

> Greening the MSD approach in agriculture

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The Donor Committee for Enterprise Development



AGENDA

- Overview of the guide with practical examples from CASA and PRISMA (25 minutes)
- Q&A (30 minutes)

www.beamexchange.org/greening-msd



How the guide came about

Implementers, consultants and donors...

- How do I manage the “friction” between reaching poverty reduction impact targets and promoting environmental sustainability?
- How can I encourage market players to embrace environmentally sustainable practices?
- How do I recruit and train my team to ensure they incorporate green considerations?
- What types of indicators do I need to measure and track?



Greening approach	Programme aims to "Do No Harm" to the environment	Piloting interventions with explicit environmental objectives, within a larger portfolio of conventional agricultural interventions	Programme sets out to unify environmental protection, climate change adaptation or mitigation objectives and economic goals
Types of objectives (besides poverty reduction)	Private sector growth <i>e.g. increases in investment, yields and incomes</i>	Private sector growth and income increases with some objectives around the introduction of 'environmentally-friendly' practices <i>e.g. use of organic inputs, waste cascading</i>	Explicitly 'green' outcomes alongside increases in resilience <i>e.g. soil health, % land regenerated or under conversion, lower GHG emissions</i>
Types of tactics	Due diligence to avoid negative environmental impacts Environment and climate change is a cross-cutting issue No dedicated budget or team member to support greening considerations	Improving resource efficiency in one sector <i>e.g. use of by-products to produce new goods, training on resource-efficient production processes</i> Promoting environment-friendly services <i>e.g. transition to e-transport for shipping</i> Strengthening environmental regulations <i>e.g. to cut agrochemical waste</i> Providing resources to draw on to support environment and climate change portfolio <i>e.g. at implementer headquarters</i>	Targeting green agriculture sectors or focusing on agroecological tactics Promoting cross-cutting services for improved environmental outcomes Embedding environmental and climate change content into technical assistance Adding environmental objectives to contracts with market actors Dedicating budget & staff to support achievement of greening targets
Forms of market actor engagement	Partnerships involve little discussion about how to green business models	Partnerships with conventional market actors that include exploring greener business models Engaging with public actors to discuss removal of barriers to greener agriculture	Partnerships with conventional and green actors that always include environmental objectives Dedicated advocacy and support to public actors to advance policy for green agriculture

Structure of the guide

Table 1: Guiding questions

Chapter	Questions for greening MSD phases/components
1. <u>Strategy</u>	What type of greener agricultural systems change do you want to achieve?
2. <u>Diagnosis</u>	Have you analysed the agricultural system in a way that allows you to understand environmental dynamics?
3. <u>Vision</u>	Are you considering economic, social AND environmental sustainability?
4. <u>Design and implementation</u>	Are you being tactical or distortionary in pursuit of green objectives? Are the interventions contributing to your greening objectives systemic?
5. <u>MEL</u>	Are you basing decisions on evidence, and are you fostering a culture of knowledge, learning and adaptive management that considers the environmental dynamics?
6. <u>Management</u>	Can your team and/or your consortium partners deliver on greener programme objectives?

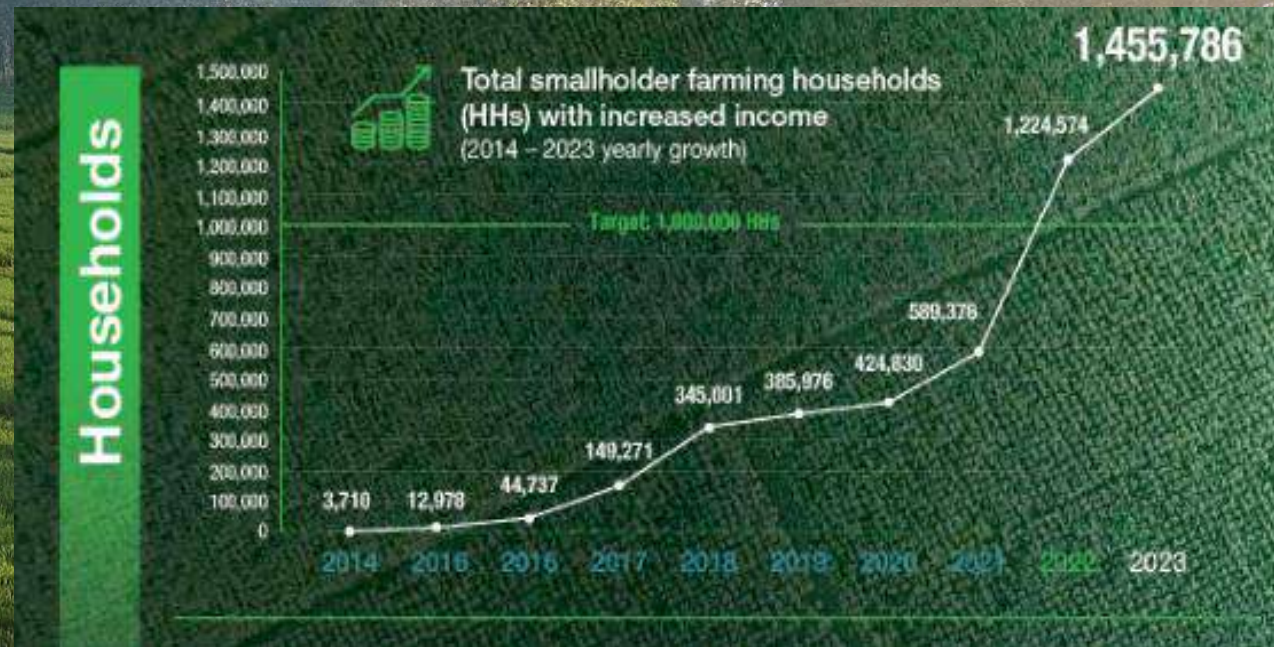


PRISMA's Climate Change Integration

About PRISMA

PRISMA is a partnership between the **Government of Indonesia** and the **Government of Australia** to increase the productivity and income of smallholder farmers.

