



The importance of partnerships in AR4D: The Rupantar experience

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SA Crawford Fund Symposium, 13th October 2026



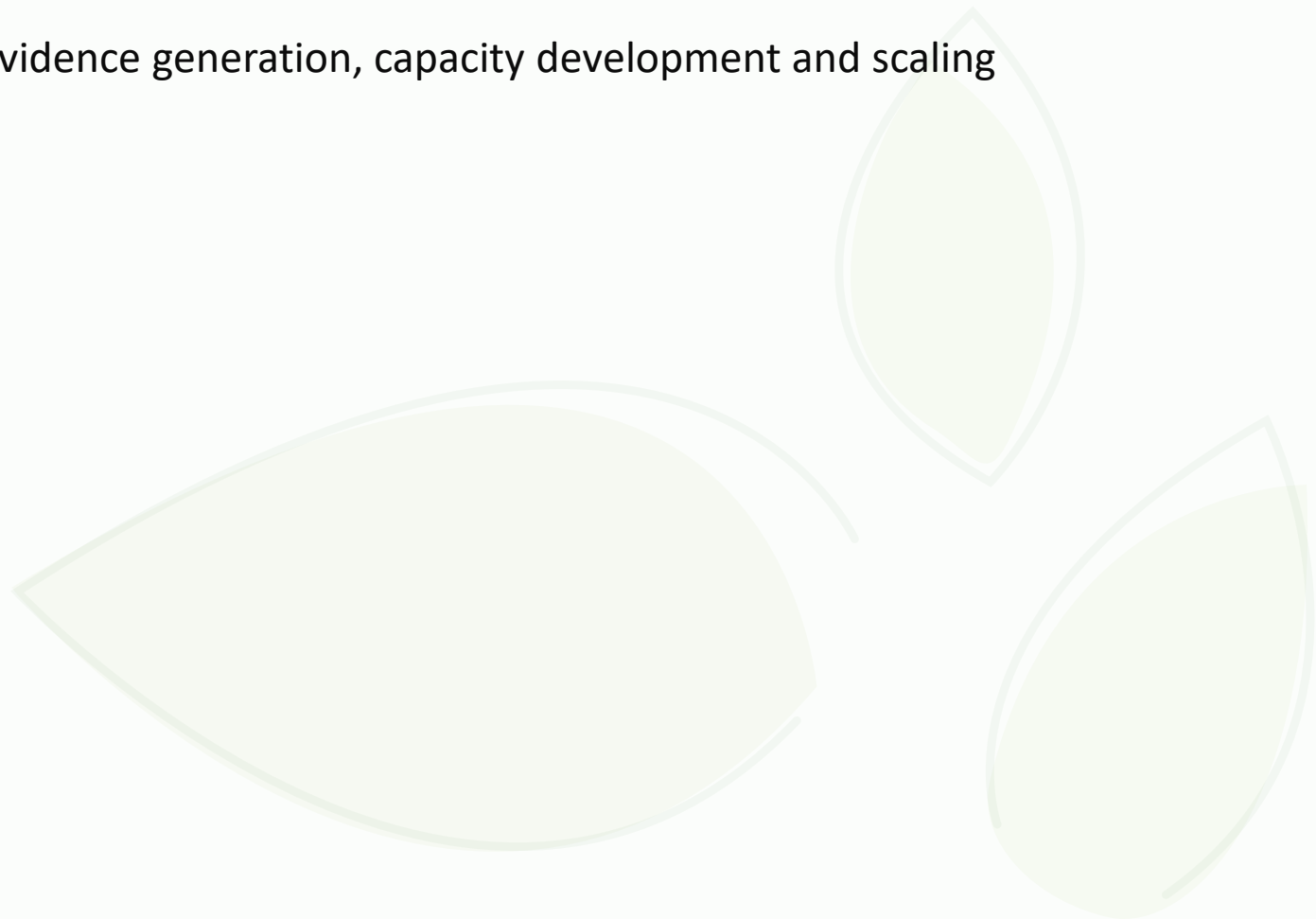
Australian Government

Australian Centre for
