

12 June 2024



Scaling models

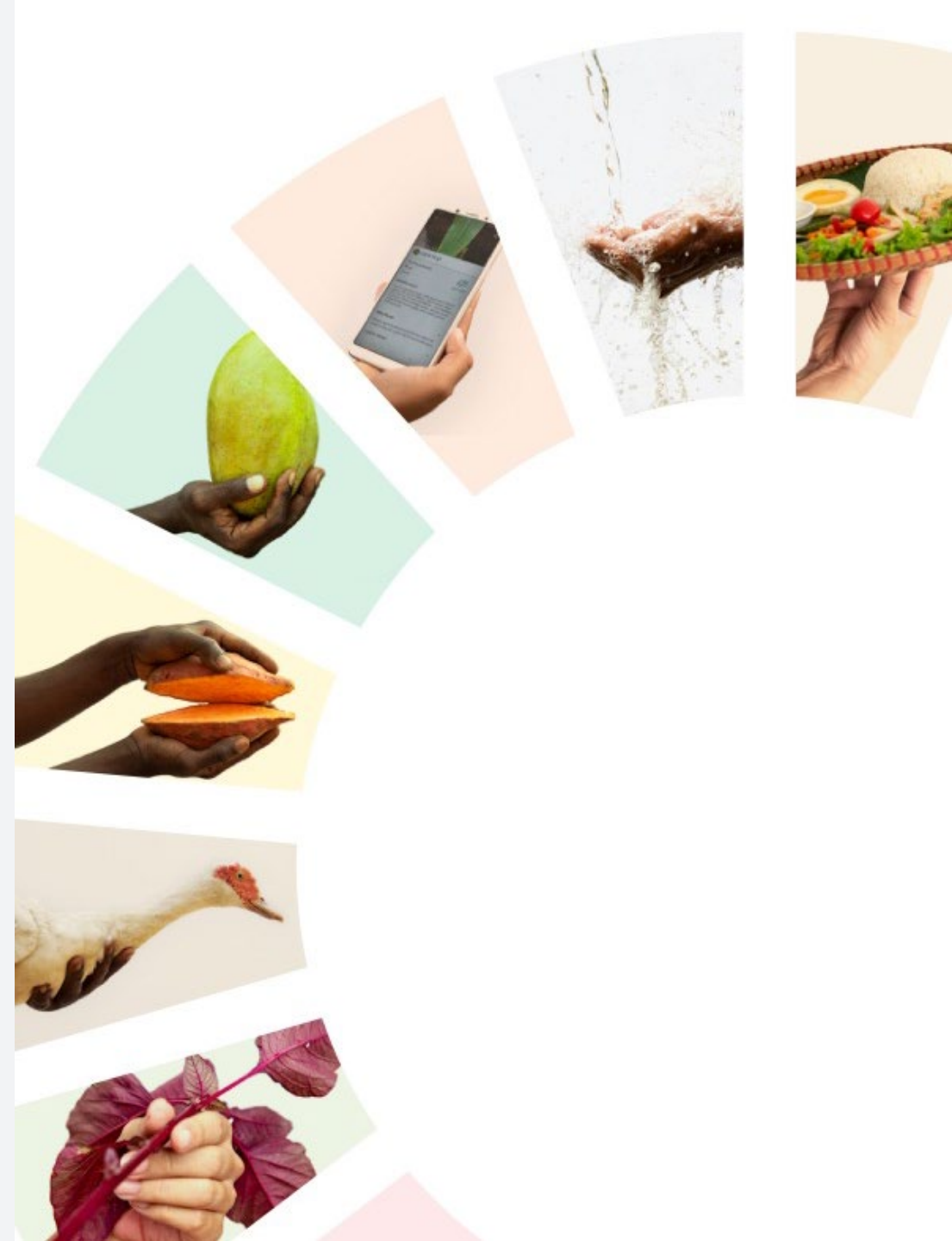
Purpose:

Science Highlight 1 – Bridging the last mile to impact

Prepared by:

Introduced by the Executive Managing Director

Presented by Bram Govaerts, DG, CIMMYT



Conclusion

It is about the Delta towards the 5 impact areas

- Potential impact scope of an innovation
- Capability of the System to move the Delta by incorporating and actioning on the innovations and technologies generated (Enabling Environment, Delivery set up, Policy, Markets, Consumers,) (influenced from our action)

It is not about CGIAR becoming a delivery agency

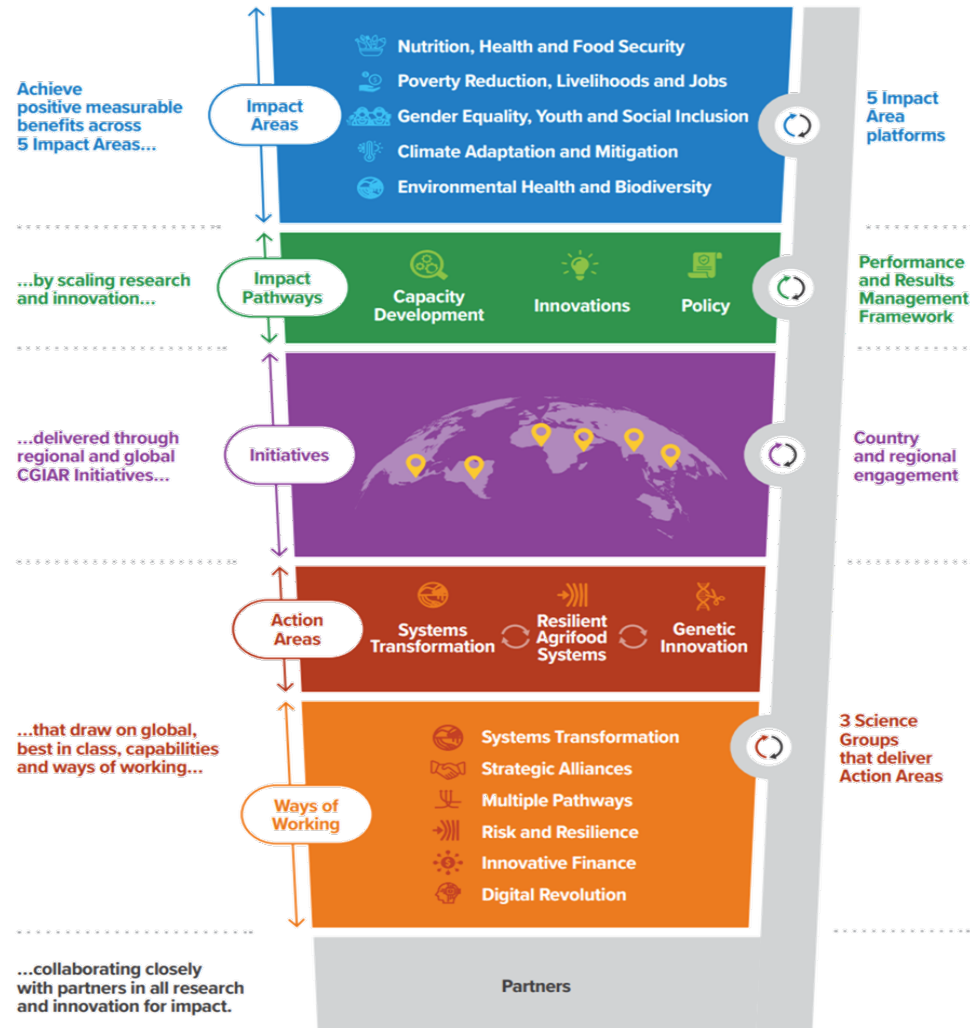
It is about

- Turning data into information, information into decision making and decision making into decision taking
- Allowing stakeholders to do better what they already do good or know best
- Allowing impact to happen on the 5 impact areas
- Strong methodological and conceptual underpinning that per se is an institutional experiment to document
- MP on Scaling and Integrated Programs

