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Harvesting Impact: Lessons from Outcome Harvesting in Bangladesh’s Agricultural Mechanization

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Agenda

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1 Introduction

2 Outcome Harvesting Overview

3 Applying OH

4 Lessons Learned

5 Q&A

Introduction to Speakers

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Monitoring, Evaluation, Research and Learning (MERL) Expert

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About iDE: Where we work

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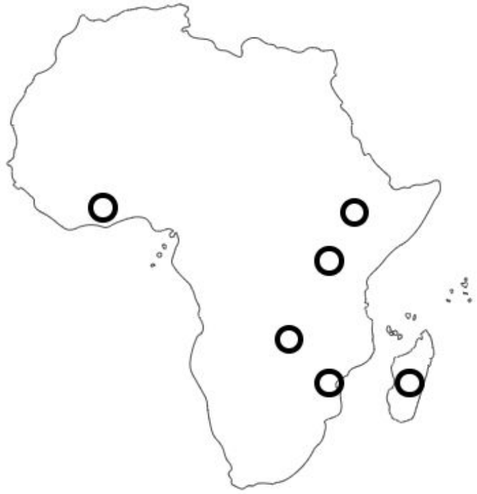
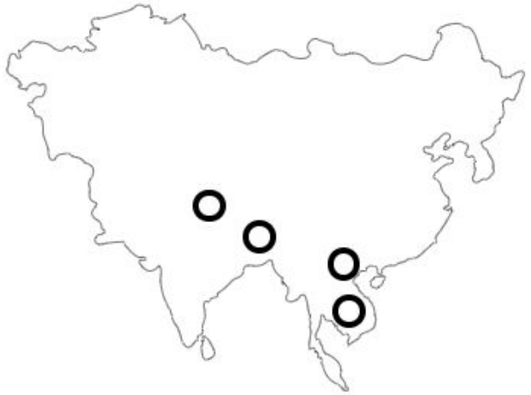
Africa



- Ethiopia
- Ghana
- Kenya
- Madagascar
- Mozambique
- Zambia

Asia



- Bangladesh
- Cambodia
- Nepal
- Vietnam

Central America

- Honduras
- Nicaragua

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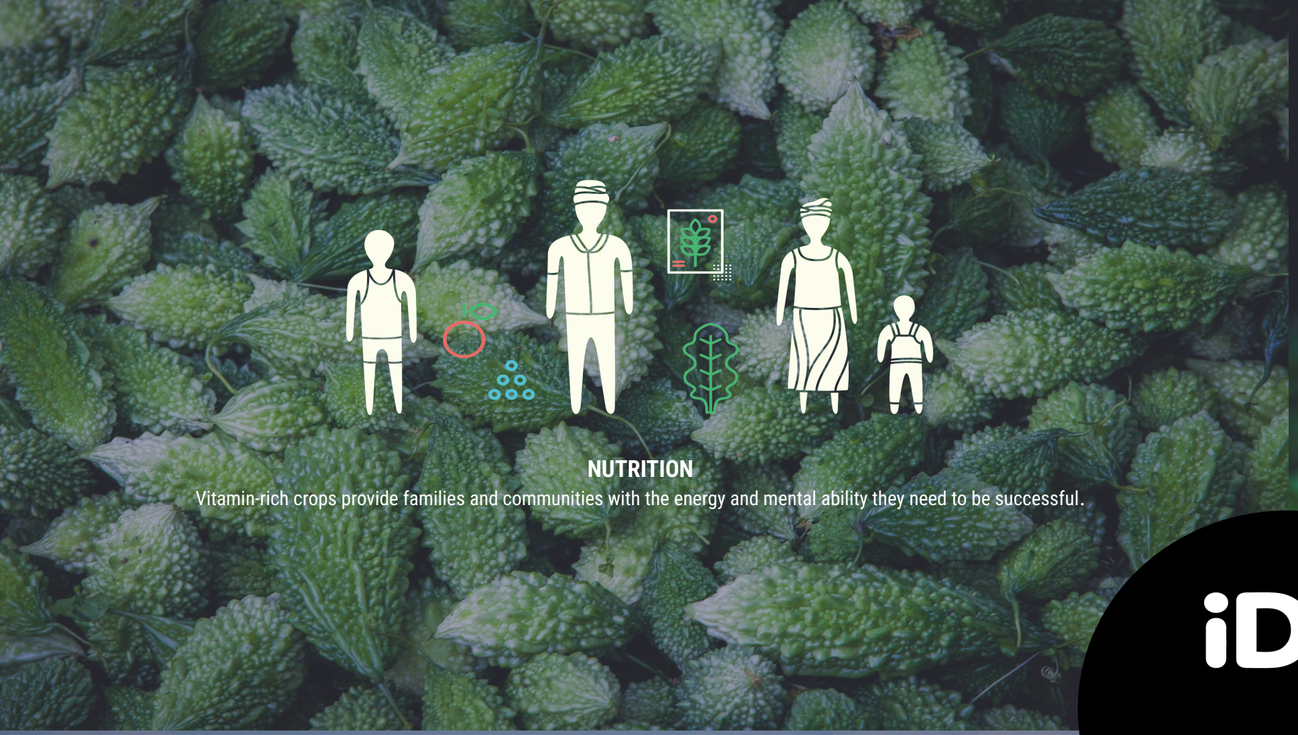
Our Expertise