International Agricultural Research

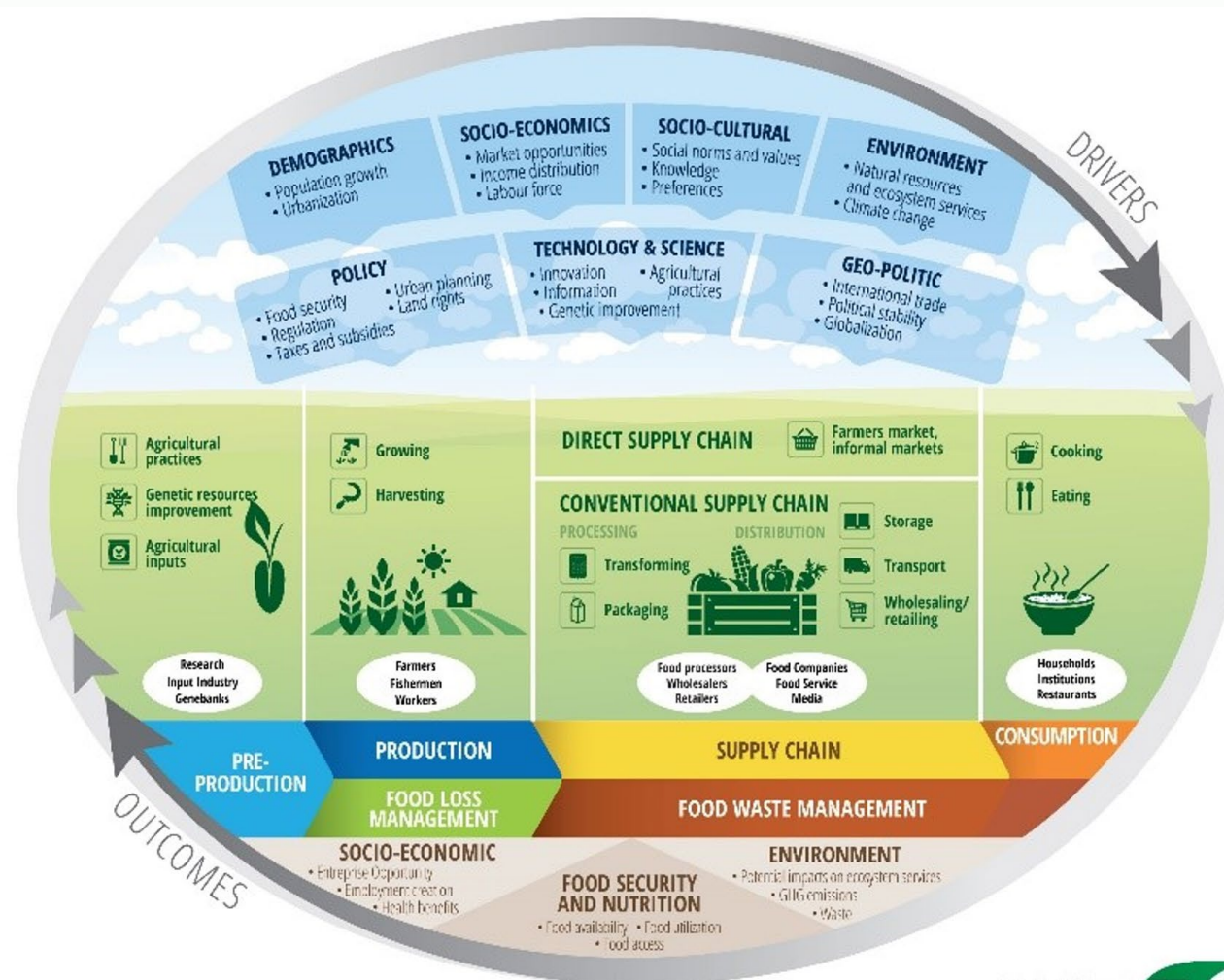
Overview



- Food systems transformation
- The Rupantar project experience – partnerships for evidence generation, capacity development and scaling
- Links to Crawford Fund support