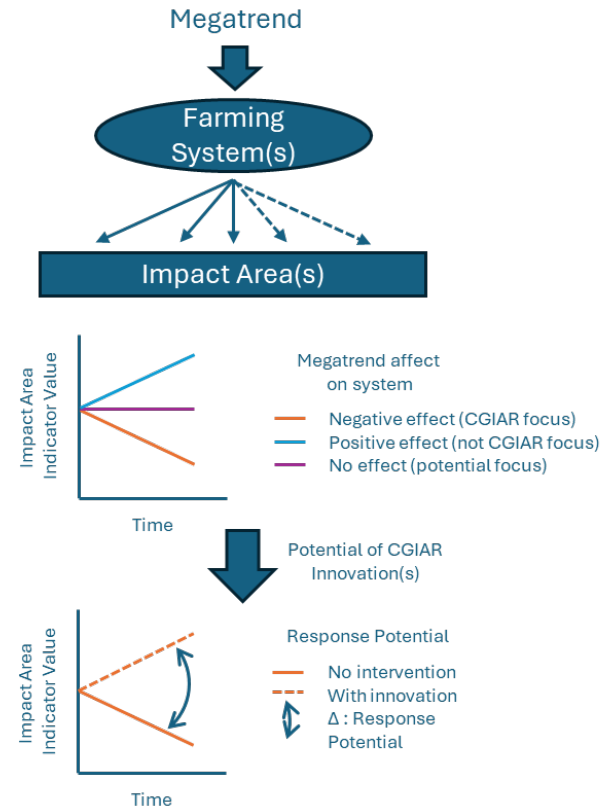
Context: CGIAR 2030 Research & Innovation Strategy



CGIAR research and innovation will:



Context: P25



Innovations	Scale of potential (Δ x impact area metric)	System Translation Capability	Comparative Advantage	Priority
---	High	High	High	1
---	Medium	Medium	Medium	4
---	Low	High	High	-
---	High	Low	High	3*
---	High	Medium	Medium	2
---	Medium	High	Low	-

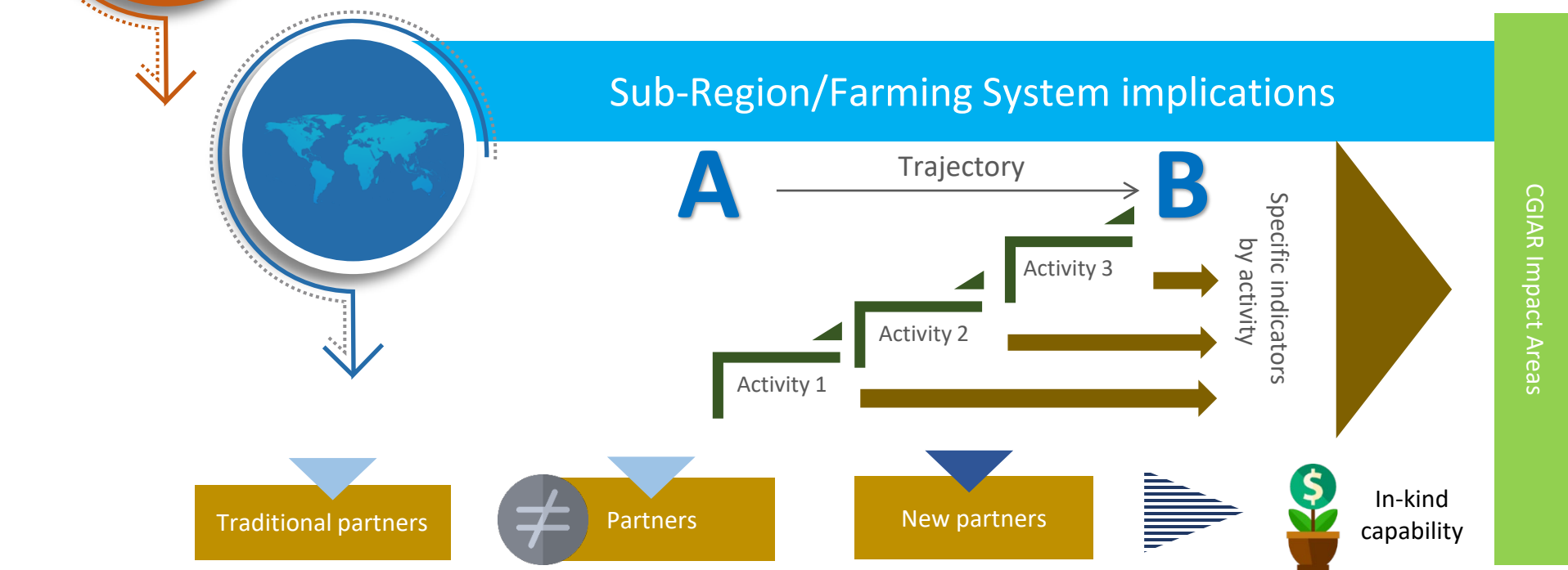
* Where additional CGIAR-partner innovations strengthen system translation capability

Context: P25 Priority Setting through The Theory of Change

Prioritization will be achieved based on

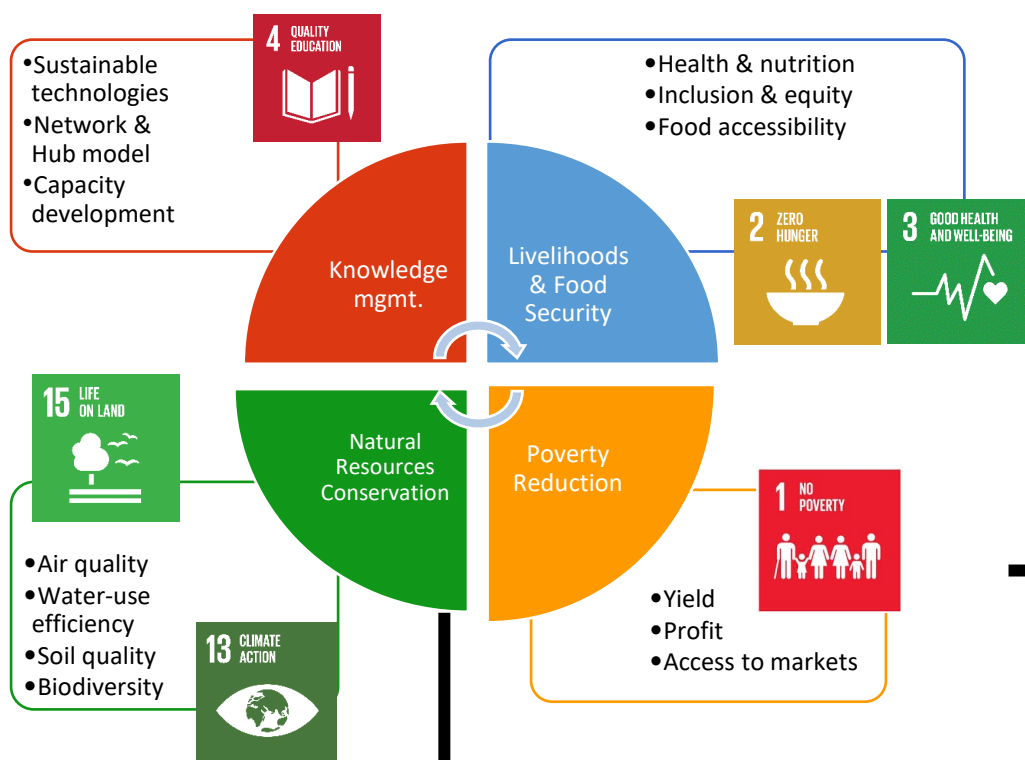
1. Impact of the trends on the systems (Given)
2. CGIAR contribution → Potential of innovations to address the Delta
 - a. Potential impact scope of an innovation
 - b. Capability of the System to move the Delta by incorporating and actioning on the innovations and technologies generated (Enabling Environment, Delivery set up, Policy, Markets, Consumers,) (influenced from our action)**
3. Our comparative advantage to deliver the innovation within the appropriate system

