

Co-design of the scaling strategy Mechanized DSR and tailored agronomy in Cambodia



Rica Joy Flor

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Synergies between EiA and AMD

- Direct seeded rice technologies are options for climate adaptation
- Scaling the technologies require systemic change related to policy or governance

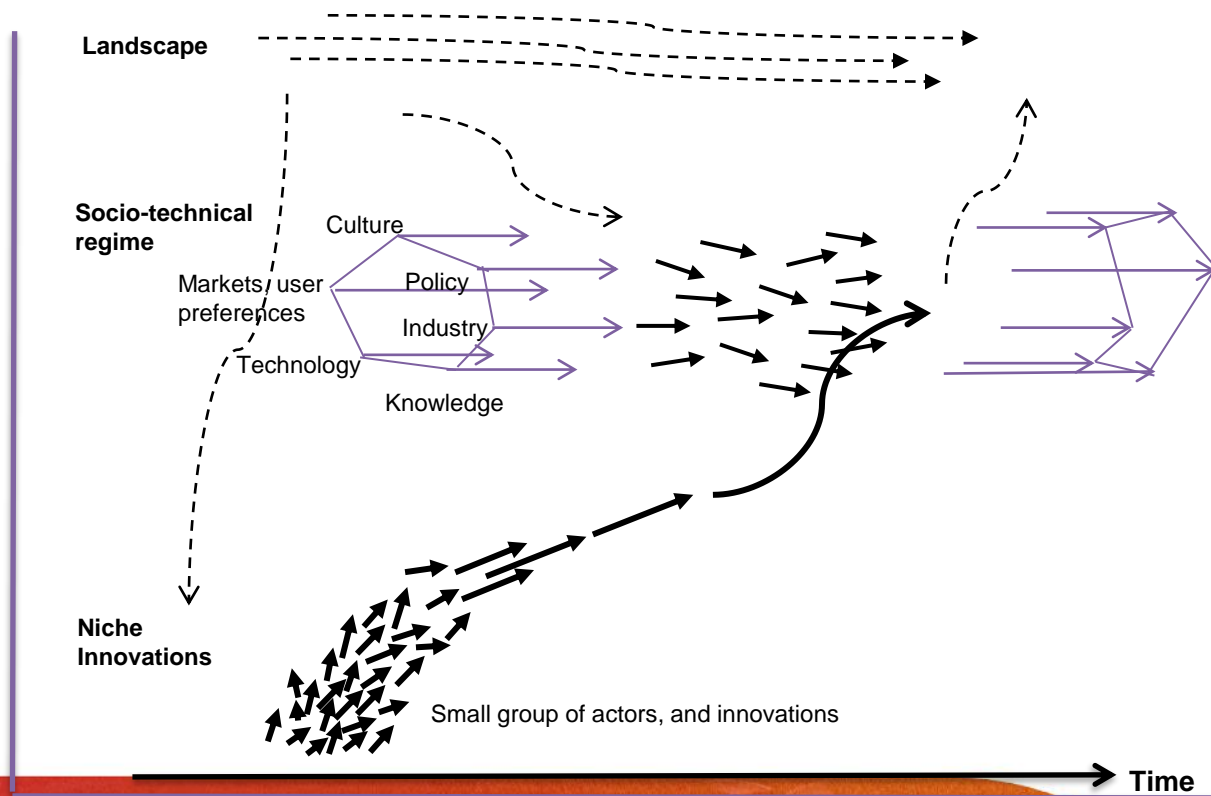




Examine, strategize for, and catalyze the scaling
of mechanized DSR with tailored agronomy