Markets for WASH

Agriculture for Entrepreneurs



NUTRITION

Vitamin-rich crops provide families and communities with the energy and mental ability they need to be successful.

GENDER EQUITY

Men and women participate as customers and entrepreneurs, strengthening their families and livelihoods.

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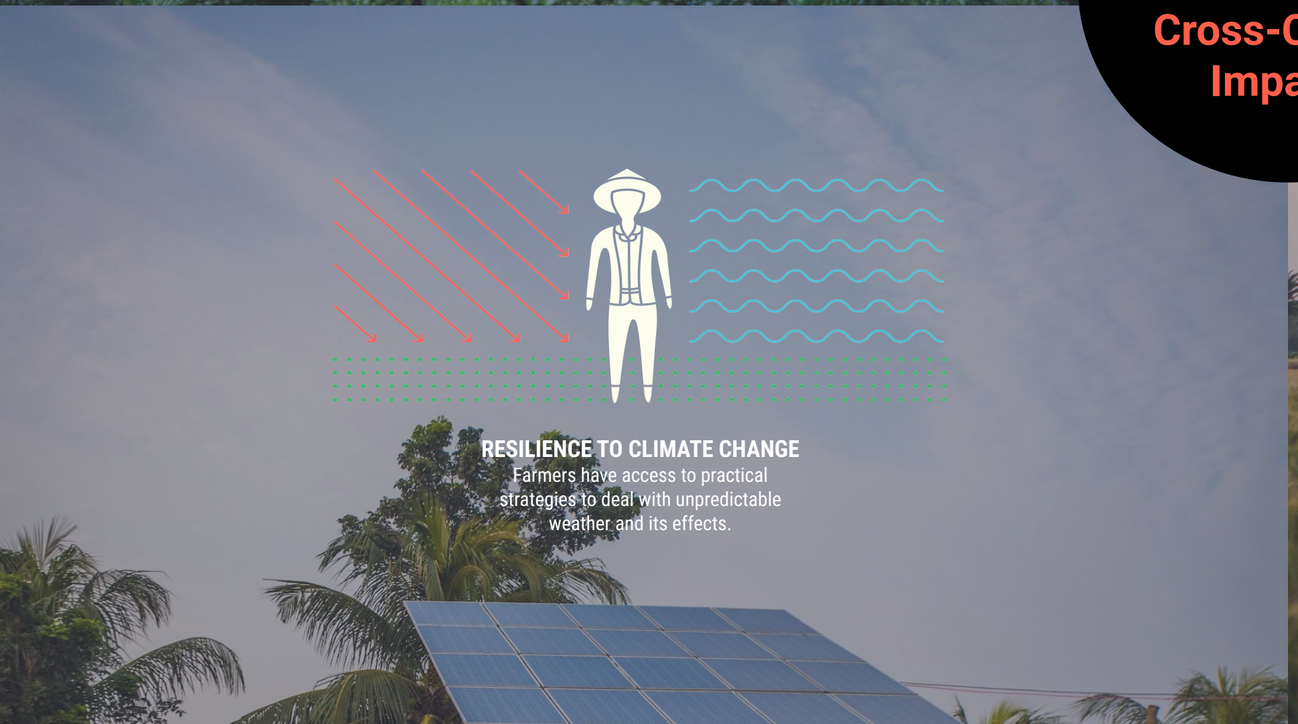
Cross-Cutting Impacts



RESILIENCE TO CLIMATE CHANGE

Farmers have access to practical strategies to deal with unpredictable weather and its effects.

FOOD SECURITY

Sustainable farming practices ensure the availability of food while protecting the environment and health of communities.