Method and Conceptual Underpinning: Delta through Enabling Environment

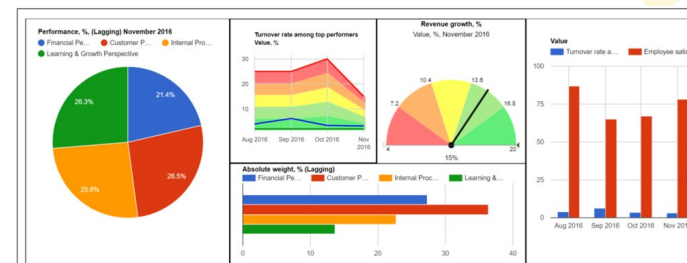


Method and Conceptual Underpinning: MultiScale Data Systems

Sustainability Indicators (Field & Landscape Level)

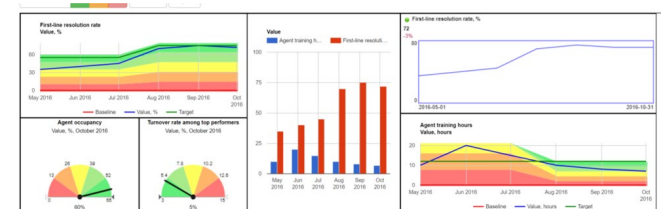


✓ SUSTAINABILITY SCORECARD PER PLOT/CYCLE

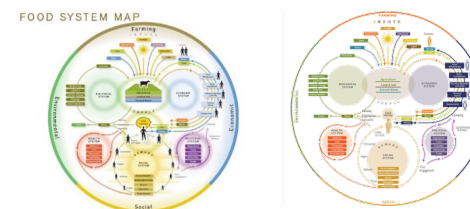


✓ AGRONOMIC RECOMMENDATIONS PER PLOT/CYCLE

✓ SUSTAINABILITY DASHBOARD PER PROJECT



✓ INPUTS FOR AGRI-FOOD SYSTEMS MODELLING



Method and Conceptual Underpinning: Policy Processes Differ from Innovation Scaling Processes



A policy scaling approach would involve:



High quality, consistent, globally aware, and demand-driven engagement (within the existing political economy paradigm).

Much of the policy work of the CGIAR fits here.

Agile and sufficiently scaled response to opportunities for major reforms (in response to a new paradigm or to create a new paradigm).

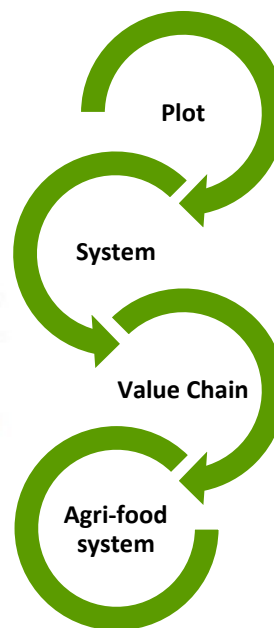
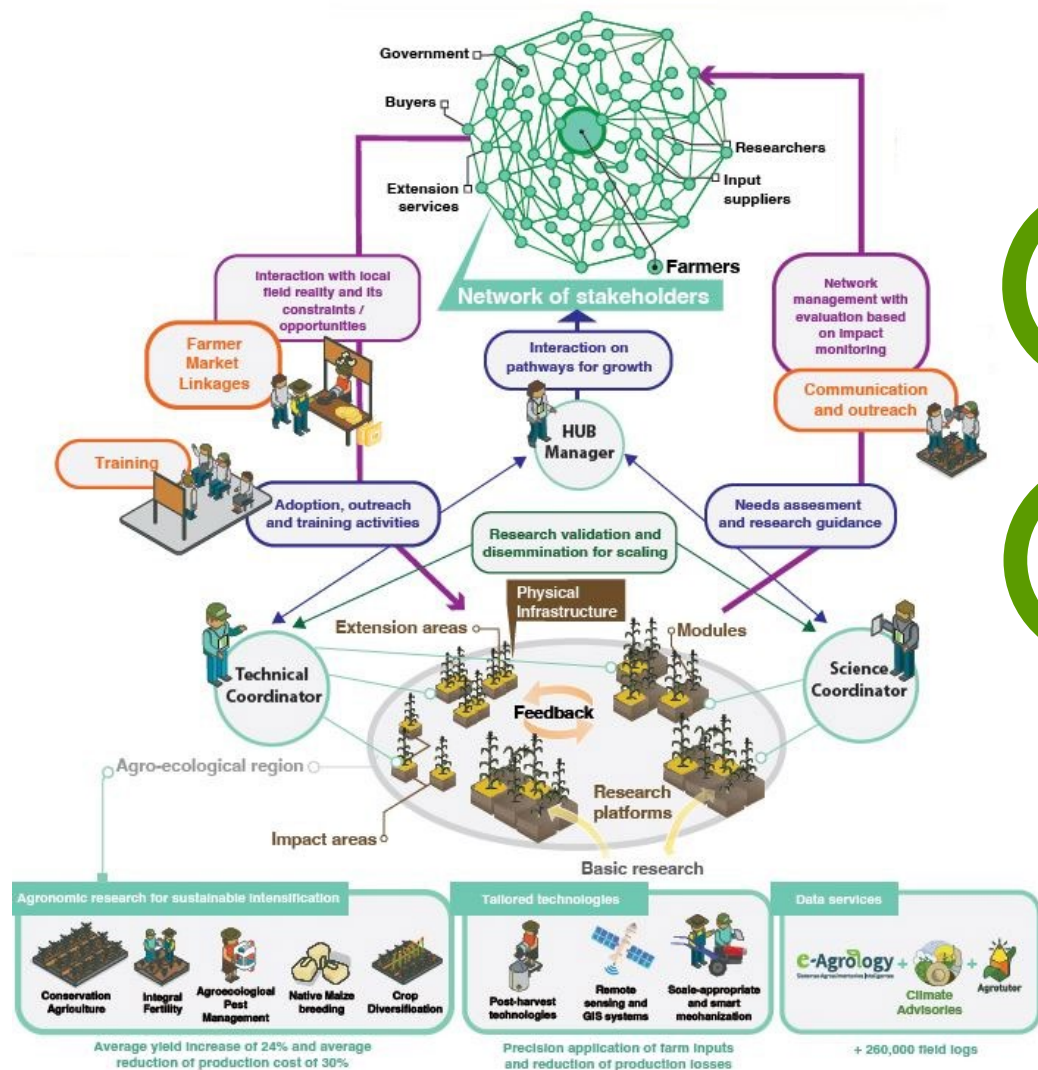
Offers the opportunity to achieve substantial impact in a short period of time.

Strong partnerships with key actors in policy shaping processes (e.g. IFIs, regional economic communities) **who can facilitate the use of best tools, practice and evidence in policies & programs**

Plans for **overcoming barriers to operationalizing scaling:** capacity, financing, etc.



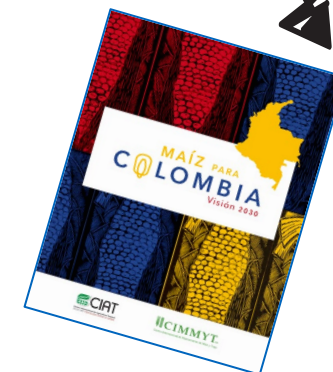
Method and Conceptual Underpinning: Multi-level Integration with Last Mile Delivery



Integrated Agri-food System Initiative (IASI)			
Questions	Process	Focus Group	Product
Where we are?	Analysis	Experts panel	Diagnosis and Identification of Change Drivers
Where are we going?	Research	Scientific team	2030 Scenario Projection <i>Statu quo</i>
How to achieve a better future?	Participatory Consultation	Key actors	2030 scenarios workshop
	Validation	Institutional Evaluators	Strategics drivers and actions