Framework for scaling



Adapted from: Geels 2002

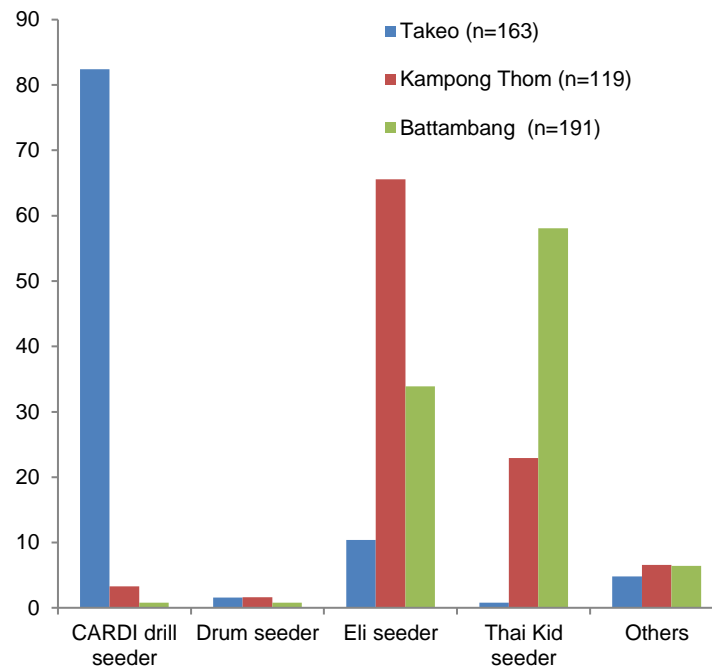
Tools and techniques



Strategy 1. Assess options, work with companies that commercialize tools

EiA studies

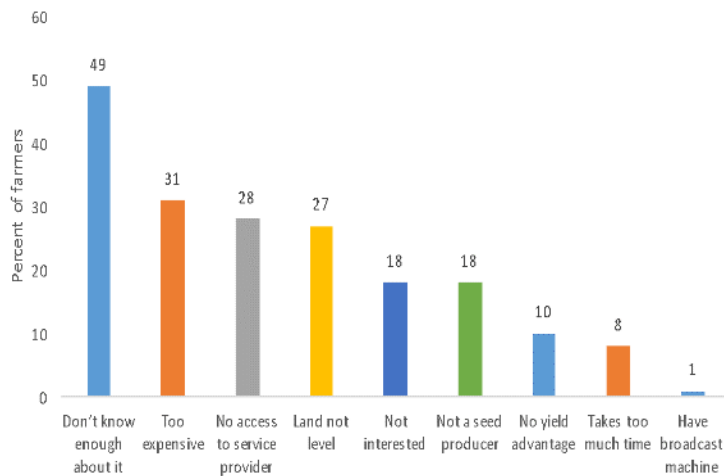
- Compare the performance of seeders
 - No significant differences for dry mDSR options (ASR 2022)
- Identify which seeders are used by service providers and farmers, across provinces



Percentage of farmers (N= 473) by province and type of seeder used

EiA studies

- Assess reasons for adoption and non-adoption



Reasons for non-adoption of mechanized DSR

Source: Survey in Battambang by ASR

Reason for dis-adoption	%
Engine broke down	4
Seeder parts (e.g boom) broken	6
Could not access the machine	25

Reasons provided by dis-adopters
(n=100)

