Photo: G. Smith/The Alliance

CGIAR | Standing Panel on Impact Assessment

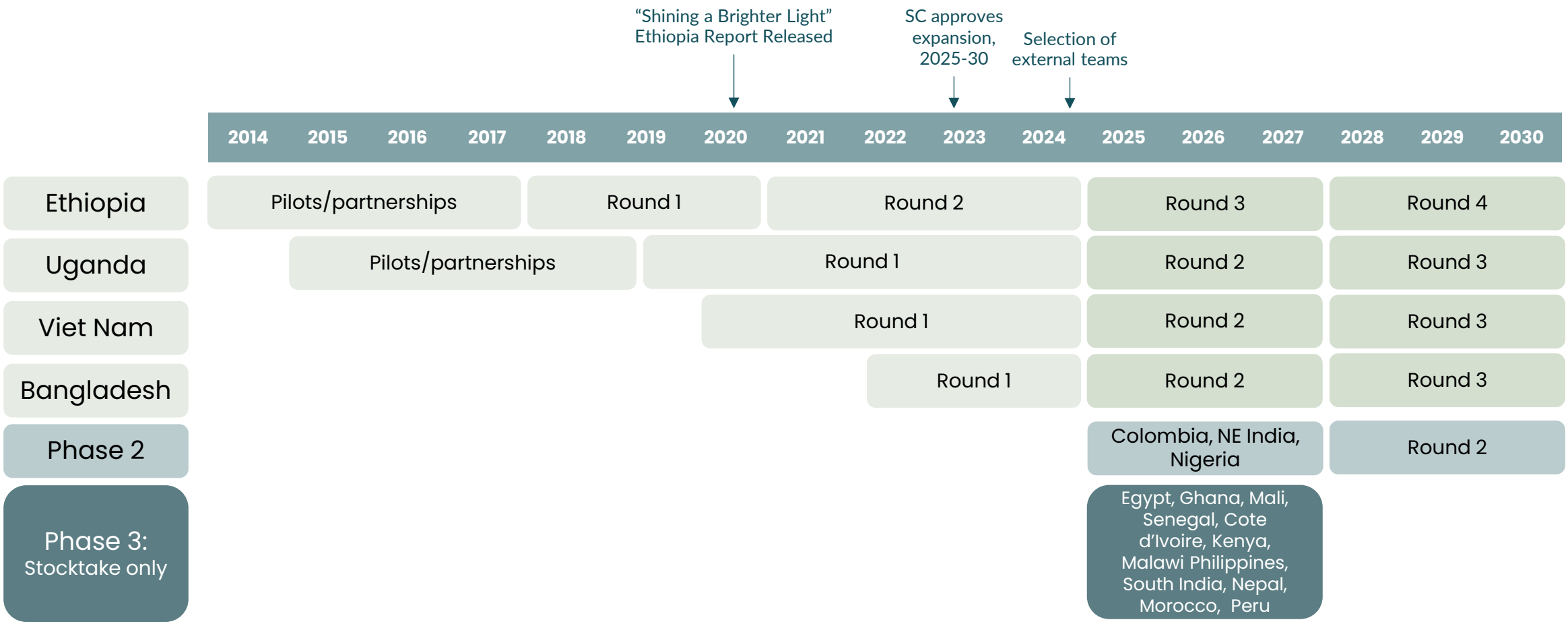
From the Field:

Insights from SPIA Phase 1 Country Studies

Travis Lybbert, SPIA Chair / UC Davis
James Stevenson, SPIA Senior Researcher
Sujata Visaria, SPIA Member / City St. George's-Univ of London

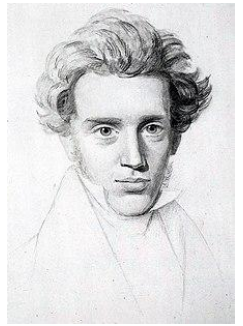
System Council, SIMEC, IPB, Global Leadership Team - May 16, 2025