Increased productivity contributes to food security and builds farmer resilience to agricultural shocks, such as climate change, and disease outbreaks.





CASA and CCE

❖ Strategic mandate is on economic outcomes

- ✓ SME Investment
- ✓ SHF Incomes



❖ Aquaculture and Poultry



❖ CASA's evolving CCE ambition



Greening the MSD Approach: Case of Viphyra Chambo



Implementation: Case of Viphya Chambo



❖ Tactical value proposition and focus of the partnership

- ✓ Adaptations to integrate CCE considerations
 - a) Company's business plan and income flows integrated crop farming
 - b) Adapting production facilities
 - a) Supporting partner to design a greenhouse
 - a) Design of standard CCE integration training materials



Results

❖ Farmer Level

- ✓ Adoption of integrated technology
 - Bananas, sugarcane and vetiver grass
- ✓ Adaptation of production ponds
 - Pond depth, dykes, conservation trees
 - Water reservoirs at pond outlets

❖ Firm Level

- ✓ Enterprise integration
 - 40% income from non-fish value chains
 - On-going Reskilling for SHFs

❖ Scale-up anchored around immediate income benefits

1. Strategy

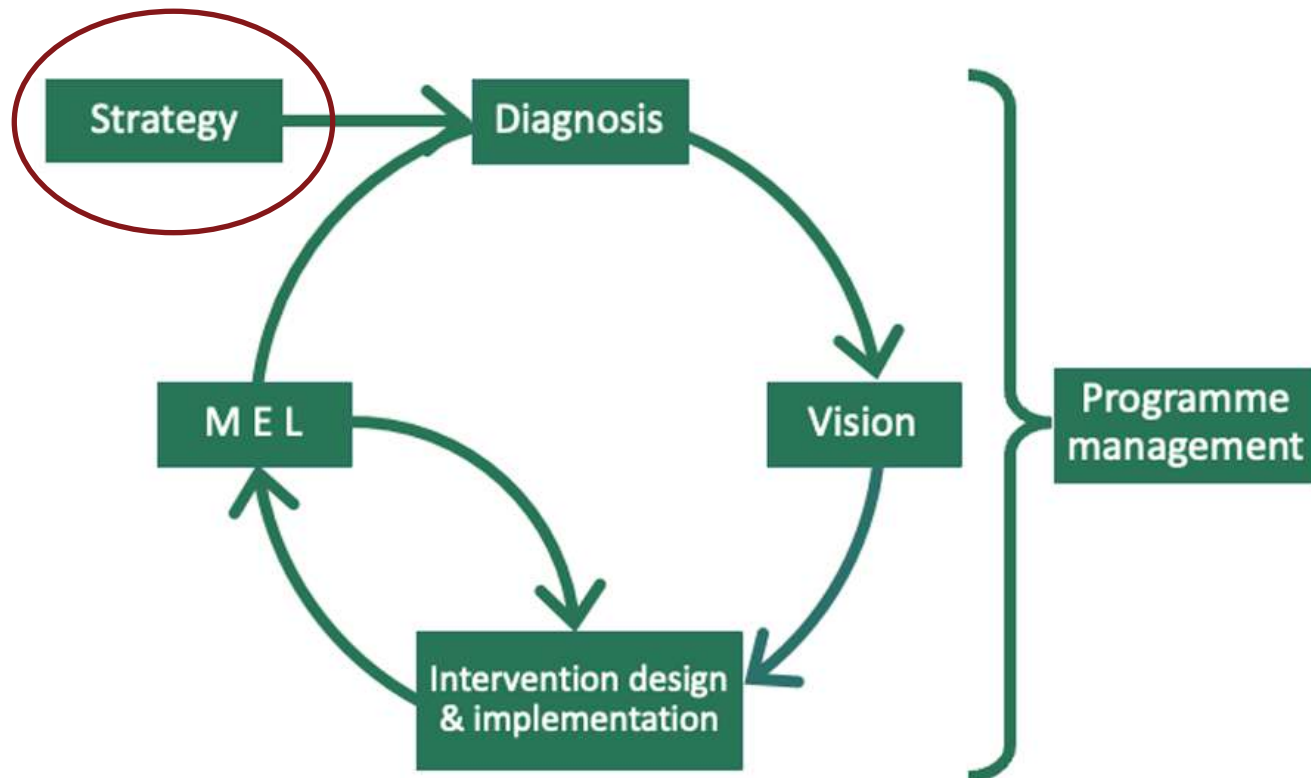


Table 5: Sector selection criteria	Answer	Alignment with objectives
Sector (e.g. maize)		
Environmental sustainability ⁷		
• What is the sector’s contribution to GHG?	?	H / M / L?
• What is the sector’s contribution to biodiversity loss, deforestation and/or soil degradation?	?	H / M / L?
• Which natural ecosystems are impacted by the sector (fish stocks, rainforest, etc.)?	?	H / M / L?
• What is the sector’s resource intensity use (energy, water, land, etc.) per productive output?	?	H / M / L?
• How much and what types of waste are generated because of production?	?	H / M / L?
• How do production zones affect environmentally or culturally sensitive areas nearby?	?	H / M / L?
Environment-social sustainability nexus		
• What are the most significant climate change-related risks and vulnerabilities affecting the target group and how are vulnerable populations affected by these climate risks?	?	H / M / L?
• How have past extreme weather events impacted the area where target populations work?	?	H / M / L?
• Have community members been involved in the identification of climate risks and adaptation strategies? If so, what are their priorities?	?	H / M / L?
• Are there funding sources available to implement environmental protection or climate change measures?	?	H / M / L?
• Are there nature-based solutions, such as reforestation or wetland restoration, that could be used to support environmental objectives?	?	H / M / L?