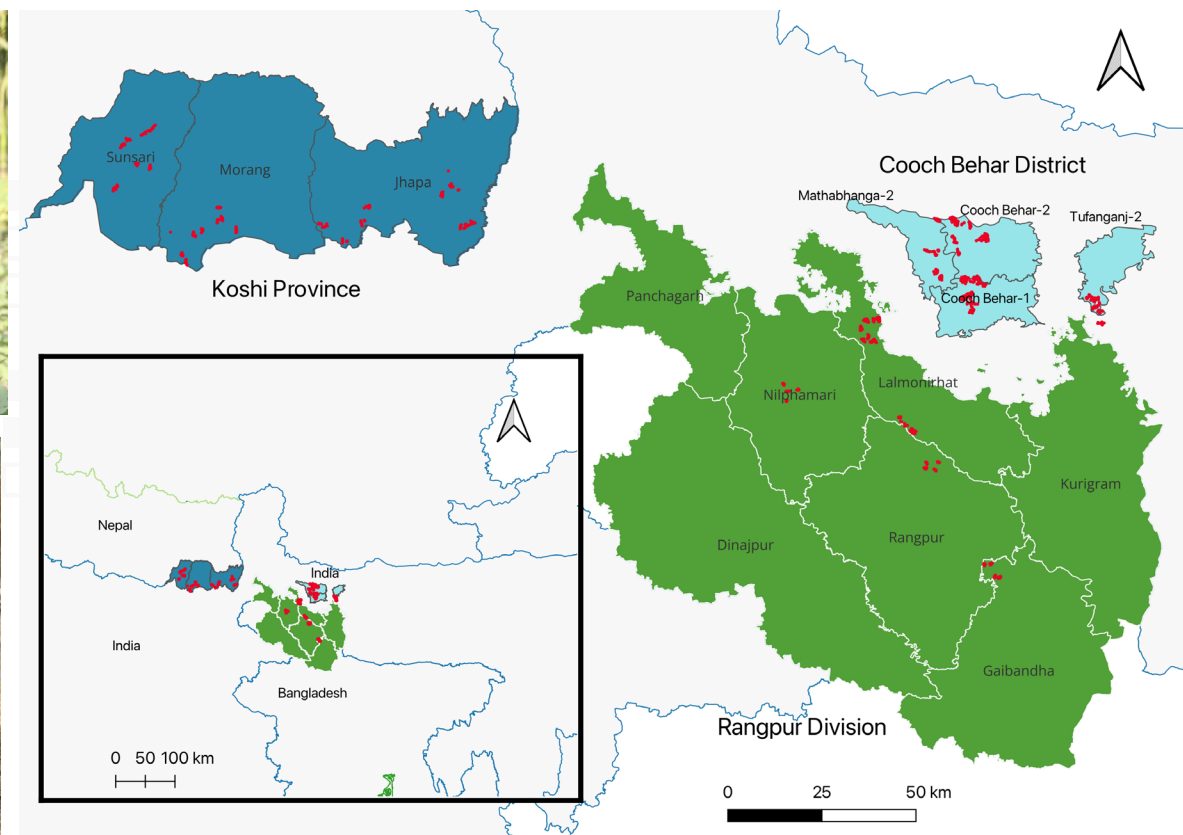
Partnerships are critical for Food Systems Transformation



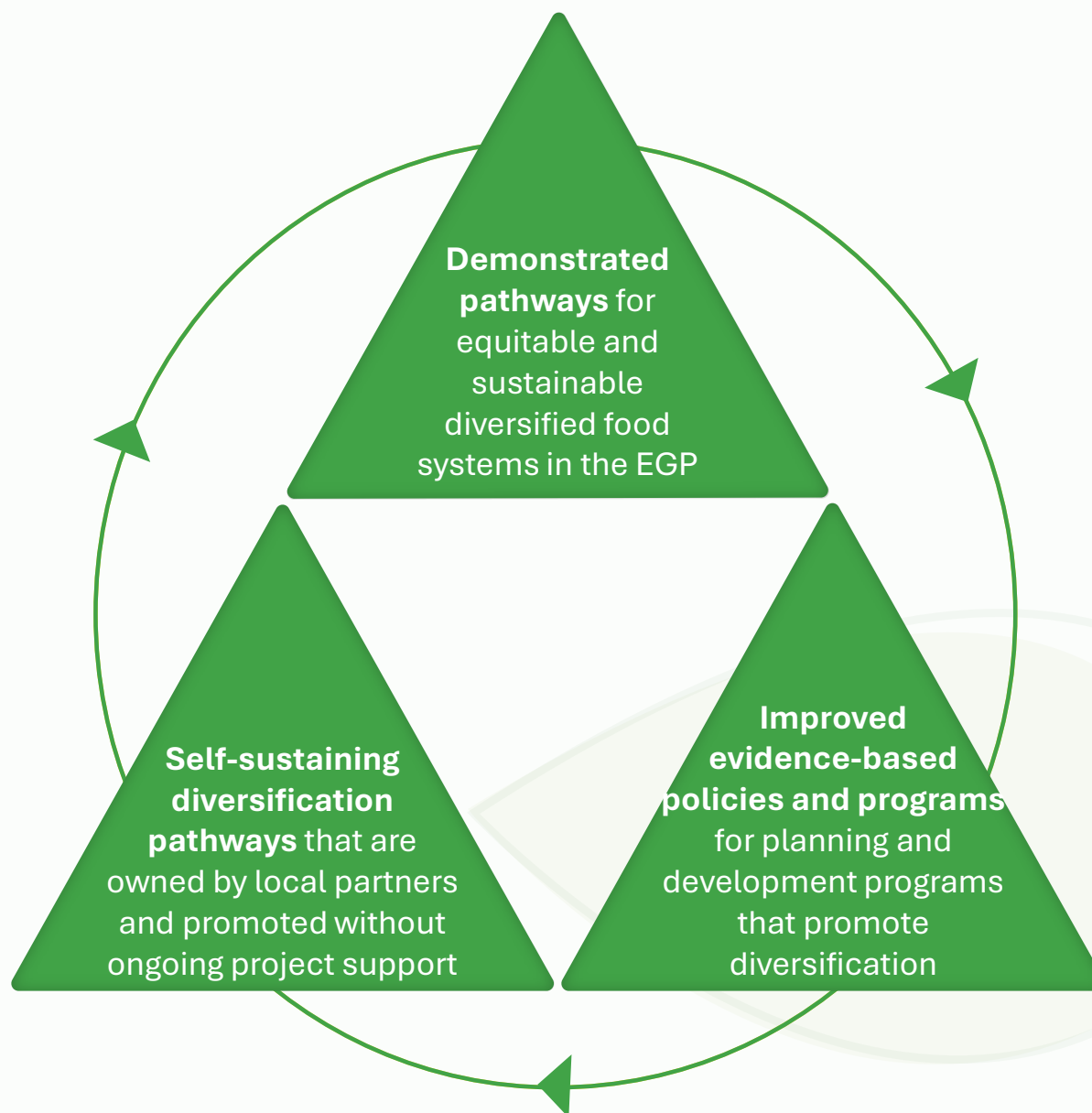
Transforming smallholder food systems in the Eastern Gangetic Plains – the Rupantar project (2021 – 2027)