Source: EiA DSR Use Case Survey 2021

Tools and techniques

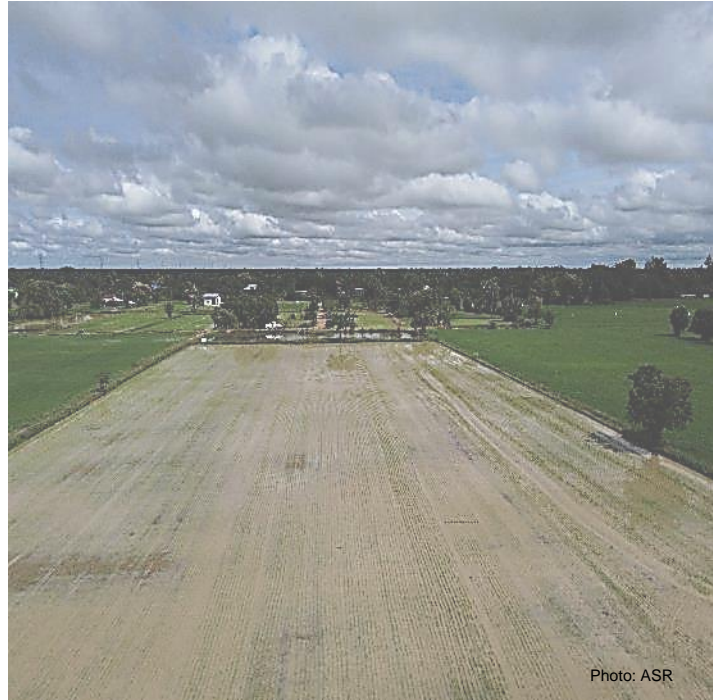


Photo: ASR

Strategy 2. Adapt agronomic recommendations for mDSR



EiA Adaptive experiments

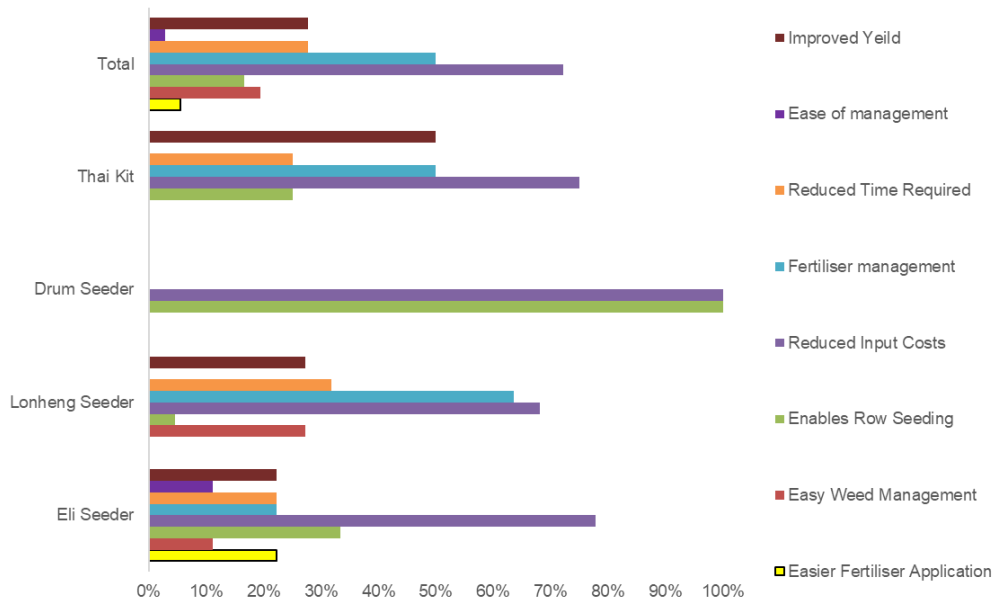
- Integrated weed management
 - Various options, improved (weed-free) FP can improve yield
- mDSR + best agronomic practice
- Fertilizer
- Water management
- Seed rates



What are we missing in terms of mDSR knowledge and tailoring the agronomic recommendations?



Service sector



Benefits associated by service providers for seeders they use

Strategy 1. Understand the current conditions for service provision

Source: EiA survey on service providers

EiA Studies on willingness to pay and service profitability

Cost (in USD/ha) that female and male farmers are willing to pay for mDSR service

	Female (n=114)	Male (n=197)
Seeder service	28	29
Labour (Men)	27	27
Labour (Women)	30	29

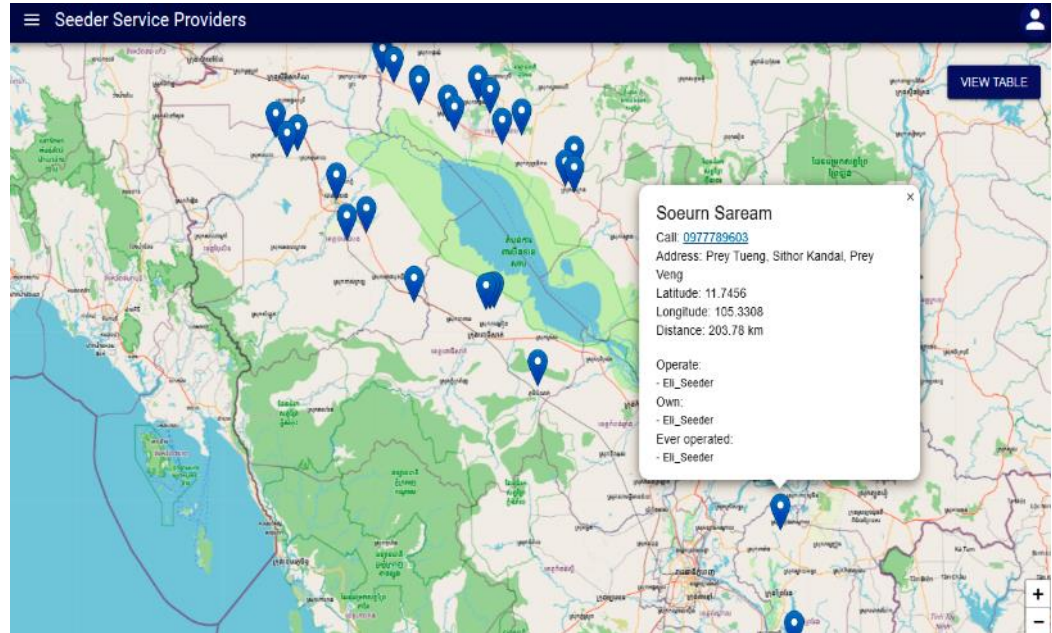
Price of seeder service and income

Machine used	Price of service (USD/Ha)	Income per season (USD)
Thai Kid	30.5	1236
Lunheng	17	182
Eli	11	76