Our journey with Participatory M&E

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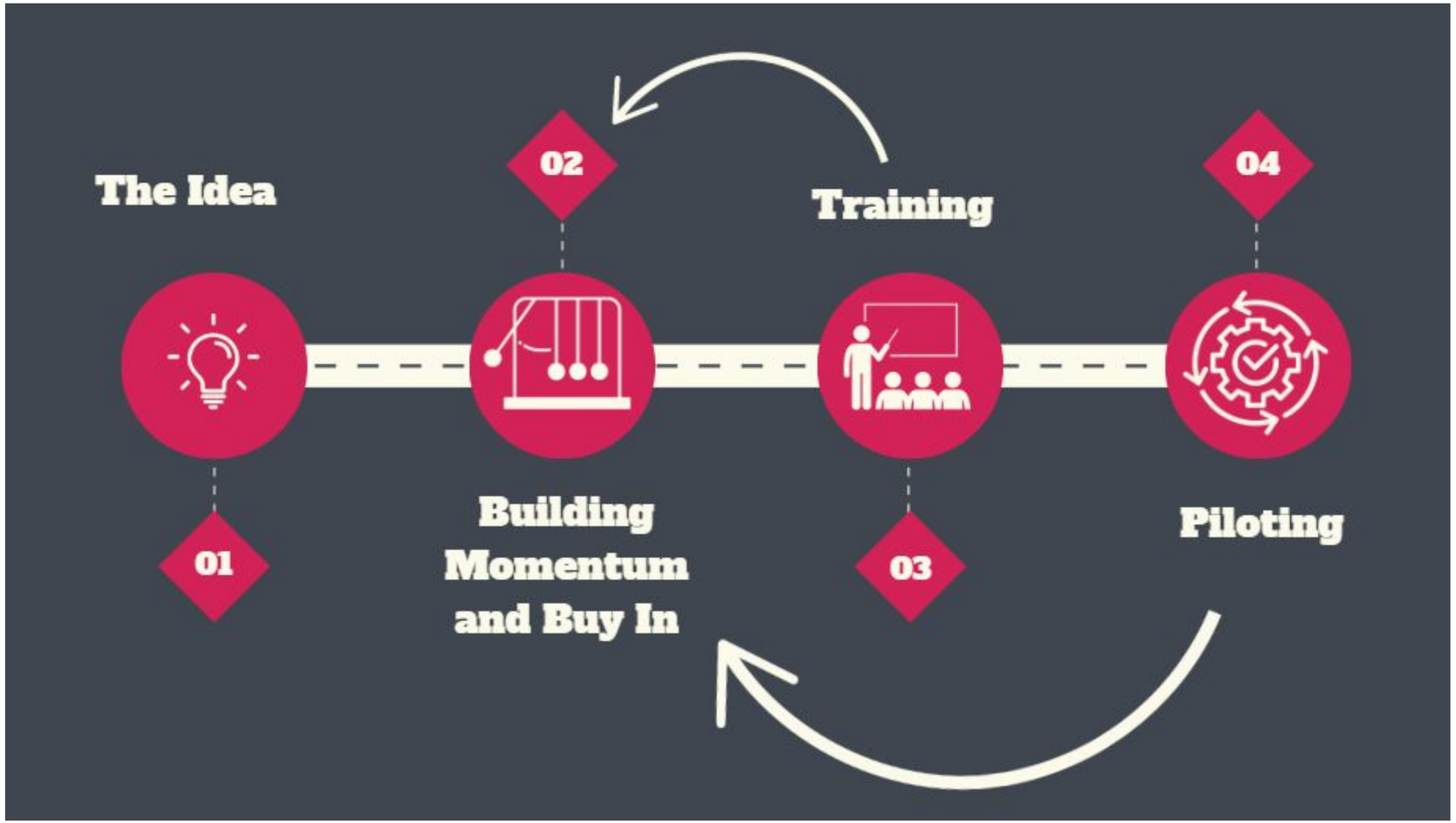