Rupantar aims to understand and communicate the processes and practices for equitable and sustainable transformation of food systems through livelihood diversification, and the enabling environment that helps them go to scale.



Expected outcomes



Partners

Lead scaling intervention research, oversight of pathway implementation



Lead policy and market research



Facilitate research partnerships in Bangladesh



Facilitate research partnerships and activities in West Bengal, India

Implement project activities in Rangpur



Synthesis, communications, oversight



Implement project activities in West Bengal, India

Facilitate research partnerships and activities in Nepal



Implement project activities in Koshi Province, Nepal

Rupantar's approach



Rangpur Division, Bangladesh:

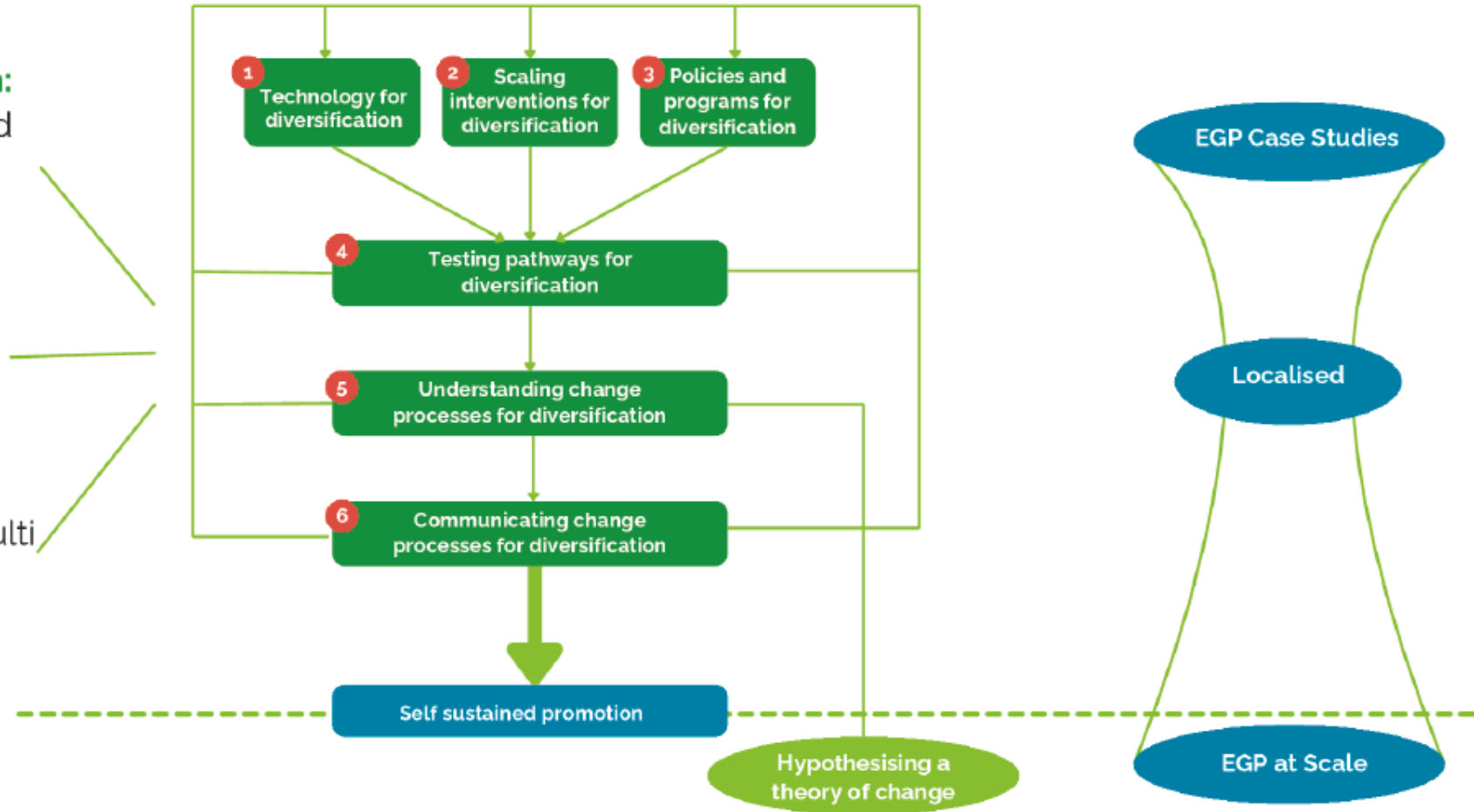
Improving Mustard, Poultry and Brinjal systems through local agri-innovation networks.