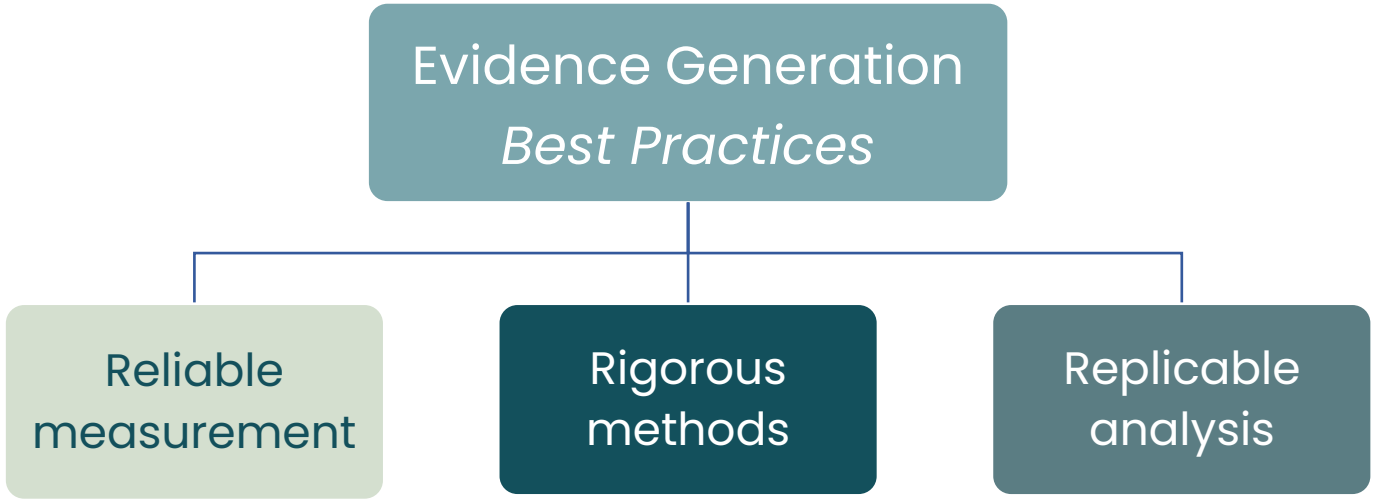
The Emergence of SPIA Country Studies



SPIA Mandate & Methods: Learning from the past

*"Life can only be **understood backwards**, but it must be lived forwards."*
- Soren Kierkegaard