About Outcome Harvesting

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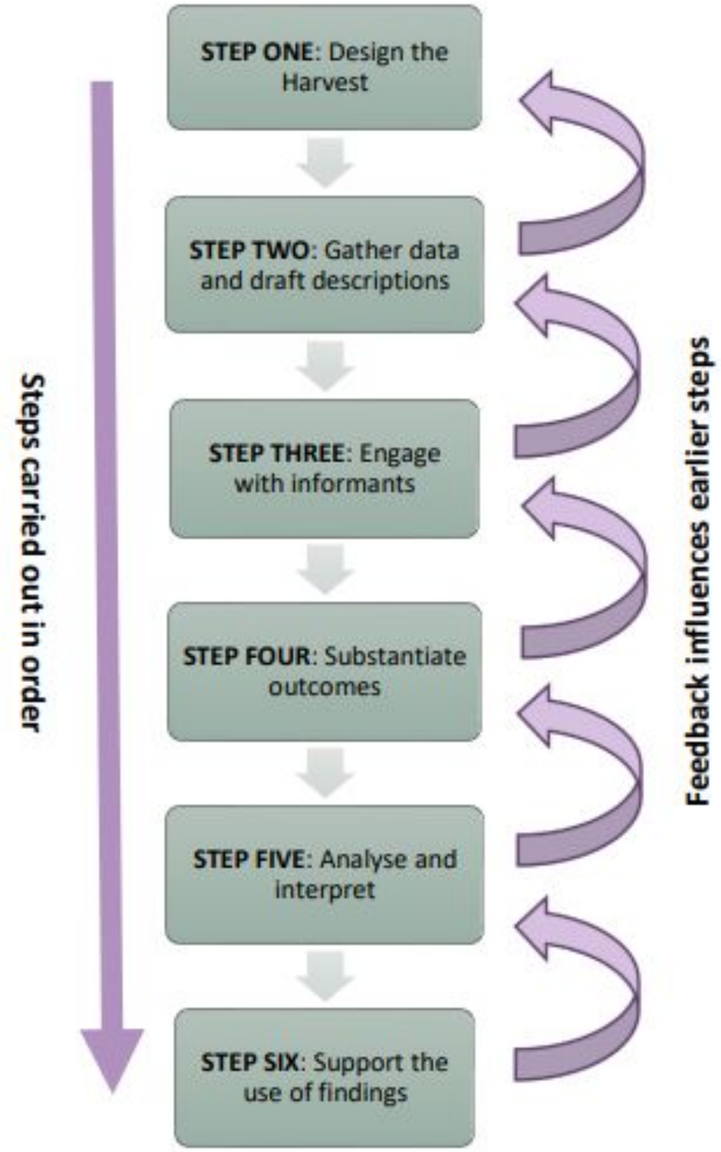

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An M&E methodology used to identify, describe, verify and analyse outcomes.

(Wilson-Grau and Britt, 2013)

But what is an outcome?

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“A change in the behaviour, relationships, actions, activities, policies, or practices of an individual, group, community, organization, or institution”

Applying OH in iDE

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Project Background

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The Cereal Systems Initiative for South Asia (CSISA) was established in 2009 with a goal of benefiting more than 8 million farmers and is funded by USAID. Operating in rural 'innovation hubs' in Bangladesh, India and Nepal, CSISA works to increase the adoption of various resource-conserving and climate-resilient technologies, and improve farmers' access to market information and enterprise development. CSISA supported women farmers by improving their access and exposure to modern and improved technological innovations, knowledge and entrepreneurial skills.

Project Period

CSISA-MI (2013-2018)

CSISA-MEA (2018-2025)

Partners: International Maize and Wheat Improvement Center (CIMMYT); International (iDE); Georgia Institute of Technology

Location

The project operated in 23 districts under the Feed the Future (FtF) Zone of Influence (ZOI) in south-west Bangladesh and the Feed the Future Zone of Resilience (ZOR) in Cox's Bazar region in south-east Bangladesh.

Project Background

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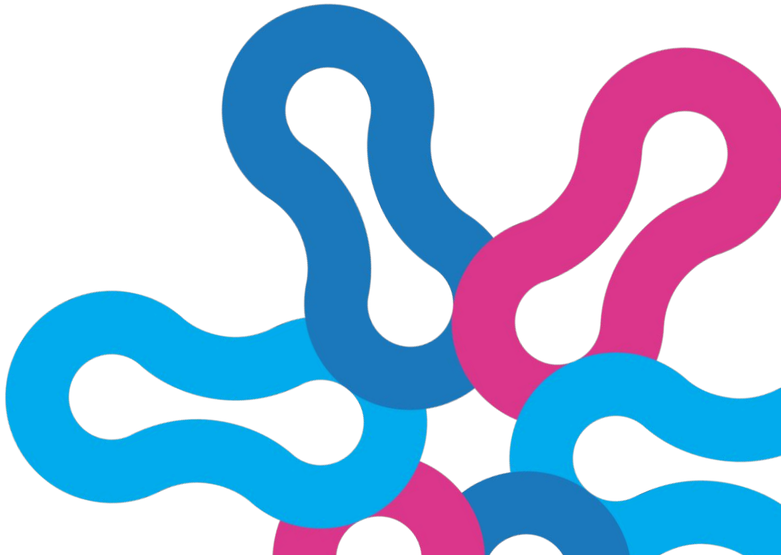
Intermediate Results

Intermediate result 1: The competitiveness and efficiency of domestic and private sector-led agricultural machinery manufacturing boosted.