West Bengal, India:

Improving Mustard, Goat and Chilli systems through Farmer Producer Organisations.

Koshi Province, Nepal:

Improving Maize, Dairy and Multi layer farming systems with agricultural co-operatives

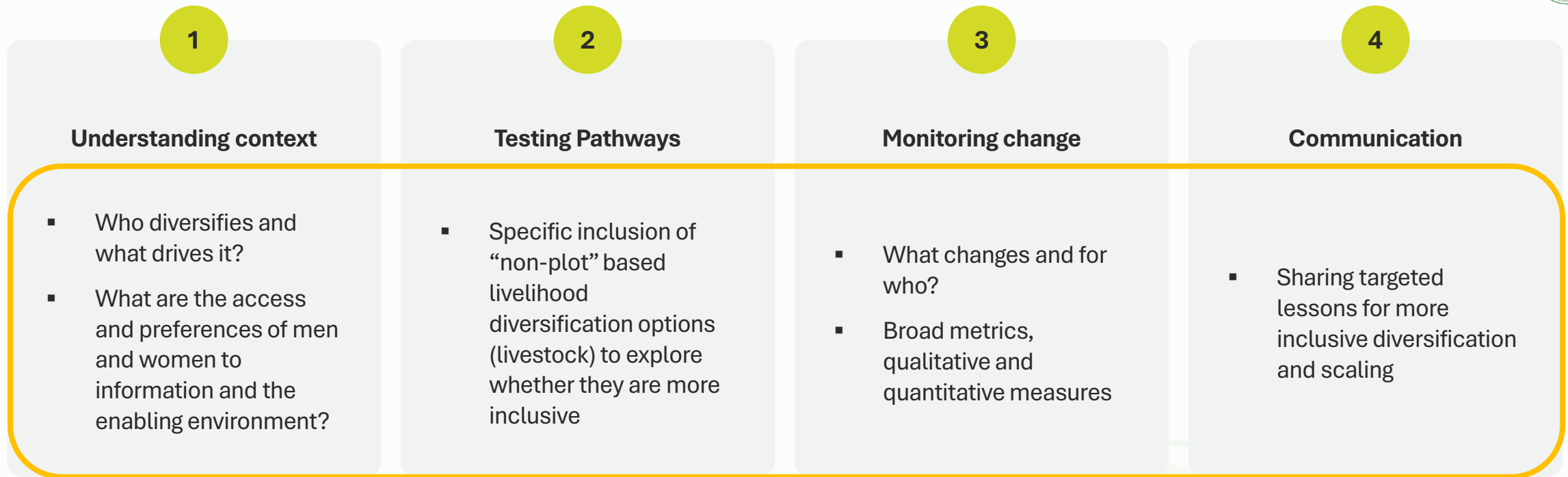


Pathways are defined as a package of technology, interventions and policies/programs together

= Nine Diversification Pathways

Approx 15,600 farmers (direct engagement 55% women 45% men)