Ex post evidence of **reach** of CGIAR innovations

Ex post evidence of causal **impact** of CGIAR innovations

Use of evidence: from learning from the past to living forwards

CGIAR | Standing Panel on Impact Assessment

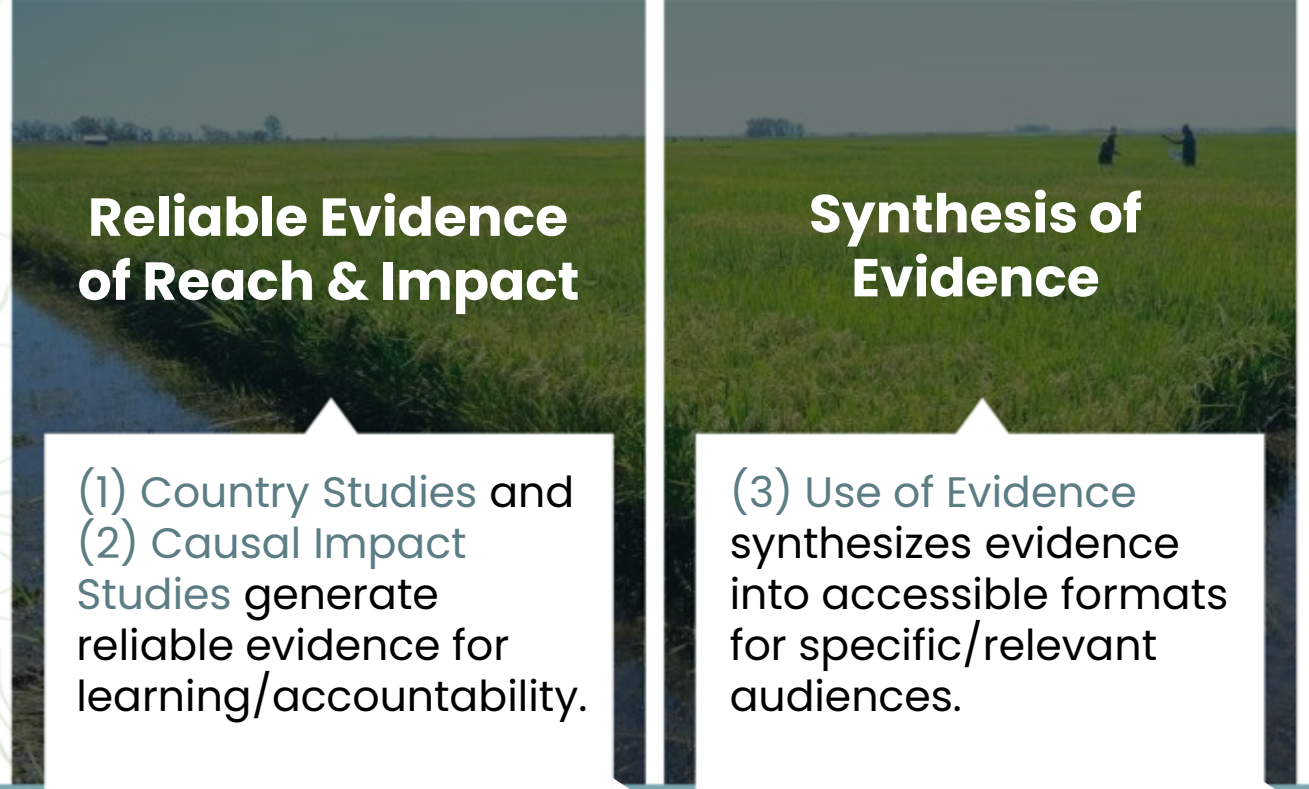


Photo: N. Palmer/The Alliance

SPIA's "Bounded" Approach to *Use of Evidence*

Reliable Evidence of Reach & Impact

(1) Country Studies and (2) Causal Impact Studies generate reliable evidence for learning/accountability.

***Foresight** uses results to **project benefits**. Modelling capacity exists w/in CGIAR. PPU uses evidence.*

Synthesis of Evidence

(3) Use of Evidence synthesizes evidence into accessible formats for specific/relevant audiences.

*SPIA does not (i) make **recommendations**, or (ii) collect data on **costs or M&E** as these are others' responsibilities.*

Stakeholder Engagement

(3) Use of Evidence shares evidence in dialogue w/ stakeholders to promote learning and enable prioritization.

*Results can be used for **advocacy, fundraising, or strategic planning**, but these are others' responsibilities.*

SPIA Mandate

Expertise & Capacity

Photo: N. Palmer/The Alliance

CGIAR Standing Panel on Impact Assessment

Webinar Agenda

1. Findings of Country Studies (James)
2. Emerging Themes
   a) Stress-tolerant varieties (Travis)
   b) Natural resource management practices (Sujata)
   c) CGIAR innovation & economic transformation (James)
3. Panel: Sandra Milach, Ruben Echeverria, Simeon Ehui
4. Q&A: Post questions throughout the webinar
5. Closing Remarks: Ismahane Elouafi