Intermediate result 2: Institutional capacity for agricultural mechanization through the development of a skilled and youth workforce enhanced.

Intermediate result 3: Access for farmers to agricultural machinery, production and marketing services improved.



Project Background

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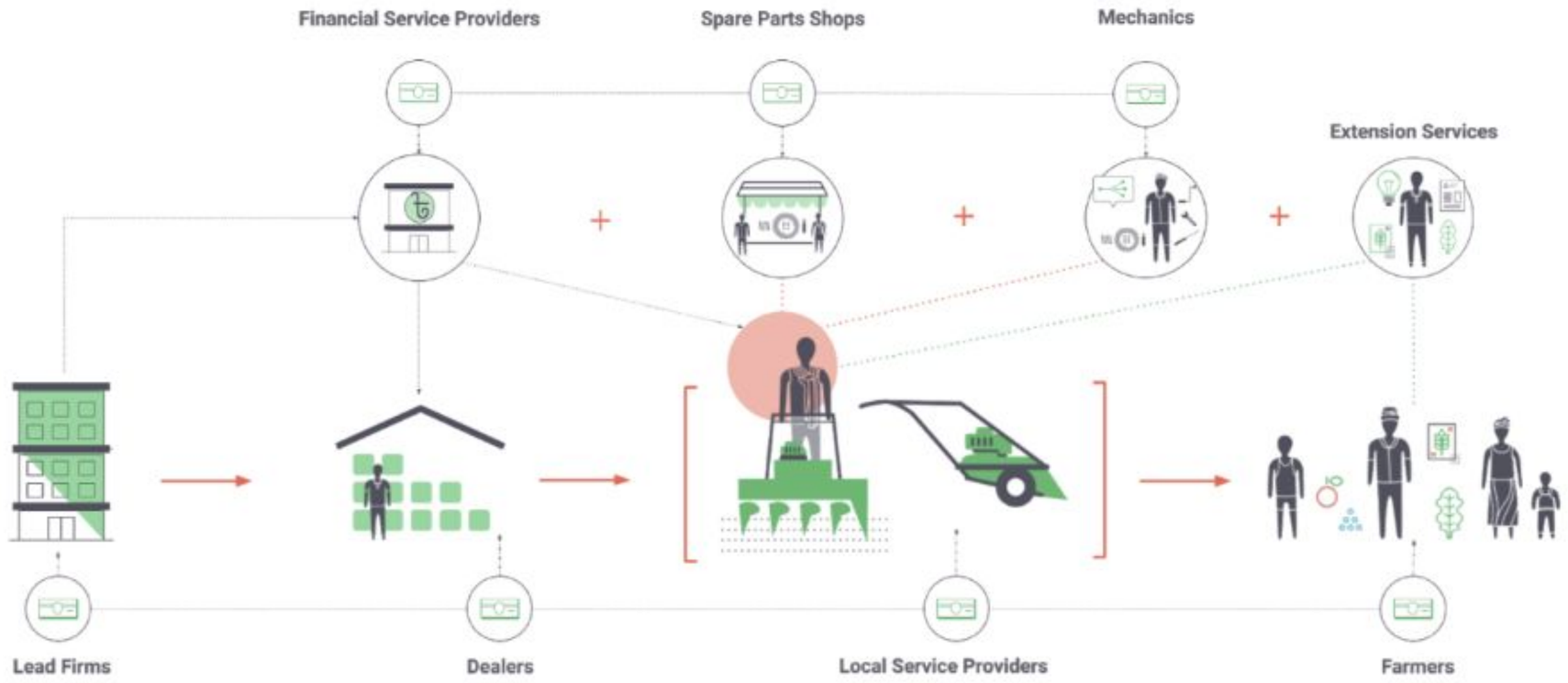

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Combine Harvester

Reaper

Power Tiller Operated Seeder

Rice Transplanter

Axial Flow Pump

Applying OH in Agricultural Mechanization

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Step 1: Training

Training on the Outcome Harvest process was delivered for all iDE Bangladesh MERL staff and CSISA-MEA project staff