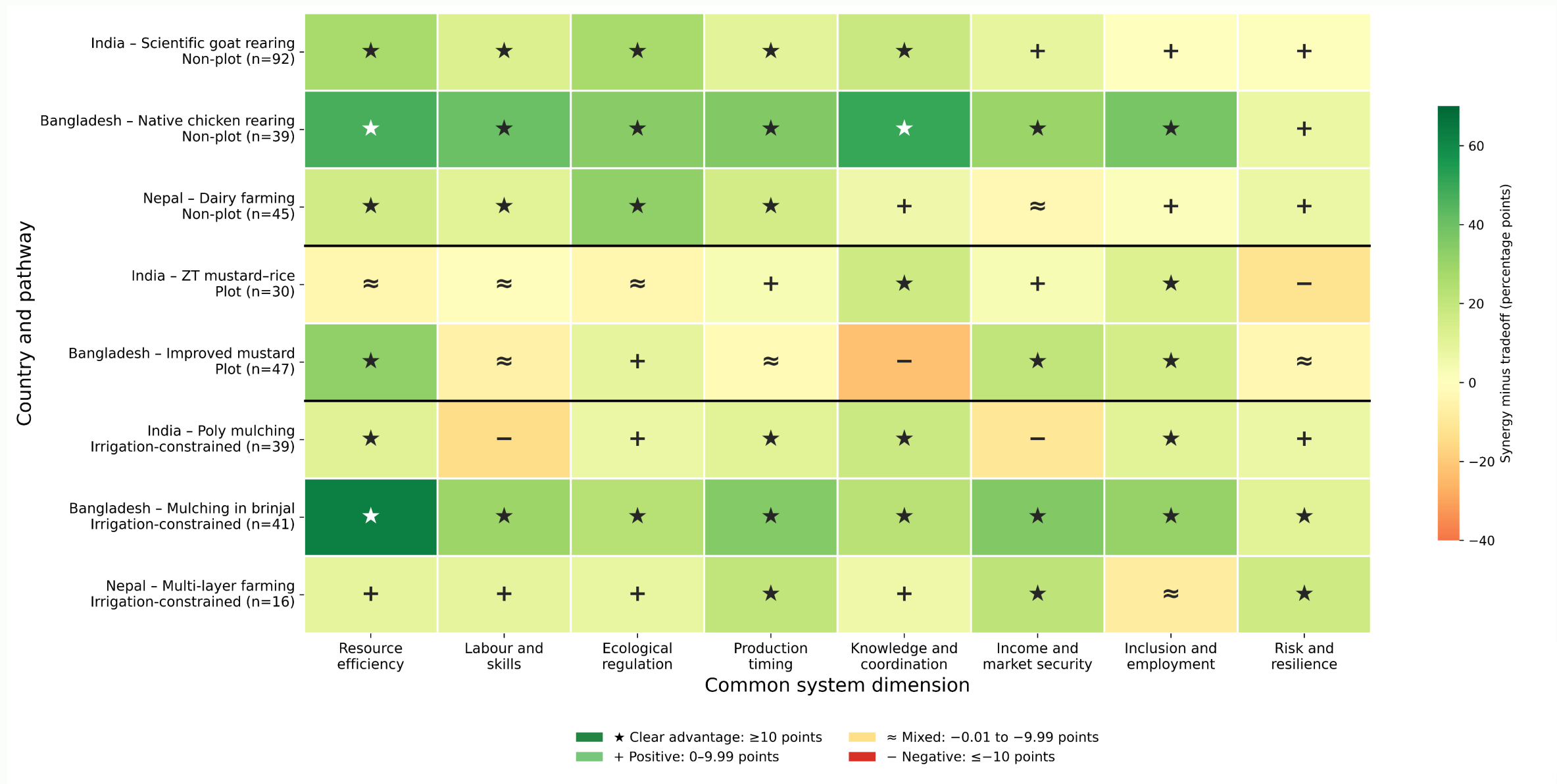
Rupantar approach: ‘Learning and doing’ gender and inclusion



- Gender as both a stand-alone objective AND a cross-cutting lens
- Beyond procedural or symbolic inclusion
- Shared language across a diverse team, disciplines and countries
- Gender as evolving, reflexive practice
- Embedded in research design, implementation, and impact



Trade offs and synergies: Common system interaction of diversification pathways across India, Bangladesh and Nepal





Crop diversification in Bangladesh: Public policy provisions, practices, and insights for future initiatives

Ravi Nandi  , Timothy J. Krupnik  , Wais Kabir  



Spatiotemporal variation of crop diversification across Eastern Indo Gangetic plains of South Asia

Ravi Nandi ^a  , Arunava Ghosh ^b  , Saurya Karmacharya ^c  ,
Timothy J. Krupnik ^a  

Status and drivers of crop diversification in the Eastern Gangetic Plains of

Research Article

Smallholder farmer insights on information systems: current use and future needs in the Eastern Gangetic Plains

Emma Karki  , Saurya Karmacharya  , Arunava Ghosh  , Gunjan Rana  , Kali Ratan Chakma  ,
Pragya Timsina  , ...show all

Received 21 Jun 2024, Accepted 20 Dec 2024, Published online: 27 Feb 2025

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Determinants of modern agricultural machinery adoption in Northern Bangladesh: A multivariate probit analysis

Bristy Banik ^a, Hasneen Jahan ^a, Md. Rubel Ahmed ^a, Ravi Nandi ^b, Tamara Jackson ^c,
Arifa Jannat ^c  



Research Paper

Patterns of livelihood diversification in farming systems of the Eastern Gangetic Plains