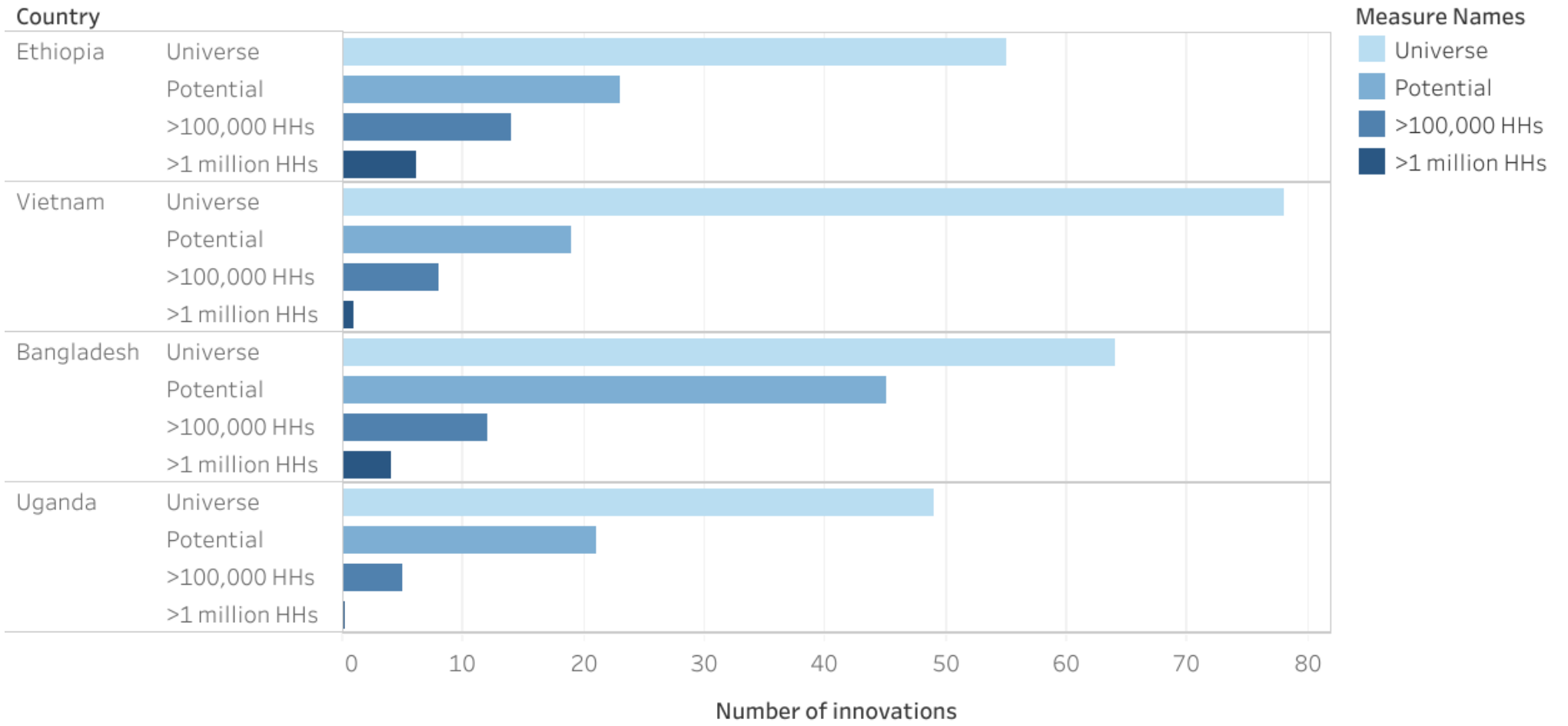
Photo: G. Smith/The Alliance

CGIAR | Standing Panel on Impact Assessment

Findings from Country Studies

System Council, SIMEC, IPB, Global Leadership Team - May 16, 2025

From innovation to reach

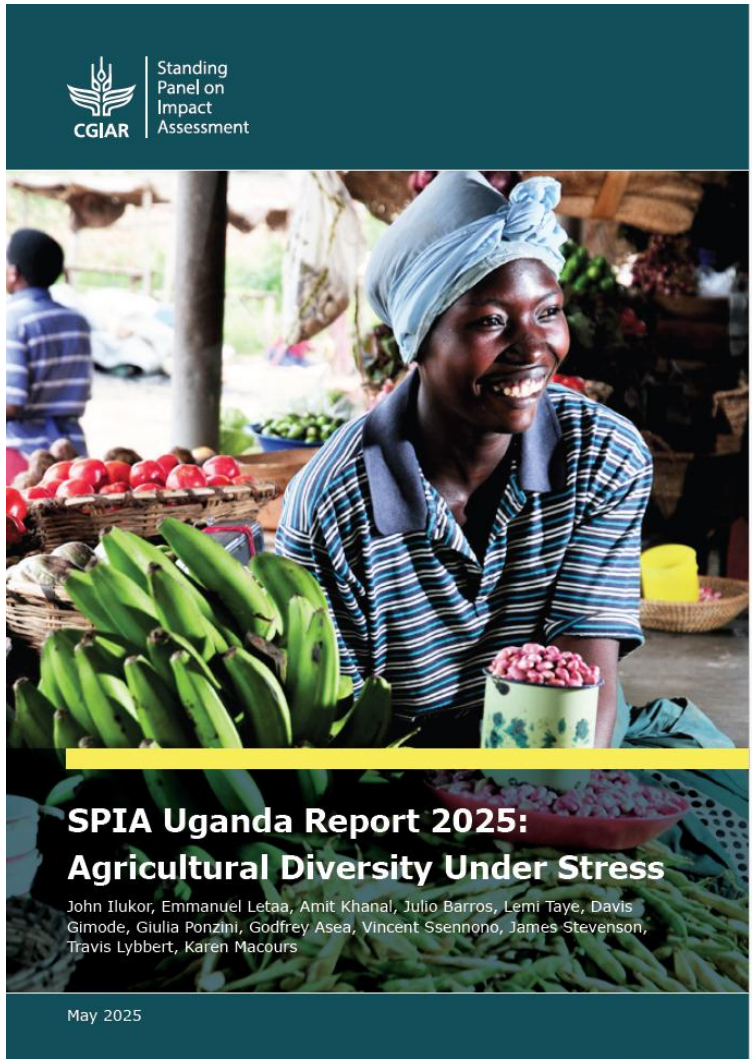


Uganda

Context

- 70% employment in agriculture but **productivity is low**
- Land becoming scarce
  - Plot sizes shrinking considerably over time (2009 to 2021)
  - More livestock farmers do not have their own pastures
  - Population approx. doubled between 2000 to 2020
- Extension and **seed systems** have long been compromised by political influence and corruption
  - 1/2 veterinary officer posts and over 1/3 of agricultural officer posts vacant at district level in 2021
- Weak effective control by regulator (despite recent attempts at reform) over seed quality, starting with foundation seed production
- Heavy burden of crop pests and diseases, and increasing **climate shocks**