Step 2: Designing the Harvest

Project name	Outcome description	Significance of the Outcome	Contribution to the Outcome	Sources of evidence
CSISA-MEA	**Outcome Statement:** CSISA-MEA facilitated increased adoption of new machinery technologies in agriculture from October 2013 to October 2023 through 5,139 skilled machinery service entrepreneurs in 23 Feed the Future districts resulting in 403,395 farmers applied mechanization services in 176,567 hectares of land. **When:** Since October 2013 to November 2023 **Who:** MSPs and Farmers **What:** -Created entrepreneurs -Service delivery model establishment (earlier more sporadic) -increase demand for machinery services -adoption of new technologies (earlier in land preparation more usage of tractor, after project from plantation and harvest use of the machinery has increased in plantation and harvest). -employment opportunities created (operator, mechanics, etc) **Where:** Faridpur, Jashore and Cox's Bazar, Barishal **CXB= RT** **Faridpur= PTOS, Reaper** **Jashore= CH** **(Khulna/Barishal= AFP)**	**Access to mechanization services:** This outcome demonstrated farmers' improved access to agricultural production and marketing services through adoption of new machinery technologies. A total of 403,395 farmers have availed mechanization services from 5,139 trained (of which 1,650 are active in 2024) Machinery Service Providers (MSPs) in 176,567 hectares of land. **Creating entrepreneurs:** MSPs are also making viable income from the machinery services indicating the increased sustainability of MSP's business. This aligns with iDE's objective of creating more entrepreneurs in the agriculture space. CSISA-MEA trained 4,700 MSP entrepreneurs of which 87% are actively providing services.	CSISA-MEA developed entrepreneurs to deliver a sustainable mechanization services to the farmers through - ***skills development*** of MSP, operators and mechanics (including women and youth) - ***awareness and demand creation*** of machinery services among the farmers (such as product orientation sessions, machine demonstrations, product promotion events etc.) - ***improved market linkages*** between the ag machinery value chain actors such as dealers, MSPs, mechanics, spare parts manufacturing workshops (ABLEs), lead firms and financial institutions - ***enhanced business development*** (such as linkage between raw material suppliers and ABLEs) ***and market enabling services*** (such as policy dialogues on financial loan products between Bangladesh Bank and ABLEs) to the ABLEs through two Associations in Jashore and Kushtia	- MSP Database (Link) - Coverage Survey conducted by CIMMYT six monthly (Link) - Joint Venture Agreements with Private Sector Partners (Link) - Collaboration Agreements with ABLE Associations (Link) - CSISA-MEA Annual Reports (Link) - Meeting Minutes on Policy Dialogue workshop (Yet to take place) - Case studies * LF Interviewing: ACI, Metal, Abedin- interviewing PoC is fine. For Big LF like Janata- interviewing Oli, RK Metal- Paritosh. * BARI- Engr. Arshadul Islam, Gazipur, Dhaka. *CSU- BAU

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Ensure clarity and agreement on what questions the evaluation will answer and on what information is to be collected.

Primary Outcome

From October 2013 to September 2024, **International Development Enterprises (iDE)** **facilitated the adoption of agri-technologies** in **23 Feed the Future (FtF) districts in Bangladesh**, for 403,395 farmers to utilize mechanization services in 176,567 hectares of farmland.

WHEN

WHO

WHERE

WHAT

Step 3: Document Review

Level	Documents reviewed
Project	• MSP Database • Land Coverage Survey conducted by CIMMYT • Joint Venture Agreements with Private Sector Partners, Lead Firms and ABLEs • Collaboration Agreements with ABLE Associations • Annual Reports • Meeting Minutes on Policy Dialogue workshop • Case Studies
Market Actor	• Sales data • Investment data • Loan data • Project Completion Report submitted by Lead Firms
National / Regional	• National Agricultural Mechanization Policy 2020 • Blog posts / Newspaper Publications • Research Papers