Integration of **Climate Change** into **PRISMA**



Climate integration evolved – from ‘do no harm’ to piloting climate interventions

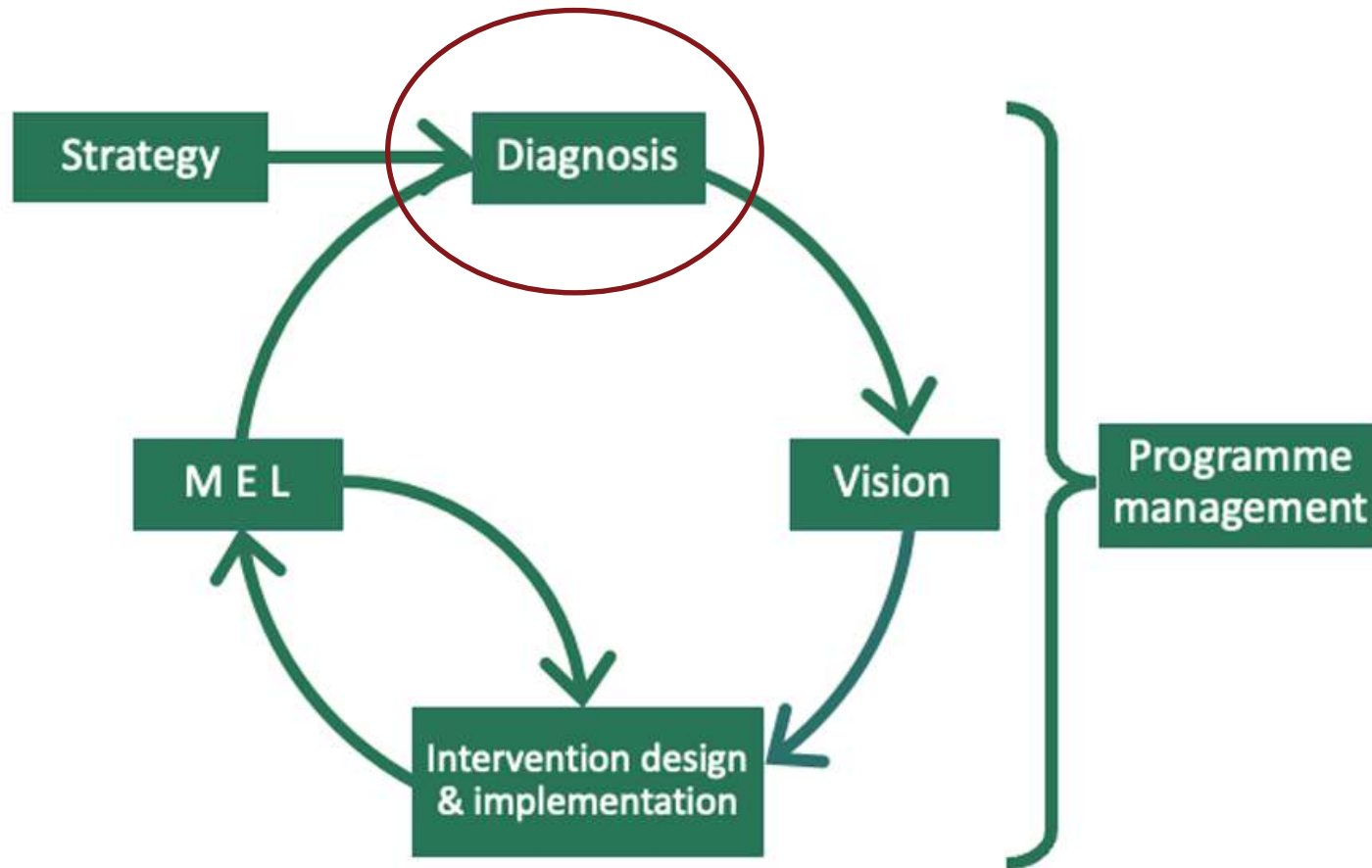
Addressing climate change is central to Australia’s development cooperation. Environment is a priority theme for PRISMA.

Greening the MSD spectrum evolved from low to middle to high – a few sectors set environmental objectives with economic goals.

DFAT’s support in **adaptive management** was integral to evolving and integrating climate objectives.

**Over 67% of interventions
have proven climate-smart
agriculture elements**

2. Diagnosis



Diagnosis

Table 6: Examples of interactions between value chains (VC) and the environment⁸

	Negative impact of the VC on climate and environment	VC affected by climate crisis / environmental degradation	VC contributing to greening objectives
Example	Production / processing practices causing soil erosion or pollution GHG emissions Natural capital depletion Harmful waste generation	Directly: reduced productivity, increased production costs Indirectly: volatile resource prices	CO2 sequestration Natural regeneration Sustainable agricultural practices
Tools & concepts	Lifecycle assessments, ecological and carbon footprints	Climate risks and vulnerability assessments	Carbon credit markets

Table 7: Rules, regulations and norms affecting environmental performance (examples)

National level	Nationally Determined Contributions (NDCs) Agricultural development strategies in relation to sustainable growth Tax or subsidy schemes that may affect the value chain Obligations related to international treaties or networks REDD+ frameworks Maritime protection measures
Subnational level	Green procurement guides at municipalities Energy or transportation planning competencies Waste management regulations
Informal rules	Community practices around use of the commons Traditional knowledge and practices linked to disaster risk reduction