Source: EiA survey on farmers, and EiA survey on service providers

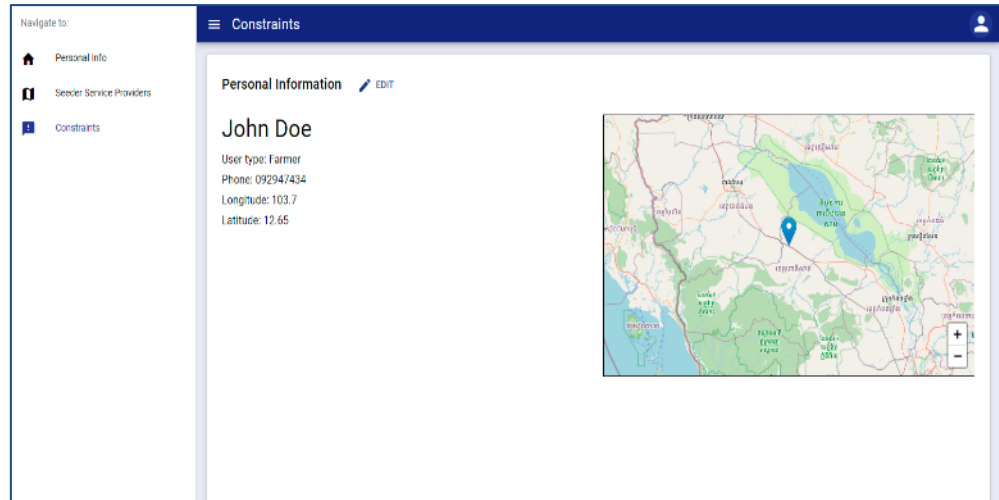


Service sector



Strategy 2. Develop a market dashboard for access to service providers

Knowledge outreach (and knowledge management)

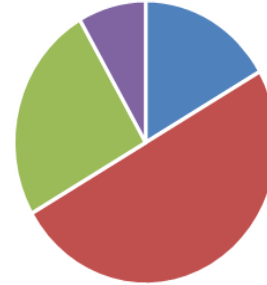


Strategy 1. Outreach through market dashboard



Knowledge outreach

Identified groups that support uptake of mDSR

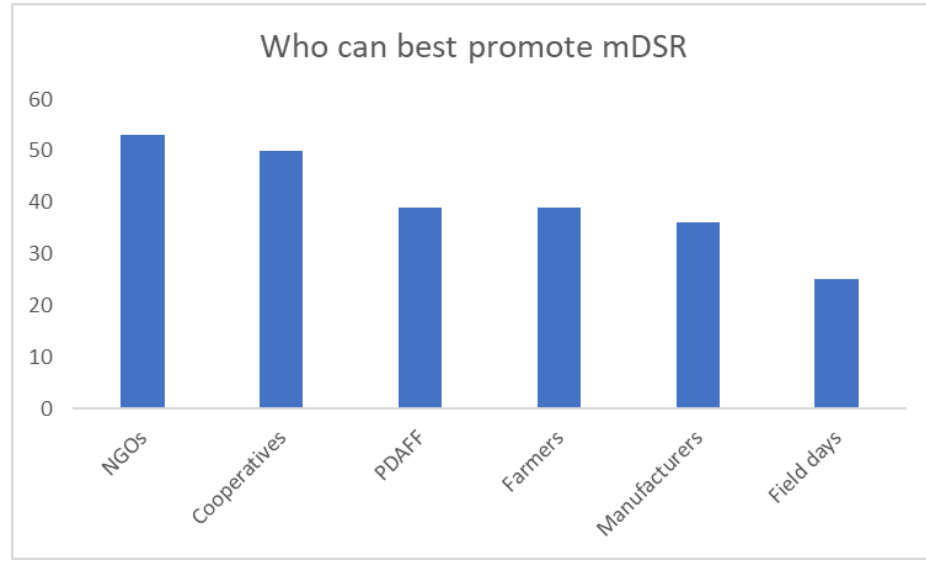


- NGOs
- National projects
- International organizations
- Government agency

Strategy 2. Partnerships for outreach
(GIZ, HKI, ASPIRE/Chamka App,
Private sector outreach, NGOs)