Scenario
analyses for
systemic change



Method and Conceptual Underpinning: (Gender-) Responsible Innovation and Scaling



USAID
FROM THE AMERICAN PEOPLE

HORTICULTURE
INNOVATION LAB

UC DAVIS
UNIVERSITY OF CALIFORNIA

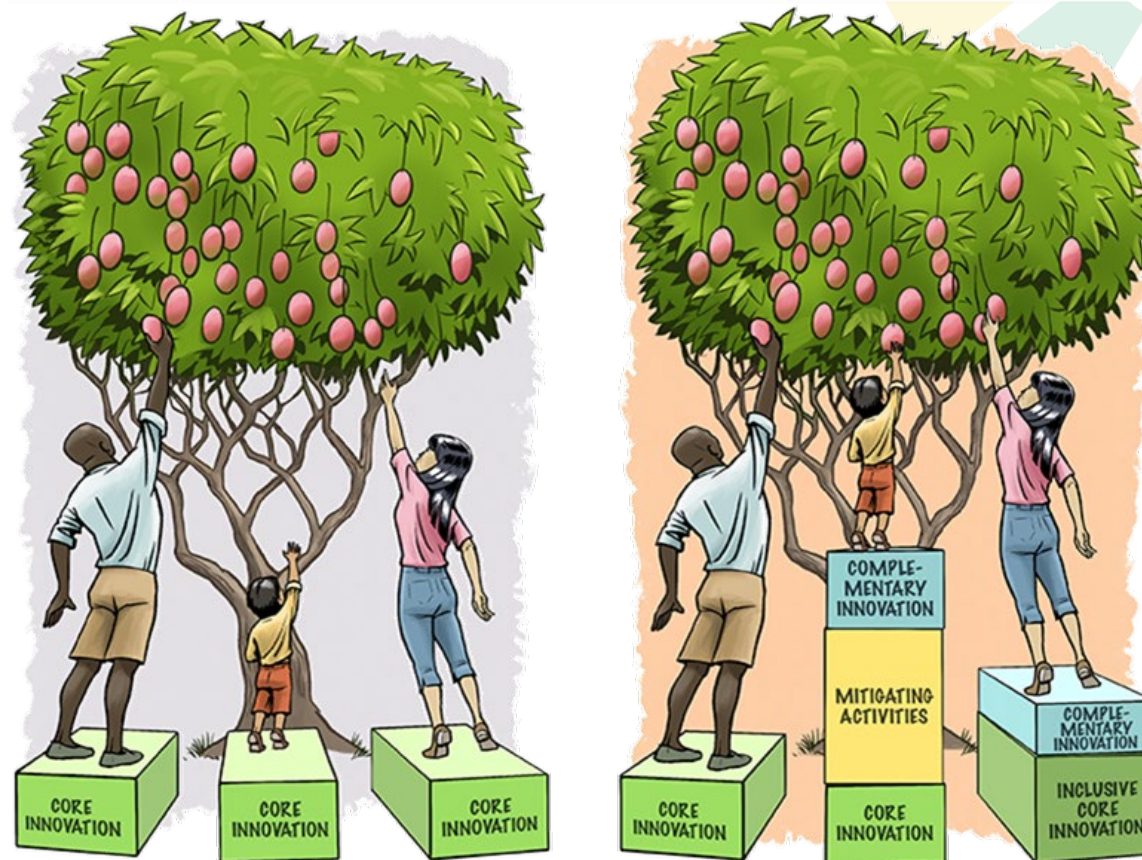
Scaling Readiness:



WAGENINGEN
UNIVERSITY & RESEARCH

GenderUp may be used independently or together with Scaling Readiness, a method that guides teams towards successful scaling strategies.

- **Identify relevant diversity** among innovation clients
- **Tailor scaling strategies** to those clients
- **Avoid or mitigate unintended consequences** of scaling innovation (risk management)
- **~50 CGIAR colleagues trained**



Through One Innovation Lens

Case: Policy Response to a Paradigm Shift

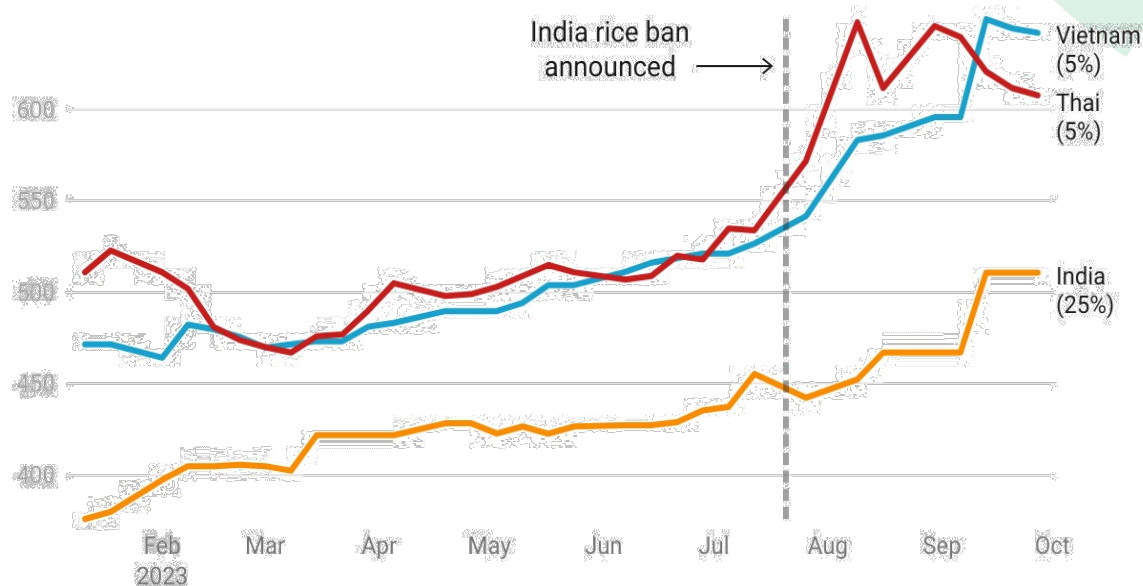


An export ban on rice by **India**, the world's largest rice exporter, in August 2023 in response to **El Niño provoked a rethink of food security strategies by rice importers**. This is a propitious moment for:

- **Analytics and South-South dialog** on the global rice market (rice production, consumption, and trade is dominated by the global south)
- **Constructive evaluation** of self-sufficiency policies
- **Examination of opportunities** to put in place growing practices that emit much lower volumes of methane

Rice prices

USD/metric ton



Thai white rice (5% broken); Vietnam white long grain rice (5% broken); India white long grain rice (25% broken)

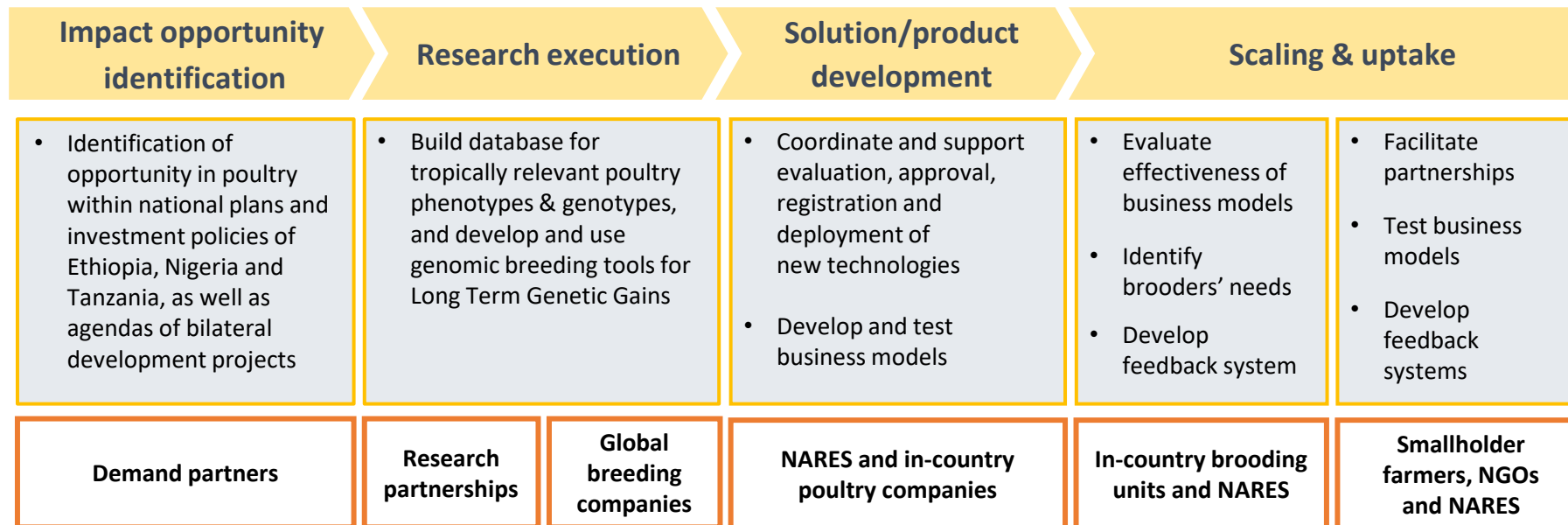
Chart: Soonho Kim and Joseph Glauber • Source: Bloomberg

Through One Innovation Lens

Case: Deliver Poultry Solutions



ILRI role



Relevant partners



Through One Innovation Lens

Case: Improved Tilapia Distinct but Complementary Scaling Approaches



Enhancing the sustainable production of Genetically Improved Farmed Tilapia (GIFT) in Nigeria & Timor-Leste.