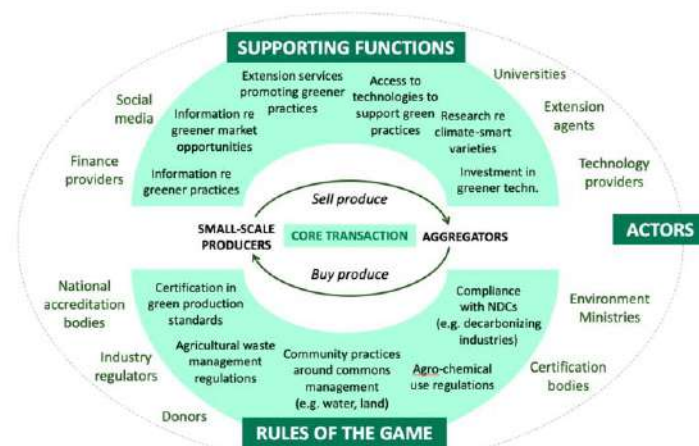
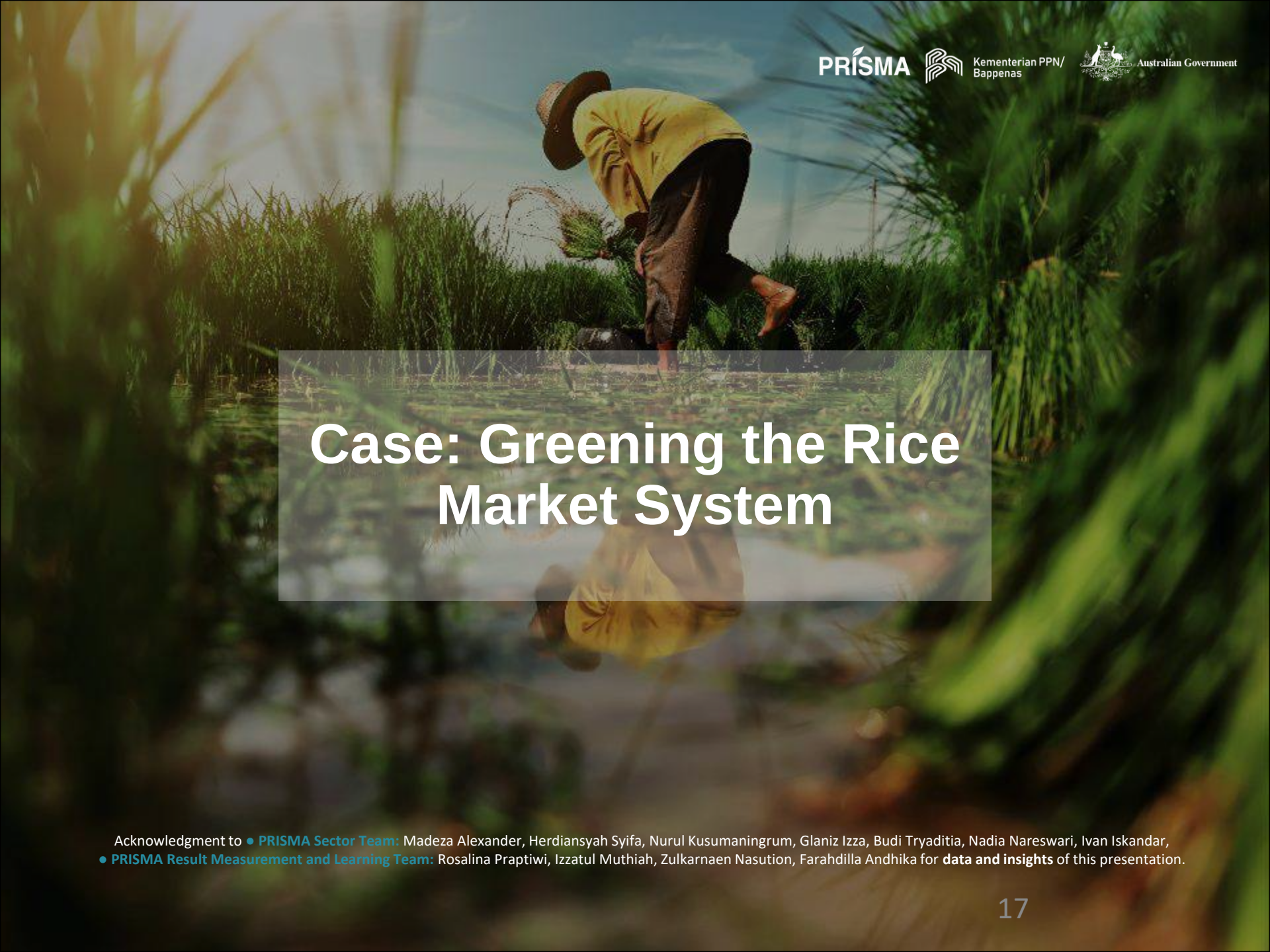