Photo: N.Palmer/The Alliance



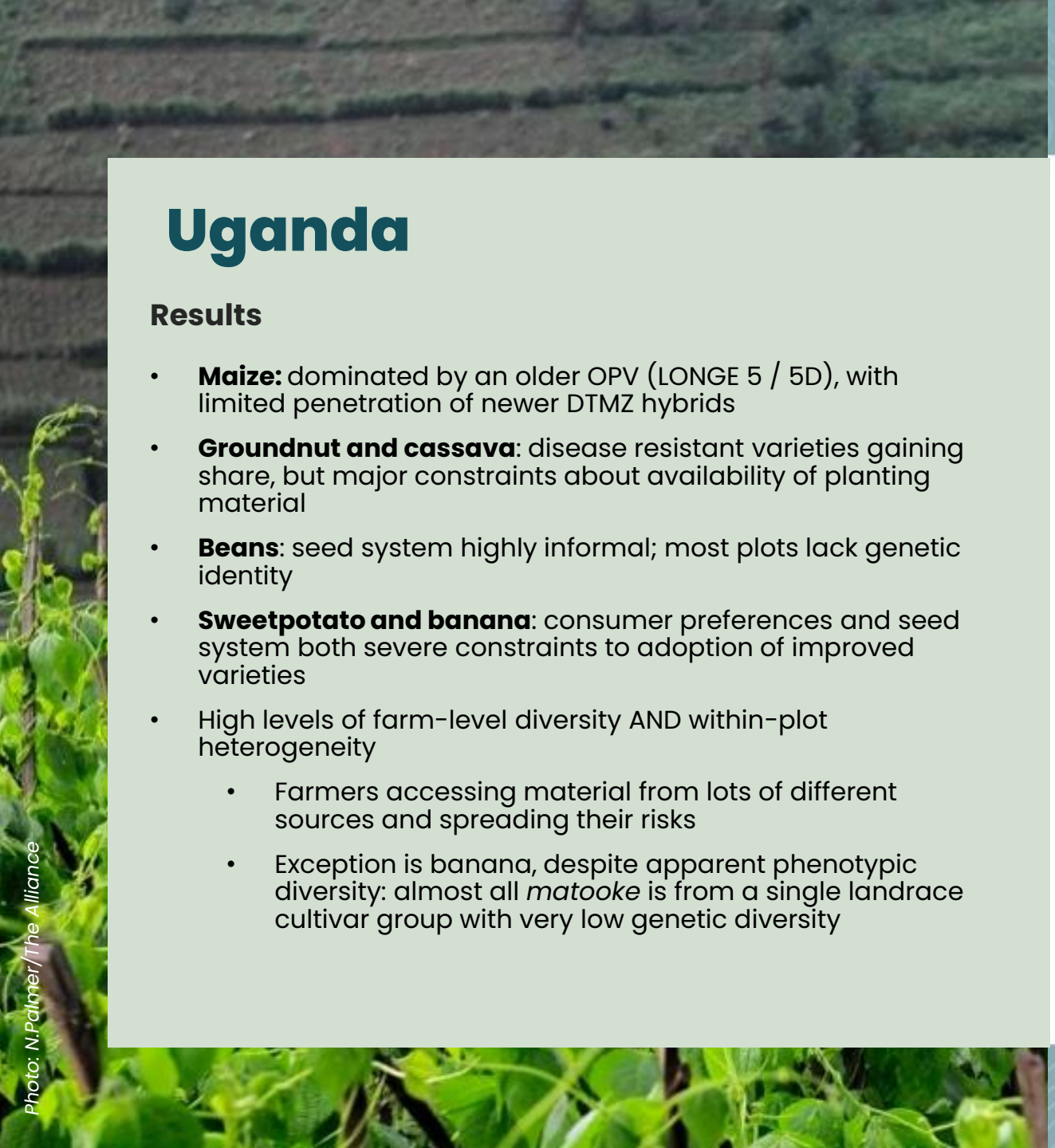


Photo: N.Palmer/The Alliance

Uganda

Results

- **Maize:** dominated by an older OPV (LONGE 5 / 5D), with limited penetration of newer DTMZ hybrids
- **Groundnut and cassava**: disease resistant varieties gaining share, but major constraints about availability of planting material
- **Beans**: seed system highly informal; most plots lack genetic identity
- **Sweetpotato and banana**: consumer preferences and seed system both severe constraints to adoption of improved varieties
- High levels of farm-level diversity AND within-plot heterogeneity
    - Farmers accessing material from lots of different sources and spreading their risks
    - Exception is banana, despite apparent phenotypic diversity: almost all *matooke* is from a single landrace cultivar group with very low genetic diversity

	% Households	% Communities*
% CGIAR-related crop varieties among sampled HHs		
Maize	57.8	82.7
Cassava	35.1	53.9
Banana	0.4	1.2
Beans	21.6	48.9
Sweet Potato	6.9	17.7
Groundnut	37.1	28.8
% with innovation among rural HHs with large ruminants		
Practices controlled breeding strategy	9.9	22.8
Cross-bred cows	16.3	31.6
% with NRM innovation among all rural HHs		
Banana-coffee intercropping**	43.3	59.7
Plants scattered tropical fruit trees	13.5	56.4
Cultivates improved fruit tree variety***	11.1	22.9

** Community where at least one household (HH) adopts*

***Among households with banana or coffee*

**** Among households with tropical fruit trees*

Ethiopia

- 70% employment in agriculture; productivity increasing (but contested)
- State-led development particularly for infrastructure
- > 3 million people displaced by conflict; approx. 15 million reliant on food aid
- Despite pandemic, conflict and drought, for households outside conflict-affected north, several innovations were successfully rapidly scaled