Critical success factors:

- Establishment of a robust **relationship with the private sector** to scale the production of GIFT.
- Comprehensive learning materials and a training curriculum on best management practices for raising Nile tilapia applied to train around **200 farmers**, including a significant proportion of women.



Critical success factors:

- **The Public-Private Partnership model**, expanded under the Partnership for Aquaculture Development In Timor-Leste (PADTL) Phase 2, focused on improving access to and availability of quality GIFT seed.
- The establishment of an **additional PPP hatchery** was key given the disruptions to Timor-Leste's food supply chain caused by the COVID-19 pandemic.

- Both approaches highlight the importance of partnerships in achieving sustainable aquaculture development.
 - In **Nigeria**, it allowed the **rapid adaptation & implementation** of advanced aquaculture practices.
 - In **Timor-Leste**, it underscores the **role of governmental support and public investment** in establishing foundational infrastructure and ensuring the genetic integrity of GIFT broodstock.



Through One Innovation Lens

Case: Mechanization Supporting Last-Mile Providers



The “best performing technology”
is not always the “most scalable”



Over the past decade, CGIAR has actively (re-) engaged in partnerships with international aid agencies and governments across Latin America, Africa and Asia



Strong USAID partnership in South Asia boosts machine service and small-scale irrigation rollout.



MasAgro in Mexico: 40+ machine prototypes streamline farming from land prep to harvest.

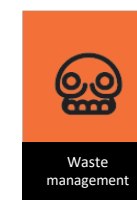
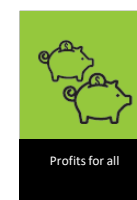
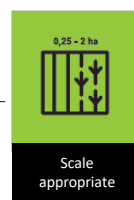


ACIAR-backed study assesses two-wheel tractor bundles in East Africa.



GIZ, FAO, CIMMYT and collaborators back 15-country network to advance mechanization efforts in Africa and Asia.

What does impact look like?



Through a Multi-Innovation Integrated Lens Content Specific Intervention through Hub Model & System Approaches



MASAGRO HUB MODEL

MasAgro 2009 – 2019

PROAGRO Productivo 2018-2019

MasAgro-Crops For Mexico 2019-2021

MasAgro-Crops for Mexico 2021-2023

MasAgro-Crops for Mexico 2024



AgriLAC Resiliente:
Sistemas de Innovación
Agroalimentaria Resilientes
en América Latina y el Caribe

LATAM

SOUTH
ASIA

SYSTEMS APPROACH CSISA



- Phase I, 2009-2012
- Phase II, 2012-2015
- Phase III, 2015-2020
- Phase 4.0, 2021-2025



BILL & MELINDA
GATES foundation



Transforming
Agrifood Systems
in South Asia

AFRICA (EAST & SOUTH)

Offering support to
cross-regional initiatives e.g.
Agronomy Science Scaling and
Acceleration Platform (ASSAP)



INNOVATION HUB MODELS & SYSTEMS APPROACH

SIMLESA 1996– 2017

- Africa RISING 2012-2020
- TAMASA/GAIA 2018-2024
- AIDI & SASAS 2021-2024

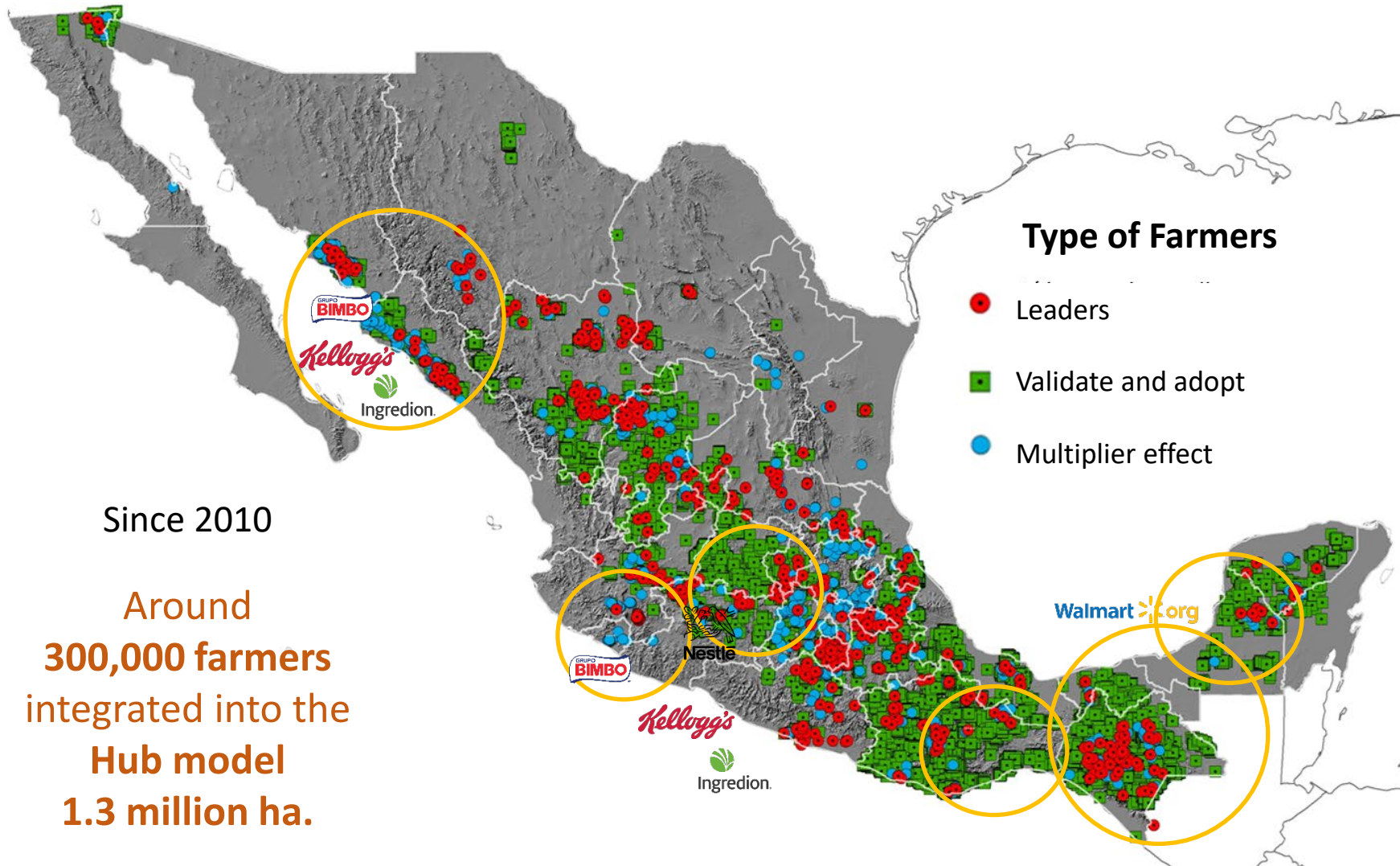
BILL & MELINDA
GATES foundation



INITIATIVE ON
Diversification in East
and Southern Africa

Through a Multi-Innovation Integrated Lens

Case: Integrated Set Up – Example MasAgro Mexico



Since 2010

Around
300,000 farmers
integrated into the
Hub model
1.3 million ha.