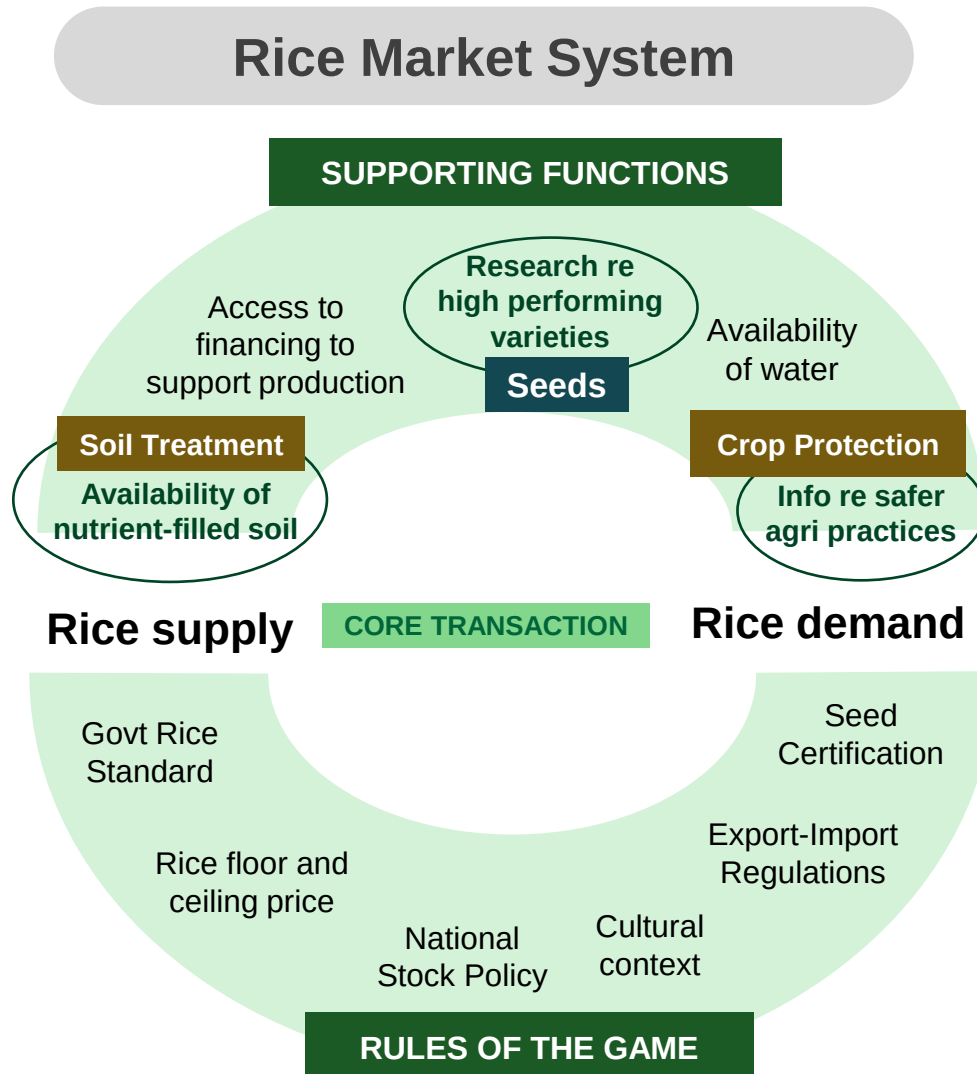
Figure 4: Illustrative Greening MSD doughnut for maize producers & aggregators



Case: Greening the Rice Market System

Acknowledgment to • **PRISMA Sector Team:** Madeza Alexander, Herdiansyah Syifa, Nurul Kusumaningrum, Glaniz Izza, Budi Tryaditia, Nadia Nareswari, Ivan Iskandar, • **PRISMA Result Measurement and Learning Team:** Rosalina Praptiwi, Izzatul Muthiah, Zulkarnaen Nasution, Farahdilla Andhika for **data and insights** of this presentation.

Diagnose the underperforming market



Diagnose the underperforming market

Constraint Analysis

Rice productivity is stagnant

symptom

Seeds

Crop
Protection

Soil Treatment

*Use of old rice
seed varieties*

*Overuse of
chemical
products*

*Unbalanced
fertilizer usage*

problem

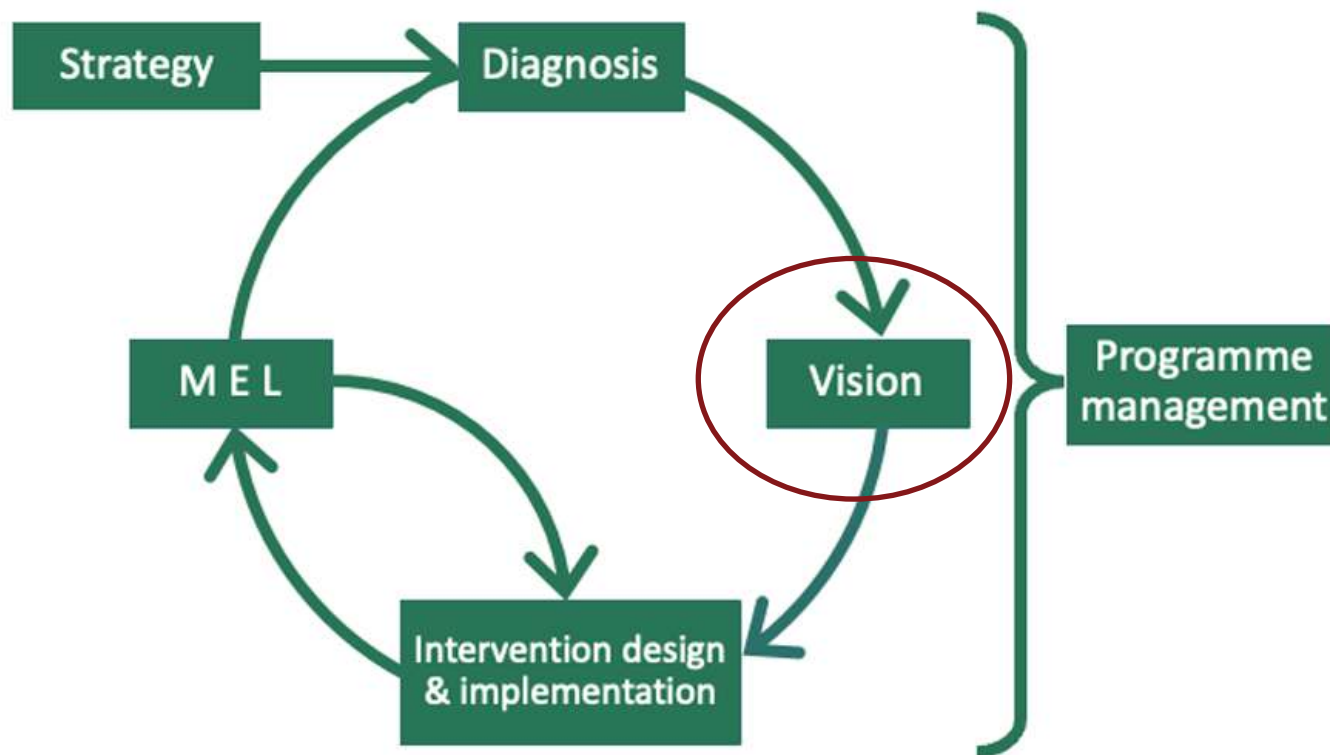
*Majority of seed
producers are
producing older
varieties*