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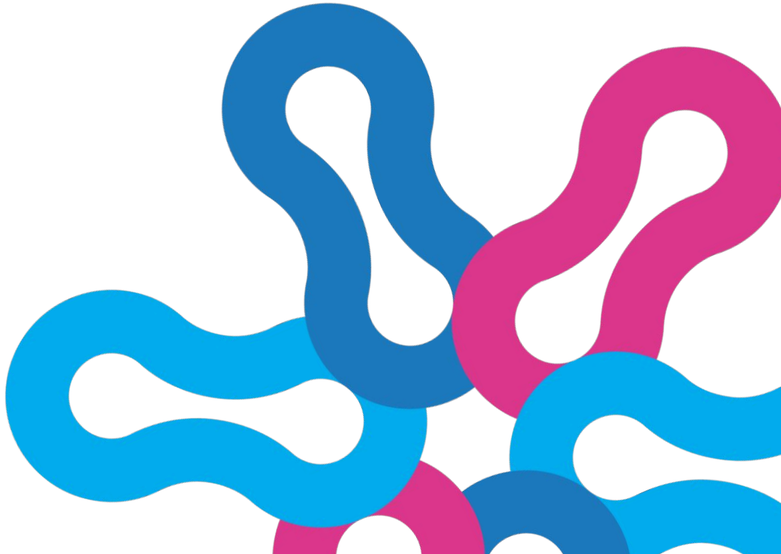
Identifying potential outcomes that have emerged across the programme, which are the result of the programme's actions.



Step 4: Substantiation

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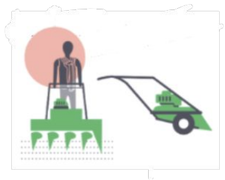
20 Machinery Service Providers



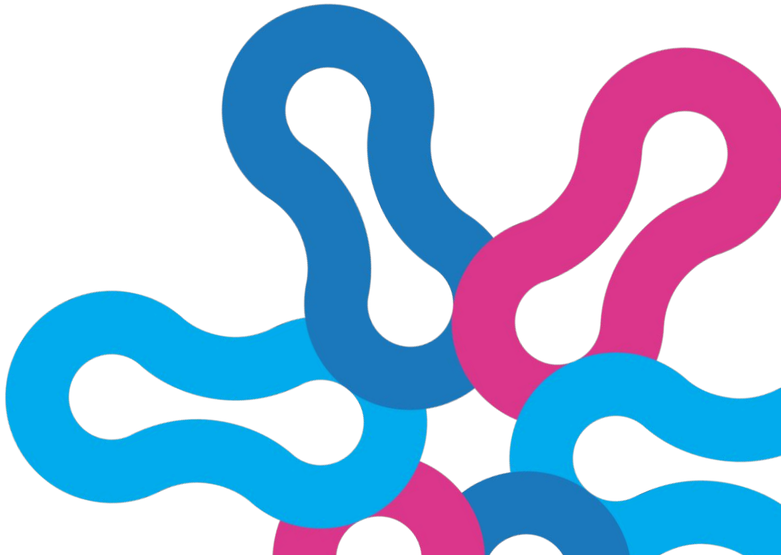
8 Agri-Machinery Dealers

6 Lead Firms

6 Public Sector Representatives

20 Farmers

Substantiation allows us to verify the accuracy of outcomes, but also to enrich understanding of the change and the contribution of other actors or interventions.



Step 5: Refining Outcome Statement(s)

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Primary Outcome:

From October 2013 to September 2024, **International Development Enterprises (iDE)** **facilitated the adoption of agri-technologies** in **23 FtF districts** in Bangladesh, for **403,395 farmers** to utilize mechanization services in **176,567 hectares** of farmland, enhancing their access to **5 productivity-enhancing agri-machinery**.

Intermediate Outcome 1:

From October 2013 to September 2024, **iDE**, through CSISA-MEA project, **fostered the creation of a sustained pool of 1,733 active MSPs**, resulting in the adoption of mechanization services in agriculture in **23 FtF districts** in Bangladesh.

Intermediate Outcome 2:

From October 2019 to September 2024, **iDE**, through the CSISA-MEA project, **facilitated the establishment of 2 Agriculture-Based Light Engineers' (ABLE) associations**, playing a pivotal role in promoting import substitution and sustainable business growth by providing mechanization services to MSPs across **23 FtF** districts in Bangladesh.

Missed Opportunity: Sensemaking Workshop

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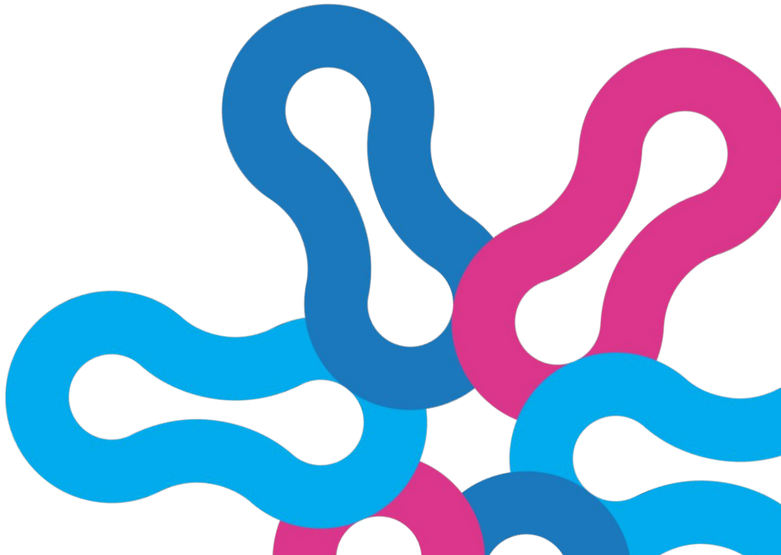
- Project closed out abruptly in January 2025
- Key insights from BADC, BRRI, BARI
- Validation of geographic differences