**Network is made up
of more than
150 collaborators,**
including local offices,
producers' organizations,
national research
institutes, and local
universities, among others.

PPP Projects: Sustainable Production as Added Value: Building Farmer Market Linkages Responding to Consumer Demands



Projects Focus:

- Regenerative agriculture
- Water footprint
- Carbon footprint
- Community resilience
- Plant Health

- Increase of approx. **20% in utility for farmers**
- Broker **trustworthy relationships between agroindustry and farmer associations**

- **Results:**
 - + 80,000 ha (maize & wheat)
 - Maize: + 600,000 ton
 - Wheat: + 200,000 ton
 - Barley and sorghum: + 25,000 ton



CLIMATE
ADAPTATION &
MITIGATION



GENDER
EQUALITY,
YOUTH & SOCIAL
INCLUSION



ENVIRONMENTAL
HEALTH &
BIODIVERSITY

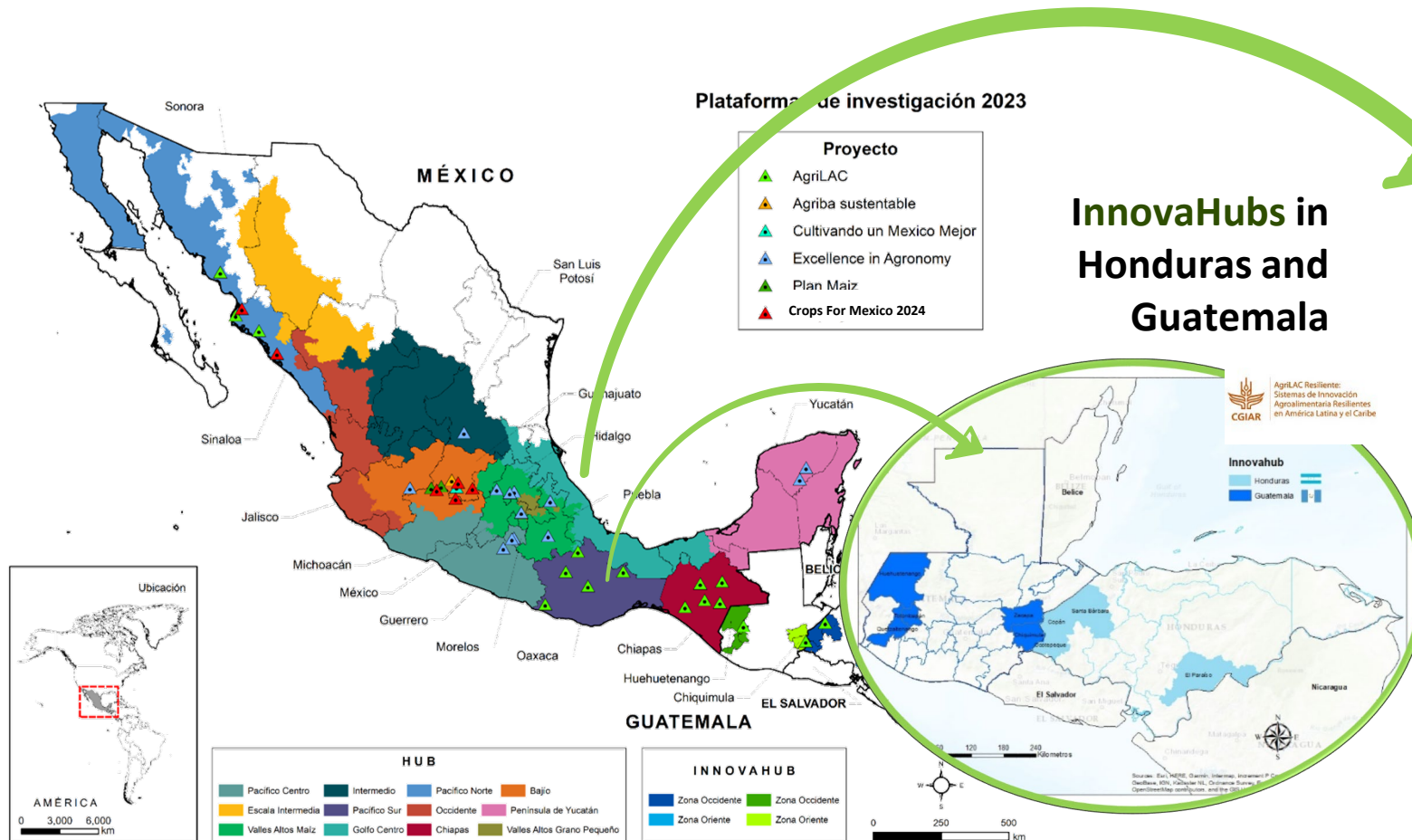


NUTRITION,
HEALTH & FOOD
SECURITY



POVERTY
REDUCTION,
LIVELIHOODS &
JOBS

Hubs to Scale Innovation Networks: Learning Together and Catalyzing Exchange



Southern Africa Accelerated Innovation Delivery Initiative (AID-I) Rapid Hub MasAgro Africa



Scaling partnerships for impact and sustainability

Using a market-driven approach AID-I engaged more than 60 delivery and scaling partners including:

33



Private seed companies

7



public sector institutes

7



CGIAR centers

15



NGOs across 3 countries:
Malawi, Tanzania and Zambia

More than
2.5
million

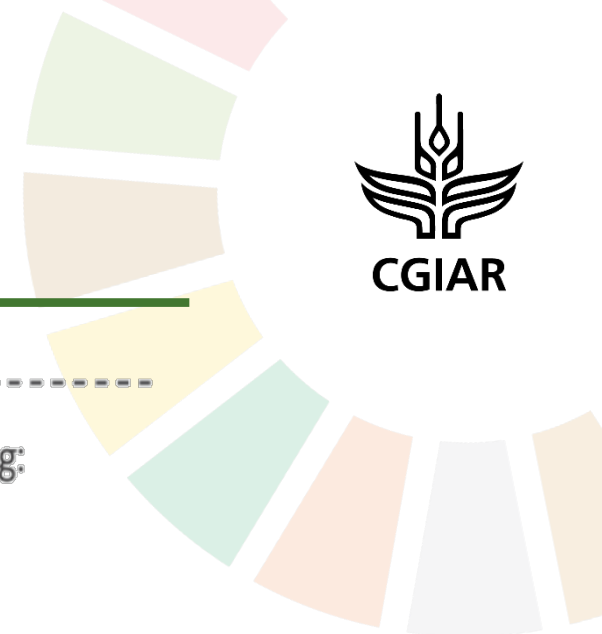


individuals participating in
food security programs

More than

US \$672,000

private sector investments leveraged



Maize Seed Systems

Innovations and technologies promoted under maize:

66 

multiple stress-tolerant maize hybrids promoted through demonstrations

(~40% hosted by women farmers)

600 

field days conducted in 2023/24 in Zambia, Tanzania, and Malawi

100 Ha 

under production for early Generation Seed for 3 FAWTH (Fall Army Worm Tolerant Hybrids)

6,000 

Tons of seed sold to farmers in 2023/24 farming season

1,625 

Village based advisors recruited and trained

19,000 

Farmers trained in seed production and good agronomic practices

4,637 

Hectares under certified seed production

9,641 

demonstrations of Stress Tolerant hybrids planted

Legume Seed Systems

56 

Promotion and seed multiplication of 56 unique varieties of pigeon pea, common beans, groundnuts, and cowpea in Malawi, Tanzania and Zambia

600 

Roadside demonstrations held with 5,000 farmers attending field days

8,000MT 

of commodity sold through structured markets

800 

mega demonstrations have been established in Malawi and Zambia to promote new varieties and soil health.