*Not enough
promotion of
safer
alternatives and
its judicious use*

*Commercial
companies
lack
investment in
greener
options and
extension
services*

root cause

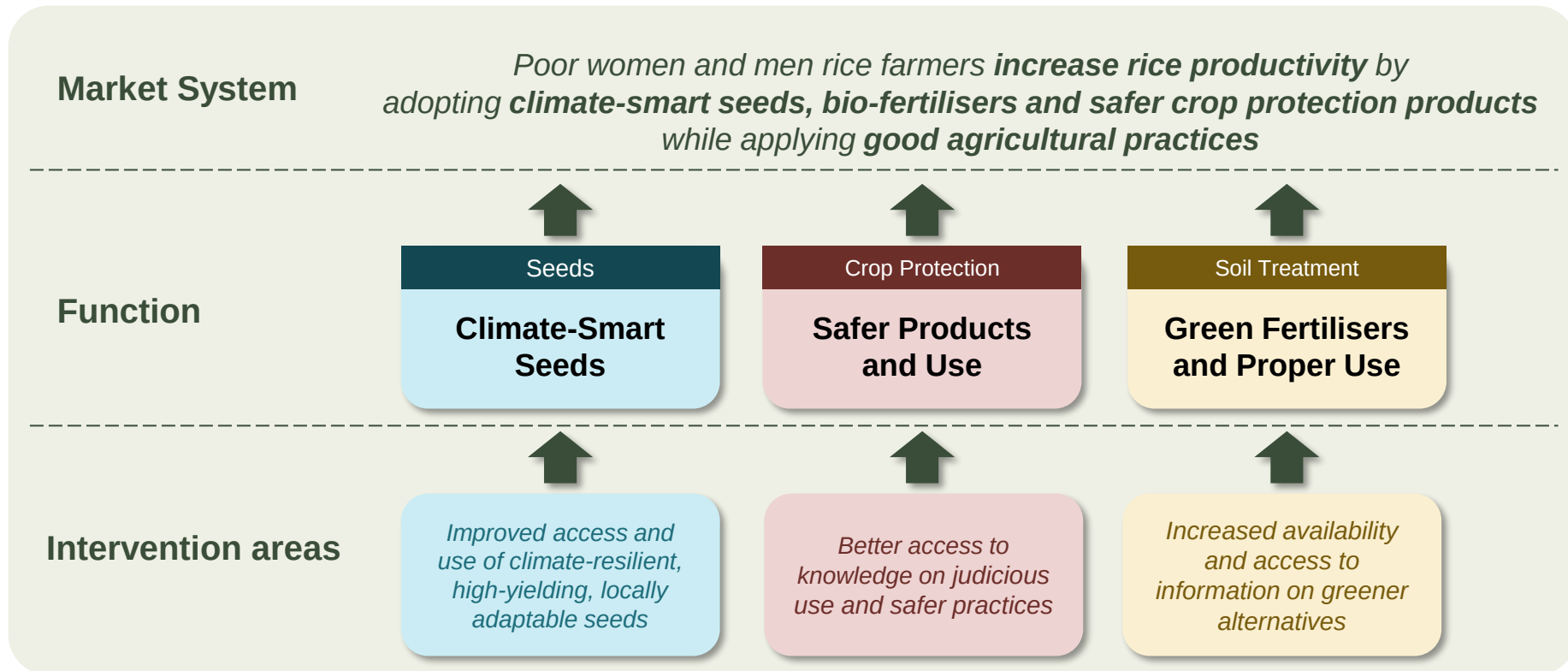
3. Vision



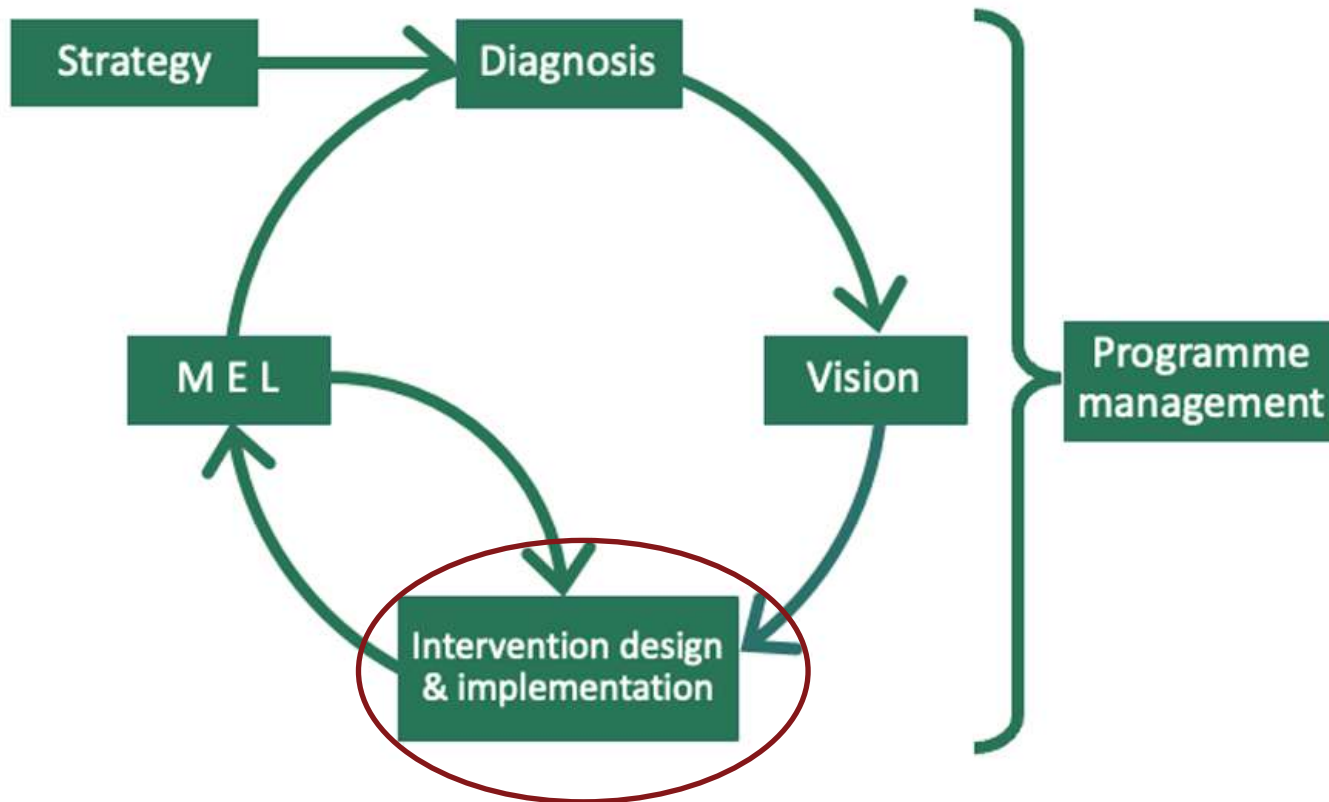
Vision

Table 9: Who does and will do? Who pays and will pay?				
Functions / rules	Who does	Who pays	Who will do	Who will pay
Links between business services and green finance providers	Donors	Donors	Business service providers	Finance provider association and producer associations
Accreditation of green certification providers ¹²	No one	No one	National accreditation agency	Certification bodies who want to be accredited

Define the vision for the market system



4. Intervention design and implementation



Design and implementation

Table 11: Varying partnership objectives across the Greening MSD spectrum

	A. Conventional input supplier	B. Green input supplier (e.g. organic fertiliser retailer)
Conventional agriculture	Support input dealers to sell agrochemicals from list of EU approved agrochemicals and advise farmers in their correct application	-
Regenerative agriculture	Support input dealers to provide soil testing services to farmers to ensure fertilisers are applied better, promoting integrated soil management practices or stocking new climate resilient seed varieties	Support green input suppliers to scale their products and services and reach more customers by establishing partnerships with other market players (e.g. large organic farmers, associations)

Designing the partnership



Seed

Introduction of climate-resilient, high-yielding, and locally adaptable seeds.



Crop Protection

Promotion of judicious use of products and options of safer & environmentally friendly products



Soil Treatment

Increased availability and access to information on greener alternatives

Steps to Create the Impact

Step 1.

Partner Identification

- *Academics, educational institutions, research unit of universities*
- *Companies with existing eco-friendly innovations*
- *Existing partners*

Step 2.