Lessons Learned

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Preliminary Findings

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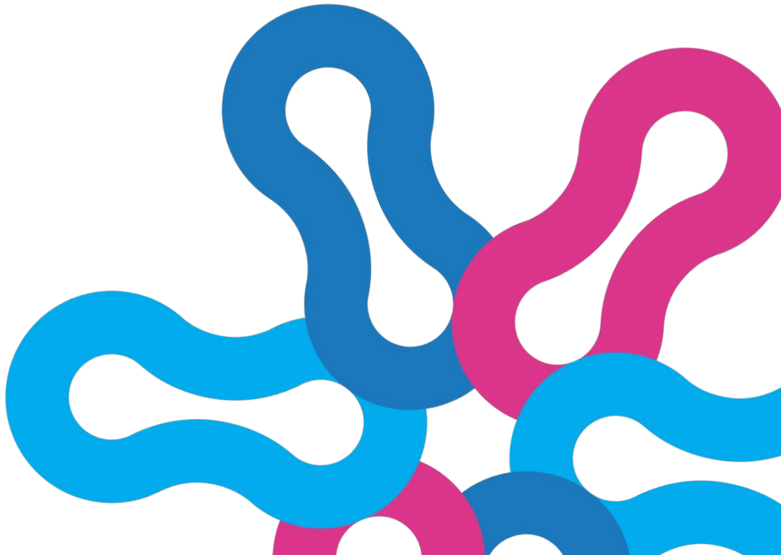
1. Adoption of Agricultural Machinery

- Driven by demonstrations and training
- High upfront costs were a critical barrier.

2. Value Chain Strengthening

- Improved dealer–MSP–lead firm linkages
- Gaps in spare part supply, warranty service



Preliminary Findings

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3. Farmer Perspective and Behavioral Change

- Benefits: Time saved, labor reduced, climate risks managed
- Combine harvesters preferred over reapers

4. Unintended Consequences

- Subsidy access sometimes politically driven
- Smallholders left out despite demand

Lessons Learned from the OH Activity

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Lesson learned: 1

Designing/forming a single outcome may lead to two or more intermediate outcomes, which may arise from the process of substantiation or any of the steps.

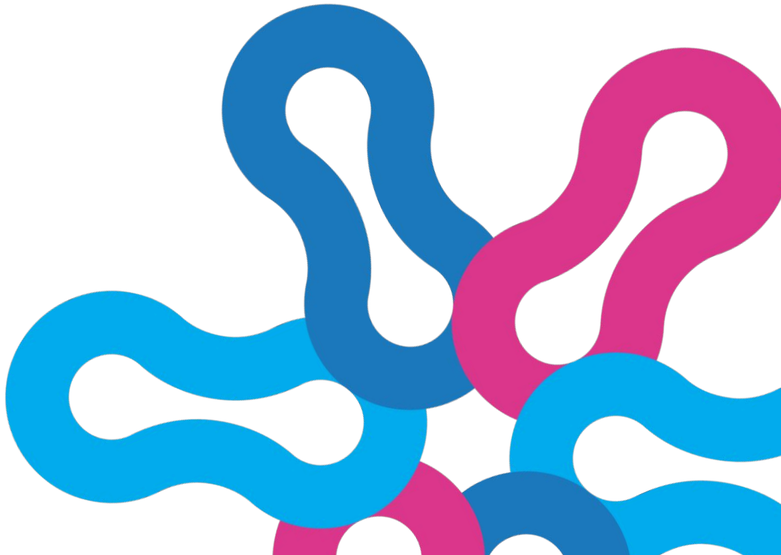
Lesson learned: 2

OH follows an iterative process-- allows us to refine and adapt strategies

Key Challenges we faced

Subjectivity vs Objectivity

Attribution vs Contribution



Q&A

global **evaluation** initiative

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Thank you!

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