15 

seed companies linked to Agro dealers

2,000 

farmers linked to markets and over 19,000 trained in maize and legume production

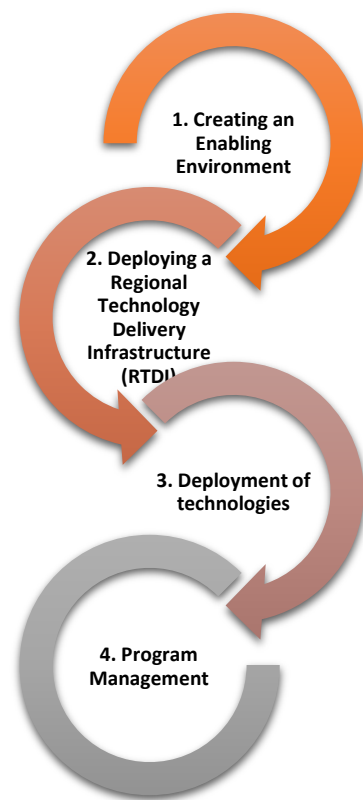
Through a Multi-Innovation Integrated Lens

Case: Technologies for African Agricultural Transformation

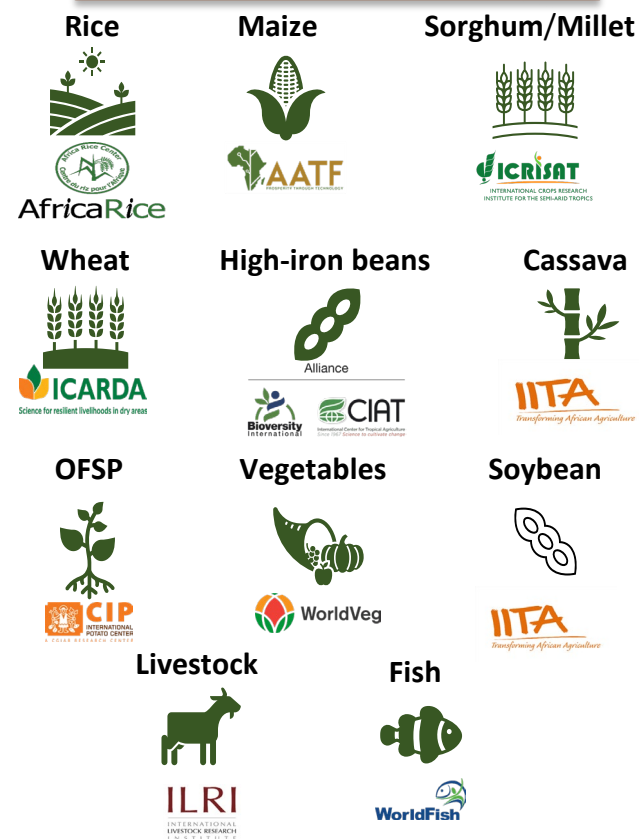


TAAT is implemented in **4 Components** and works with **11 commodity** compacts and **3 enabler compacts** in Sub-Saharan African countries

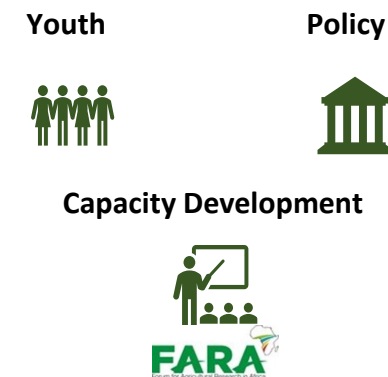
4 Program Components



11 Commodity compacts



3 Enabler compacts



Technologies for African Agricultural Transformation

Private sector

- Farmers
- Seed Companies
- Fertilizer Companies

- Agro dealers
- Machinery Companies
- Processors
- Etc.

- 'Connect-the-dots' to link science, policy, and action.
- Get CGIAR innovations into the hands of farmers.
- AICCRA has a vision for scaling CGIAR science on four areas: Partnership; Innovation; Science-based approaches; Action research on scaling.



Project Development Objective | To strengthen the capacity of governments, regional organizations, farmers and other relevant stakeholders and enhance access to—and use of*—climate information services and validated climate-smart agriculture technologies in IDA- eligible countries in Africa.


**updated for additional finance*




- **Six focus countries:** Senegal, Mali, Ghana, Ethiopia, Kenya and Zambia.
- **Four thematic teams:** Policy, CSA, Climate Services and Gender.
- Two regional teams' spillover' impact to **41 countries**.
- AICCRA is **led by The Alliance Bioversity International – CIAT** but activities **involve all CGIAR centers** (except CIP) to scale CGIAR science.
- CGIAR innovations, having forged **91 partnerships** with institutions, NGOs, farmer groups and private sector.



Recent stories



BLOG
Climate-smart innovations in Ethiopia's central wheatbelt



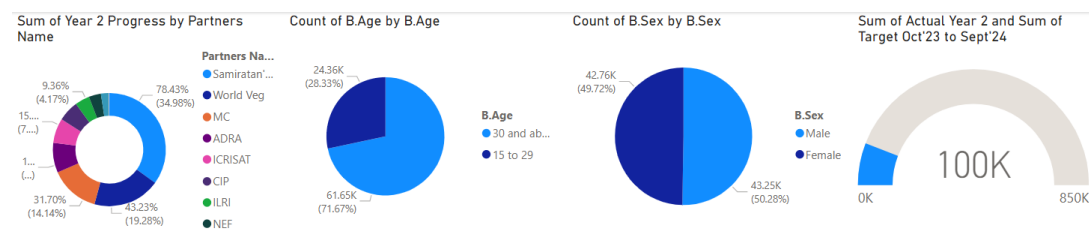
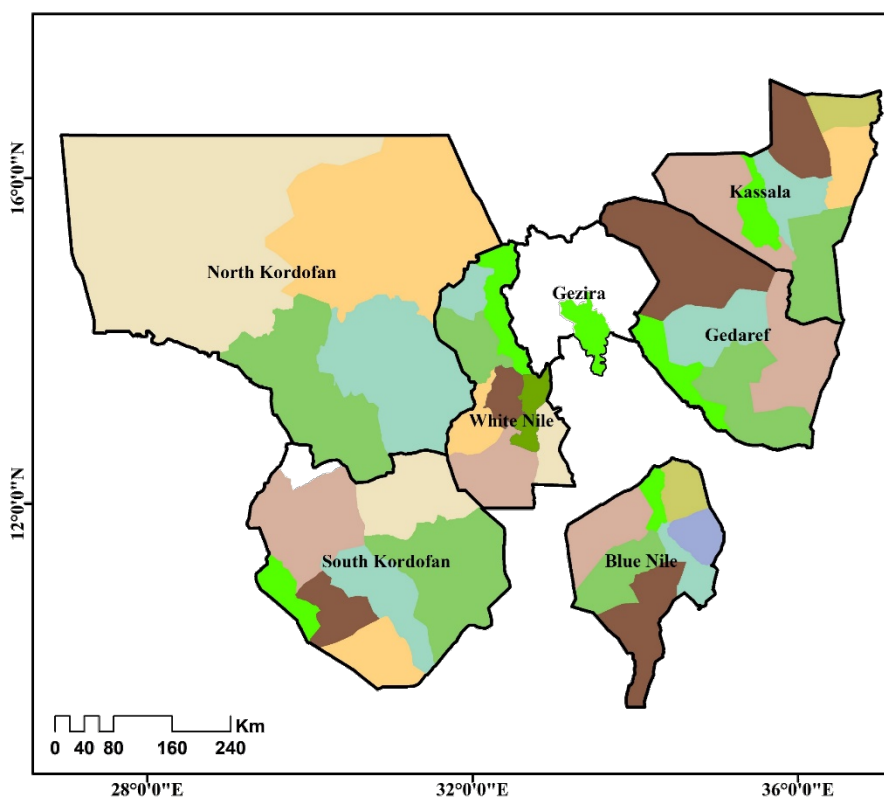
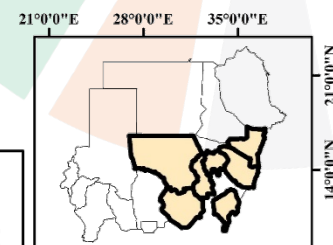
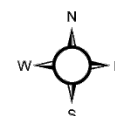
NEWS
COP28 UAE
World Bank commits \$100 million at COP28 to CGIAR 'climate-smart' agriculture project in Africa