Knowledge outreach



Strategy 3. Outreach through agricultural cooperatives, PDAFF and farmer networks

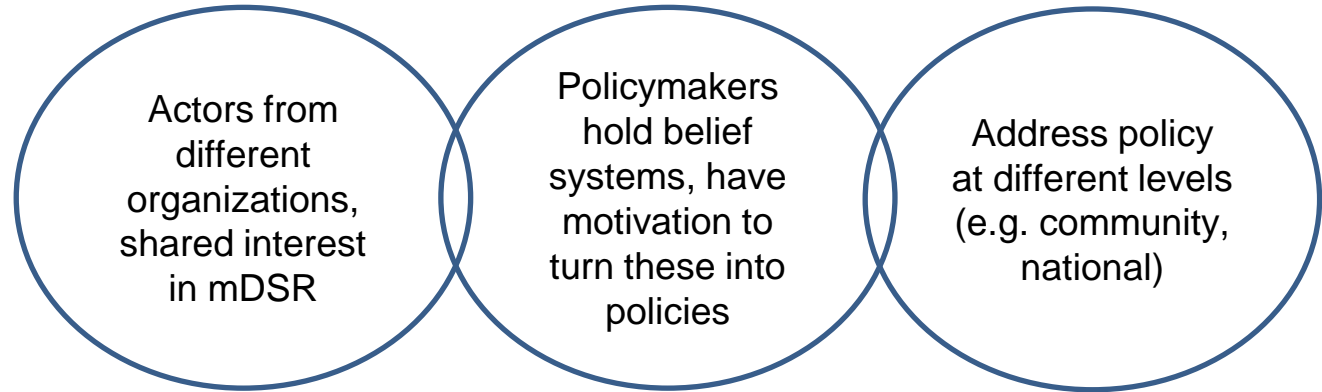


Outreach activities

- Field visit, field day, reflection activities
- Outreach through NGOs, cooperatives, PDAFF
- Trainings for farmers
- Trainings for recipients of seeders (from government)



Policy



Strategy 1. Advocacy coalition framework



Policy activities

- Brief to address seeder distribution
- Sharing information to government leaders, partners



Who can we partner for more knowledge outreach?

What opportunities exist for us to synergize EIA outreach activities?



Innovation delivery

Strategies

1. Capacity building

- Use, Maintenance, Repair services
- Entrepreneurship
- Training the trainers

2. Access and technical support for women's groups

3. Business accelerator (Impact Hub)?

4. Contract farming (SRP)?



Who else needs to change so that farmers will adopt mDSR?
What incentive mechanisms can be linked to mDSR uptake?



Market and Financing mDSR investments

Strategies

1. ASR discussions with potential financing for seeder buyers
2. Private sector mechanisms



EiA activities

- Business diagnostics (profitability from purchase)
- Insights on subsidy for machine purchase
- Supporting creation/revision of user's manuals



What support is needed to improve the market for seeders?
What role can projects (like EiA) play in supporting this?



In this scaling strategy:
Bundling innovations

Innovation profiles		
Name	Description	Stage of innovation
Certified/good quality seeds	Commercially available certified seeds or Quality Declared Seeds	Available for use
Integrated pest management	No insecticides, apply Beauveria No fungicides, apply Trichoderma	Available for use
Good land preparation	Tillage+Leveling (twice), Use laser land leveling where possible Construct small canals	Adopted by some farmers
Cooperatives as service providers	Communal use of seeders (agricultural cooperatives)	Piloting
Market dashboard for seeder services, extension materials	Digital tool that integrates service access with knowledge access	Proof of concept
Seeder and technical support for women's group	Enabling access for women, supporting them with timely sowing and other agronomic advice	Proof of concept

In this scaling strategy:
Enabling systemic change

- Change in tools and techniques accompanied by changes in markets, policies, incentive mechanisms, services, beliefs, and culture



Group work

1. Tools and techniques
2. Knowledge and policy outreach
3. Services and financing
4. Innovation delivery

