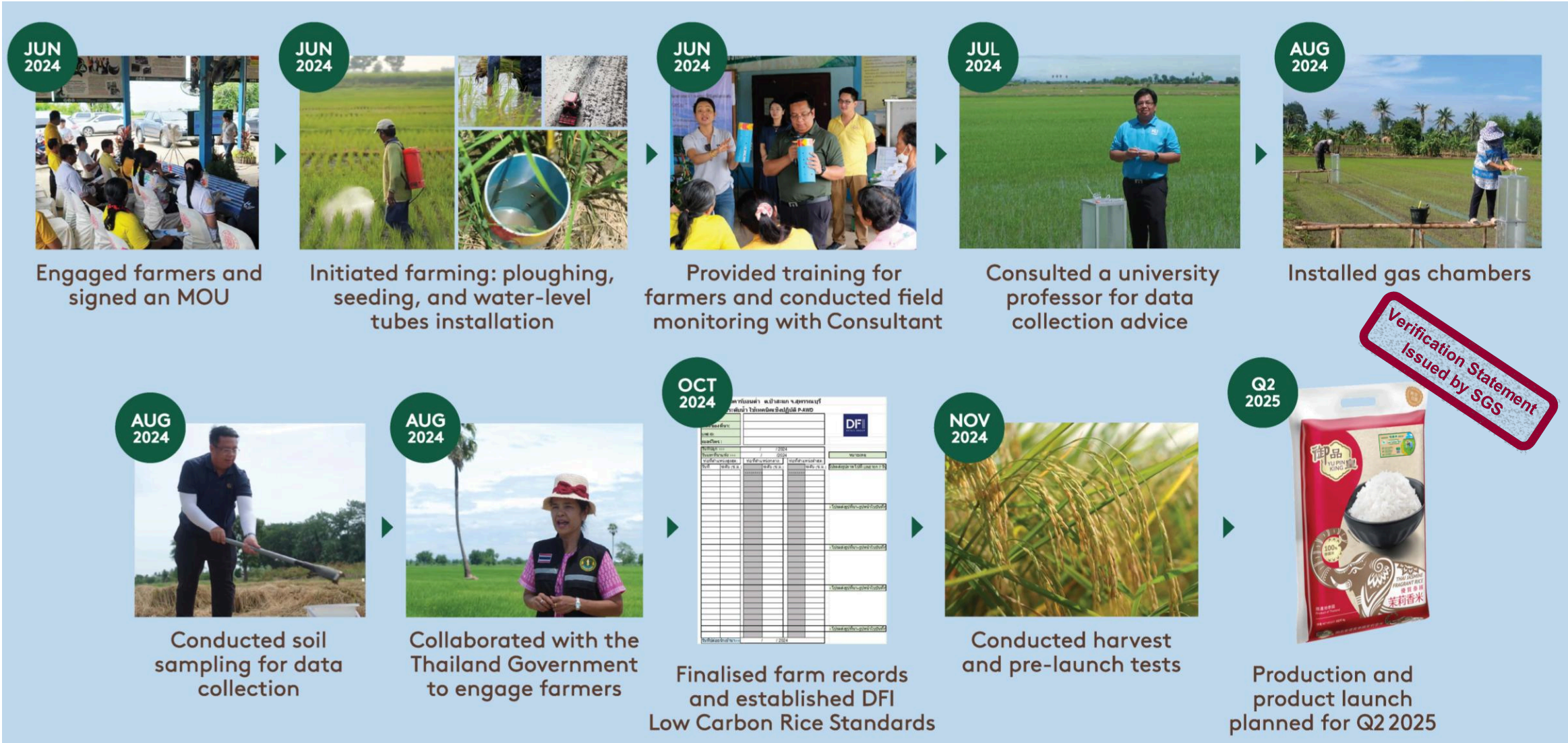
There are 12 Key Levers to Address Rice Decarbonization

	 Levers	 Reduction Mechanism	 Carbon Reduction Potential	 Feasibility	 Expected ROI for Farmers
Cultivation Technique	<input checked="" type="checkbox"/> Alternate wetting and drying (AWD)	Periodically dries and re-floods fields to cut methane and conserve water	High		Positive
	<input checked="" type="checkbox"/> Direct seeding of rice (DSR)	Sowing rice seeds directly in the field without transplanting	Medium		Positive
	<input type="checkbox"/> Soil aeration through mechanical weeding		Medium		Neutral
	<input type="checkbox"/> Reduced seedling density & wider spacing	Enhances root oxygenation, promoting aerobic decomposition of organic matter instead of methane-producing pathways	Medium		Neutral
Input Mgmt.	<input type="checkbox"/> Sulphate-based fertiliser	Promotes sulfate-reducing bacteria, which outcompete methanogenic microbes in rice farming	Medium		Neutral
	<input type="checkbox"/> Biochar application	Stabilises organic matter, limiting the availability of carbon for methanogens, and improves soil aeration reducing methane production	Medium/High		Neutral
	<input checked="" type="checkbox"/> Minimize use of fertiliser	Manage fertiliser application based on soil testing to ensure usage matches the specific needs of the field	High		Neutral
	<input type="checkbox"/> Intercropping fertiliser	Plant nitrogen fixing inter-crops to grow fertiliser e.g., Sunn Hemp	Medium		Neutral
Crop Residues Mgmt.	<input checked="" type="checkbox"/> Rice straw management	No burning of straw from fields to prevent organic matter breakdown and methane release (potential use as biochar/bioenergy)	Medium		Positive
	<input type="checkbox"/> Straw mulching	Leaves straw on the field as a protective layer to improve soil fertility, avoiding anaerobically decomposition, but can delay next planting	Low/Medium		Neutral/Negative
Renewables & Electrification	<input type="checkbox"/> Solar powered irrigation	Powers irrigation with solar energy instead of diesel, reducing emissions, lowering costs, and complementing AWD	Medium		Positive
	<input type="checkbox"/> Biodiesel energy	Uses plant-based residues, from rice bran oil to rice straw, as feedstock (transitional solution where full electrification is not yet feasible)	Low/Medium		Neutral