Additional finance



Through a Multi-Innovation Integrated Lens

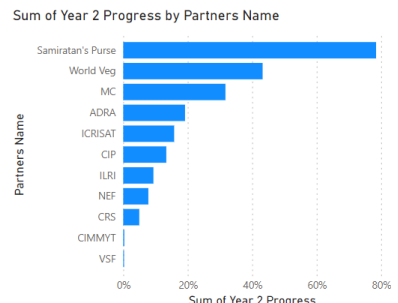
Case: Sudan – Pivot from Fragile State to Crisis



850K
Sum of Target Oct'23 to Sept'24

100K
Sum of Actual Year 2

Partners Name	Sum of Target Oct'23 to Sept'24	Sum of Actual Year 2
MC	100,000	31,702
Samiratan's Purse	26,435	20,733
World Veg	37,355	16,148
CIP	62,879	8,401
ILRI	76,356	7,148
ADRA	36,206	6,941
CRS	80,351	3,999
NEF	32,000	2,494
CIMMYT	311,440	1,043
ICRISAT	5,521	872
VSF	81,510	67
Syngenta Foundation	0	0
Total	850,053	99,548



Through a Multi-Innovation Integrated Lens

Case: Cutting edge of CGIAR in Bangladesh



Strong in-country and long-term science teams collaborating deeply with partners

Much more than wheat and maize: Interdisciplinarity



Scientific rigor and significant real-world impact

Boosting impact: Assuring synergies between initiatives and bilateral projects

Genetic innovations



Initiative on Accelerated Breeding



Initiative on Seed Equal



Initiative on Breeding Resources

Regional integrated initiatives



Transforming Agrifood Systems in South Asia



Initiative on Asian Mega-Deltas



Initiative on Plant Health



Initiative on Breeding Resources

Resilient agrifood systems



Sustainable Intensification of Mixed Farming Systems



Initiative on Excellence in Agronomy



Initiative on Seed Equal

Ongoing bilaterals

- Additive intercropping
- CSISA-MEA
- Disease early warning systems
- IPM Activity
- PARIBARTAN
- RUPANTAR
- Wheat blast phenotyping

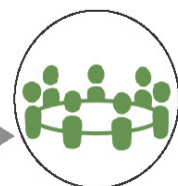
Delivering tangible value from research: some 2023 impacts

- Deep collaborations with **135 partners** across Bangladesh
- Major advances in **district-level integrated agrifood data systems** and stakeholder engagement
- Novel **socio-technological crop diversification innovation bundling testing with >700 farmers** (Rajshahi, Rangpur)
- **> 0.7 m farmers (19% women)** applying climate adaptation, mechanization, agronomy innovations
- Value chain research & capacity development support to **722 agriculturally-oriented businesses**

Through a Multi-Innovation Integrated Lens Case: Climate Smart Agriculture Telangana State, India



Agriculture Assessment



Participatory
Prioritization



Location Specific
CSA Practices
Prioritized



Inventory of CSA
Practices



Identifying
Incentives & Barriers



Investment &
Infrastructure Gaps



Ex-ante Impact Assessment
at District Level



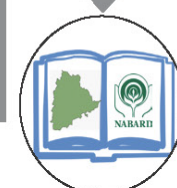
Policy Stakeholder
Consultations & Sharing
Outcomes



Scaling out through
district departments,
KVKs, NGOs, FPOs etc



Strategy for CSA Integration
into District Level Plans



SAPCC
NABARD

Feedback

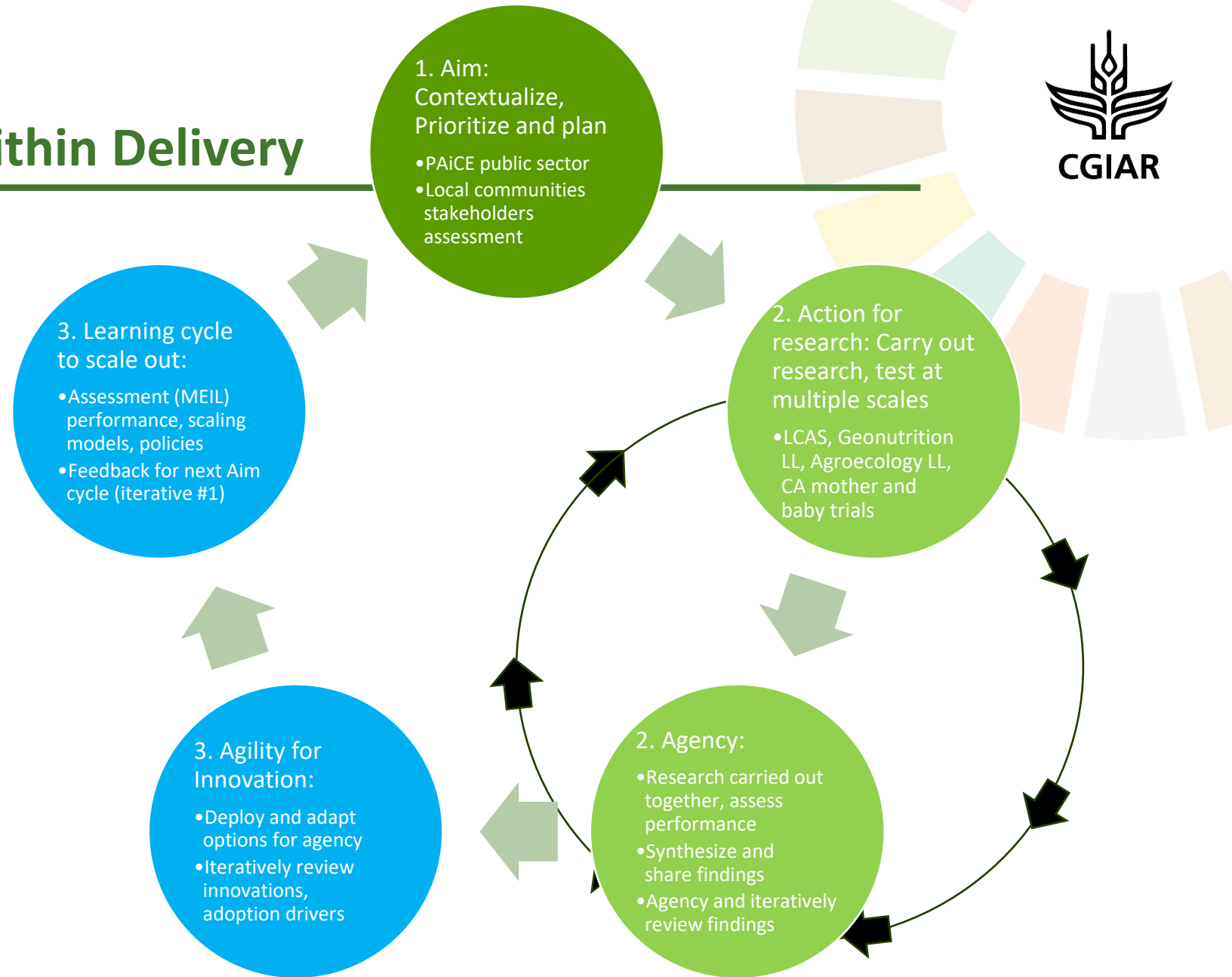


[Towards climate-smart agricultural policies and investments in Telangana](#)

Agile Systems Science within Delivery



- 1. Stakeholder engagement:** Contextualize data-based, priority setting at different scales.
- 2. Participatory action research cycle:** generate and test options through co-design. **Plan** together, **Act** together, **iteratively learn** and develop updated options.
- 3. Innovation systems through hub models:** enhance learning, agency and scaling of options, with improved policy and institutions. MEIL to understand what scales, where.



Conclusion

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It is not about CGIAR becoming a delivery agency

It is about

- Turning data into information, information into decision making and decision making into decision taking
- Allowing stakeholders to do better what they already do good or know best
- Allowing impact to happen on the 5 impact areas
- Strong methodological and conceptual underpinning that per se is an institutional experiment to document
- MP on Scaling and Integrated Programs