Tamara M. Jackson ^{a,*}, Ravi Nandi ^b, Arifa Jannat ^{a,c}, Arunava Ghosh ^d, Dilip Kumar Hajra ^d,
Biplab Mitra ^d, Md Mamunur Rashid ^e, Sagar Bista ^f, Anjana Chaudhary ^g, Pragya Timsina ^h,
Emma Karki ^g, Kali Rattan Chakma ^b, Gunjan Rana ^h, Avinash Kishore ⁱ

Nurturing the sustainable food systems: crafting policies and practices for crop diversification in Bangladesh

Ravi Nandi ^{1*}  , Timothy J. Krupnik ¹  , Wais Kabir ¹  , Tamara Jackson ²  



The hidden cost of land fallowing: Food insecurity in the Eastern Gangetic Plains

Bhuvana Narayanarao ^{a,c}  , Ravi Nandi ^b  , Tamara Jackson ^c, Biplab Mitra ^d,
Arunava Ghosh ^d, Saurya Karmacharya ^e, Gunjan Rana ^a, Anupama Islam Nisho ^b,
Anjana Chaudhary ^c



Data Article

Dataset on the patterns of livelihood diversification in farming systems of the Eastern Gangetic Plains of South Asia

Tamara M. Jackson ^a, Ravi Nandi ^b  , Arifa Jannat ^{a,c}, Arunava Ghosh ^e,
Dilip Kumar Hajra ^e, Biplab Mitra ^e, Md Mamunur Rashid ^h, Sagar Bista ¹,
Anjana Chaudhary ^f, Pragya Timsina ^g, Emma Karki ^f, Kali Ratan Chakma ^b,
Gunjan Rana ^g, Avinash Kishore ^d



Scaling achievements through project and program alignment



West Bengal: Government-led

- Department of Agriculture (DOA) has successfully scaled up Zero Tillage (ZT) mustard cultivation based on the Rupantar protocols to ~15,000 farmers across Cooch Behar, Alipurduar, Uttar Dinajpur, and Dakshin Dinajpur — without utilizing any Rupantar project funds.
- The technology has reached farmers from four key social groups: General, Scheduled Castes (SC), Scheduled Tribes (ST) from forest fringe areas, and Minority communities.
- Adoption has been driven through partial financial support from the Government of West Bengal as well as autonomous adoption by farmers, demonstrating the sustainability and wider acceptance of the Rupantar approach.

Rangpur, Bangladesh: Development partners

- RDRS has taken the initiative to expand proven climate-resilient practices: rice–mustard–rice cropping, mulching in vegetable cultivation, intercropping systems, and native chicken rearing.
- AUD\$2.2m Climate Resilience and Nurturing Growth for Poverty Upliftment (CRANGPU) project, with support from Bread for the World, Germany.
- This project targets reaching a further 30,000 farmers in Rangpur division.

Student Engagement

No.	Degree	Name	University	Thesis topic
1	PhD	Syful Islam	BAU	Livelihood Diversification and Dietary Diversity of Smallholder Farm Households at Rangpur Region of Bangladesh
2		Mamun Rashid	HSTU	Agricultural Diversification for Livelihood Security of the Farmers in Northern Bangladesh
3		Soumyadeep Das	UBKV	Understanding the farm diversification strategies across different typologies of farming households in Eastern Gangetic Plains of India
4		Sophie Lountain	AU	Women’s Empowerment in South Asia: Improving Measurement to Raise Welfare
5		Anjana Chaudhary	AU	Gendered Dynamics and Scaling Mechanisms for Sustainable Livelihood Diversification Strategies in South Asia
6		Pragya Timsina	AU	Contested Agricultures: Power dynamics, resilience and missed opportunities among smallholder rice farmers in Assam
7		Emma Karki	AU	Agriculture Technology Adoption-Household Decision Making-Gender Nexus
8		Ranjita Sapkota	AU	How can knowledge intermediaries contribute to sustainable food systems transformation through knowledge sharing?
9	Masters	Bristy Banik	BAU	Adoption of agricultural machineries at farm level in northern Bangladesh
10		Md. Sayemul Islam	BAU	A study on farmers’ status, determinants and motivations of crop diversification: evidence from a selected area of Rangpur district
11		Nishat Sultana Ema	BAU	Farmers’ knowledge, attitude and perception of crop diversification and its effect on income: the case of a selected area of Rangpur district
12		Md. Nayan	BAU	Effect of mulching and drip irrigation on productivity, water use efficiency, and economics in brinjal under water-deficit system
13		Setu Khandaker	BAU	Assessing Women’s Empowerment and Economic Viability of Native Chicken Rearing in Selective Areas of Bangladesh
14		Jannatul Ferdows Akhi	BAU	Impact of Native Chicken Rearing on Improved Food and Nutrition Security of the Households: Evidence from a Selected Area of Bangladesh
15		Divya	AU	Linking Climate Events to Diet Quality and Food Insecurity
16		Darsan Sapkota	AFU	Response of Tillage Practices and Fertilizer Doses in the Growth And Economics of Winter Maize Production in Eastern Terai, Nepal
17		Mr. Anupam Tiwari	AFU	Competitiveness and Efficiency of Smallholder Dairy Production in Sunsari District: A Study on Adoption of Improved Dairy Management Practices
18		Mr. Anil Poudyal	AFU	Financial Analysis of Areca-nut Based Multilayer Farming in Jhapa District, Nepal
19	Honours	Mackenzie Coopman	AU	Challenge and adaptation priorities for agricultural production systems in South Asia
20	Interns	Gajendra Mehta	AFU	Assessment of Status, Challenges and Profitability of Farm Mechanization in Maize at Dhanpalthan Rural Municipality of Morang District, Nepal
21		Palbi Kumari Argariya	AFU	Assessment of Status, Opportunities, and Challenges of Dairy Farming in Ramdhuni, Sunsari, Nepal
22		Paras Malla	AFU	Assessment of Status, Opportunities and Challenges of Multilayer farming in Jhapa, Nepal
23		Darpan Baral	AFU	Evaluation of the combined effect of organic and inorganic fertilizers on the growth and yield of Radish (Raphanus sativus) grown as intercrop in young Areca nut (Areca catechu) palm in Bhadrapur Municipality, Jhapa.
24		Sandhya Tumsa Limbu	AFU	Effect of Different Maize-Legume Intercropping on Green Fodder Yield and Growth Performance of Fodder Maize
25		Dilip Mehta	AFU	Response of Hybrid Maize Varieties to Different Sowing Dates in the Eastern Gangetic Plains of Nepal