Source: BCG Analysis

☒ Indicates abatement levers applied in DFI's Low-Carbon Rice Pilot

DFI Low Carbon Rice Pilot Journey



Pilot Program Highlights

Practical Training & Incentives

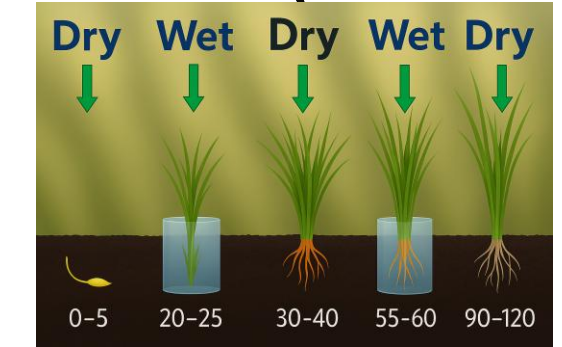
- Hands-on workshops on low-carbon farming techniques:
 1. Alternate Wetting and Drying (**AWD**): Drying fields between floods to cut methane
 2. **No straw burning**: Reduces CO₂ & air pollution
 3. **Soil & fertiliser management**: Monitors soil, prevents overuse, and reduces N₂O
 4. Direct seeding of rice (**DSR**): Skips transplanting, shortens flooding, cuts methane.
- Training and **field monitoring** delivered with local consultants
- **Premium** paid to farmers via supplier partnerships

Field Monitoring & Carbon Reduction

- **100%** compliance via **farm** + app **audits**
- **Low-cost water pipes** to track flooding (AWD)
- GHG calculated using adjusted emission factors: ≥ average **30%** GHG reduction vs. conventional farms, **verified by gas chamber testing** — with **no impact on yield or quality**
- Develop **DFI Low-Carbon Rice Standard**

Pilot Scale & Reach

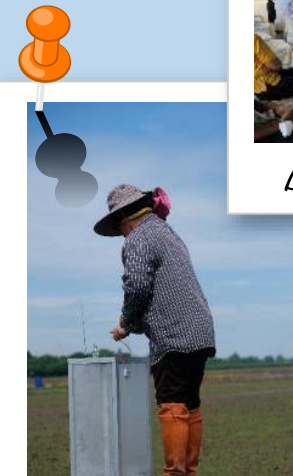
- Covered **200MT** of low-carbon rice across **30 farms** in Thailand



AWD: How It Works



Building Know-How



GHG Sampling in the Field

DFI: A Pioneer in Retail On-Farm GHG Monitoring

DFI Low-Carbon Rice Standard – 3-Level Assurance:

1. **MRV** – Daily farm audits conducted via mobile app
2. GHG Verification – **TGO-approved** method, 3rd-party verified
3. Process Assurance – **Verification statement** issued for process compliance

✓ Benefits

- **Practical**: Uses **multiple low-cost water pipes**, no laser land levelling
- **Transparent**: Traceable data, low greenwashing risk
- **Creditable**: **Carbon credit potential** with verified claims
- **Behavioural shift**: Enables move from **long-standing** flooding practices to AWD

⚠ Limitations

- Farmer savings: Limited due to **free irrigation** & minimal input cuts
- **Scalability**: Constrained by regional and climate conditions
- **Setup cost: High** for labs, training, infrastructure
- **MRV cost**: Burdensome for low-margin crops, especially for small pilot
- Price sensitivity: Consumers **expect no premium** for sustainability



Tracking Water, Daily



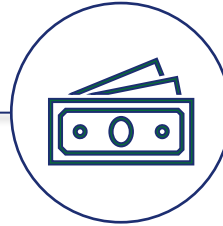
Measuring What Matters





Build Coalition

A **multi-stakeholder approach** enhances market influence, accelerates best practices, and optimizes shared resources for **lasting impact**



Diversify Financing

Retailers alone can't sustain the transition - **bank incentives** (lower interest rates for farmers), government funding, **carbon credits**, and regulations are needed to support farmers and scale impact



Drive Consumer Awareness & Education

Consumers are less likely to pay a premium for low-carbon products - **education** is key to shaping demand and driving sustainable choices



Time for your questions

Snapshots of Our Pilot Field Visits – Q&A Session



Friendship in the Field



Behind the Lens



Harvest Stories in the Making



Field Champions



Harvest Day with Our Farmers



Contact Us

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Stay tuned for our next masterclasses

Next
masterclass
es in series



All information and resources available on CGF
website: [HERE](#)

The image shows the silhouettes of several people standing in front of a large, multi-paned window. They are looking out at a vast cityscape under a blue sky with scattered clouds. The text is overlaid in the center of the image.

**Open discussion - Do we see
opportunities to partner & scale for
impact?**

Thank you