Support Modalities

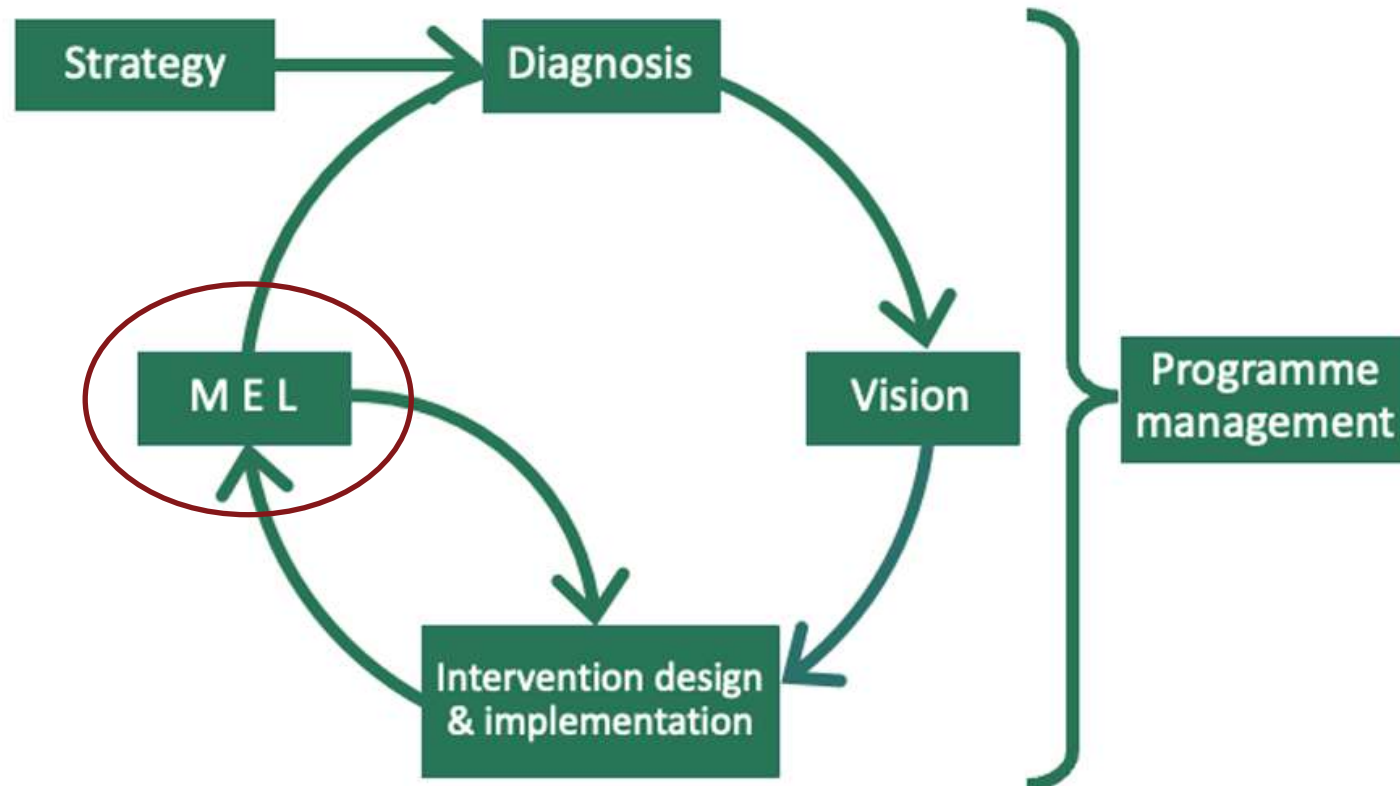
- *Cost-sharing on field testing to produce proof-of-concepts*
- *Promotion and dissemination, including market expansion strategies*

Step 3.

Business Models

- *Introduction of climate-resilient agricultural input and services*
- **(New!)** *Improving business processes to be more environmentally-conscious*

4. MEL



Systemic change indicators

- Number of market actors that sell in markets that pay a premium for environmental sustainability since beginning of your intervention
- Per cent variation in turnover associated with income streams generated from environmental activities attributable to programme support
- Number of institutions with improved capacity to assess or address environmental degradation / climate change
- Number and type of innovative mechanisms introduced (e.g. PES, reorientation of subsidies)
- Per cent of women who report increased agency over natural resources
- Proportion of households adopting improved agricultural practices
- Proportion of respondents who observe an increase in soil fertility
- Proportion of households who observe that soil erosion has reduced

Outcome and impact indicators

- Per cent of producers feeling more confident in the capacity of their farming system to cope with climate change and natural disasters since programme start
- Rate of environmental and climate data generation and sharing
- Number of market actors who report additional income sources
- # ha of land under restoration/ # of hectares protected
- Proportion of respondents that observe that tree cover is maintained or increasing in their community
- Per cent target area with sustainable crop, livestock or NRM practices
- Per cent respondents who observe health of coastal and marine resources in their community is improving
- Per cent respondents who observe an increase in water quality/availability
- Proportion of households that have effective options for waste treatment and/or disposal
- Changes in GHG
- Changes in soil health
- Changes in biodiversity index
- Per cent of households who report feeling able to withstand natural shocks and bounce back within six months

Capturing the outcomes



"The seeds performs impressively. My production increased and the planting cycle is noticeably shorter. My livestock also prefers the rice straw it yields."

Pak Wakiman,
Karanganyar, Central Java

PRISMA



Kementerian PPN/
Bappenas



Australian Government

Results

Climate Impact



45,471.3*
tonnes CO₂e saved

(equivalent to **448,767** motorcycles on gasoline driving for a month)

405k

farmers have adopted climate-adaptive innovations.

5

partners have adopted eco friendly innovations.

2

companies increased their investment on climate-resilient products & practices.

1

early signs of response from the processing industry.

*Based on PRISMA Assessment 2023, the emission reduction is calculated relative to non-users

PRISMA's Climate-Smart interventions reduced 134,708 tonnes of CO₂e



The total reduction is equivalent to the consumption of **1,329,460** motorcycles running on **gasoline for a month** or the combined electricity and fuel consumption of **1,886** households for a **month**.



1,145,180 farming households adopted climate-smart agriculture practices and benefitted.

Management and MEL

Adaptive Management

Bi-annual sector reviews to make changes in response to market dynamics. A climate scientist was hired to identify challenges and opportunities.

Aiming for Systemic Change

Achieving scale and resilience through – maintaining a set of interconnected interventions, leveraging scale agents, and sharing good practices with the potential actors.

Monitoring for informed management decisions

Clearly identified measurement indicators, internal skills set in place for regular monitoring and strategy adjustments.

Generating actionable green knowledge

With a year left, the focus is on generating insights on the green business models – what works and what does not – and providing technical support to the interested market actors.



Call to action

- Will benefit from crowdsourcing case studies & experiences
- Will also benefit from being tested out in practice
- <https://beamexchange.org/practice/greening-msd-examples/>



Case study 1



Case study 2



Case study 3