Partnerships and Facilitation Training

Dates: 26th – 27th May 2025, Birtamode, Nepal

Trainers: HE Karlene Maywald, Mr Steve Morton

Targeted outcomes:

1. Developing interpersonal and formal relationship management skills
2. Facilitating partnerships to scale climate-smart agriculture initiatives
3. Promoting institutional memory and knowledge sharing
4. Strengthening collaboration for food systems transformation

Participants (25)

- CIMMYT (5)
- Ministry of Industry, Agriculture and Cooperatives, Koshi Province, Nepal (3)
- Nepal Cooperatives (3)
- Agriculture and Forestry University, Nepal (4)
- Bangladesh Agricultural University (3)
- RDRS Bangladesh (2)
- North Bengal Agricultural University, India (3)
- Satmile Farmers Club, India (2)



Insights reported

- The critical role of relationships and trust in driving change within agricultural systems, enabling effective knowledge sharing, resource pooling, and risk management.
- The facilitator’s multifaceted role as connector, communicator, mediator, and motivator, requiring active listening, empathy, neutrality, and cultural sensitivity.
- The importance of managing risks and expectations among stakeholders, using tools like stakeholder mapping and partnership health checks to align goals and foster collaboration.
- Strategies for scaling climate-smart agriculture (CSA), emphasizing shared vision, ongoing communication, and inclusive engagement for sustainable livelihoods and resource conservation.
- The need for strong institutional memory and knowledge sharing to ensure program continuity and accountability.
- The power of collaboration and systems thinking in transforming food systems, highlighting that no single actor can drive change alone.

Developing interpersonal and formal relationship management skills

Strategies

- Capacity Building
- Clear Policy/Guidelines
- Valuing the diversity in culture, knowledge, context.
- Inclusivity (Everyone’s voice heard)
- Collective Growth
- Transparency and Accountability
- Shared Benefits
- Resource Sharing and Development
- Rotation of the responsibilities

PARTNERSHIPS TO SCALE CLIMATE-SMART AGRICULTURE INITIATIVES

WHAT STRATEGIES CAN BE ADOPTED?

Establish	Establish multi-stakeholder platforms
Align	Align CSA with national and regional policies
Develop	Develop innovative financing mechanisms
Foster	Foster Private-Public Partnerships (PPP model)
Promote	Promote knowledge sharing and capacity-building
Support	Support inclusive and community-led approaches
Use	Use empirical evidence for advocacy
Build	Build trust and transparent management structures

Improved Agricultural Water Management Skills

Dates: 22nd – 25th April 2026, Jhapa, Nepal

Trainer: Professor Santosh Marahatta, Agriculture and Forestry University

Targeted outcomes

1. Participants will have an improved understanding of sustainable water management in the context of climate change
2. Participants will have improved skills in using tools and technologies to improve water productivity

Participants (24)

- Provincial and Municipal Government, Nepal (6)
- Nepal Cooperatives (5)
- Nepal Universities (2)
- Farmers (2)
- Agriculture and Forestry University, Nepal (6)
- Bangladesh Agricultural University (1)
- RDRS Bangladesh (1)
- North Bengal Agricultural University, India (1)



How do we maintain effective partnerships in AR4D?