Dynamics

- **Drought-tolerant maize**: Jumped from 24% to 40% of households
    - Poor and remote households increasingly accessing the varieties; state dissemination
- **Crossbred poultry**: Increase from 12% to 18% of households
    - Public-private partnership; livestock master plan
- **Forage grasses**: Expansion from 3% to 10%, particularly in pastoralist areas
    - Seed multipliers increased from 30 to 250

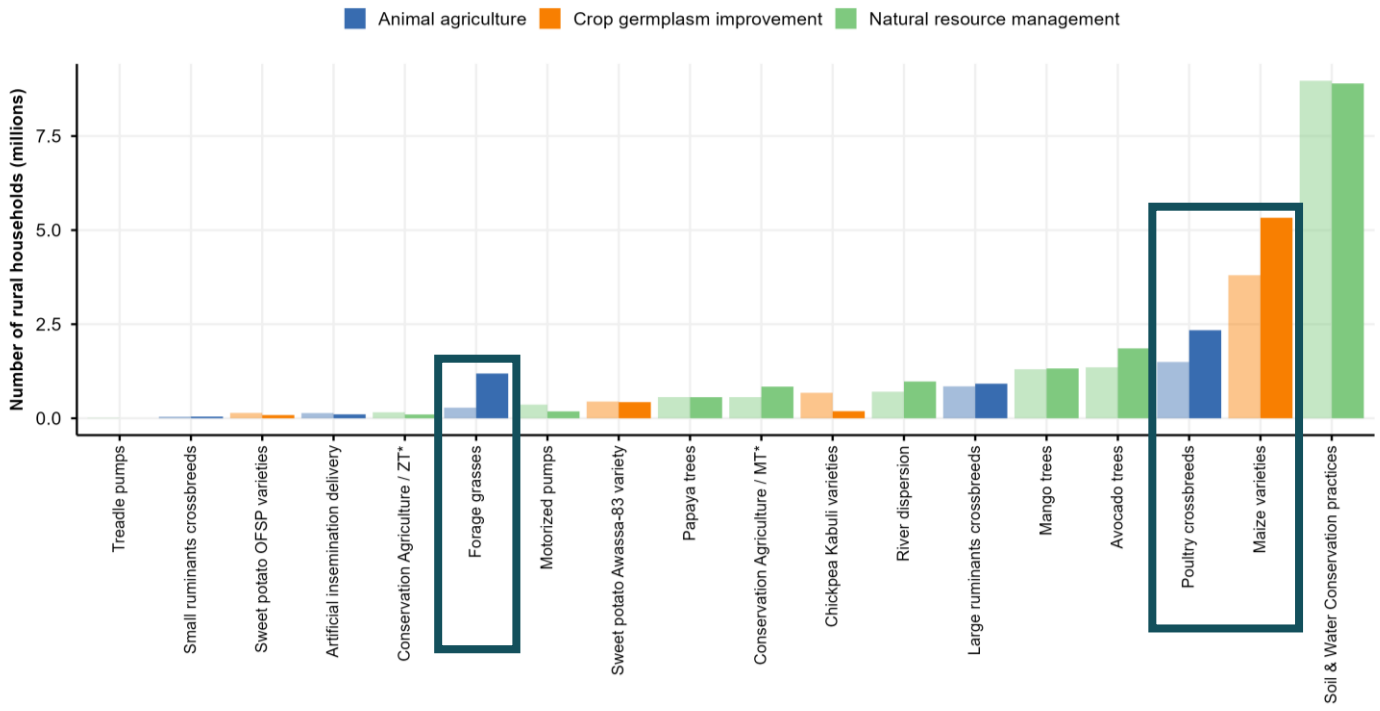


Photo: N.Palmer/The Alliance

Ethiopia

- Bounded estimates of reach of CGIAR, depending on our confidence in attributing the adoption we observe to CGIAR's efforts

- **Lower bound:** When we observe a household adopting these innovations, we are certain there has been a CGIAR role
- **Upper bound:** CGIAR has done research on these innovations and/or facilitated their dissemination, but CGIAR contribution cannot be linked back with certainty

- Innovation by innovation perspective (right)
- Can't sum across innovations – need the survey data to know who is accessing >1 innovation

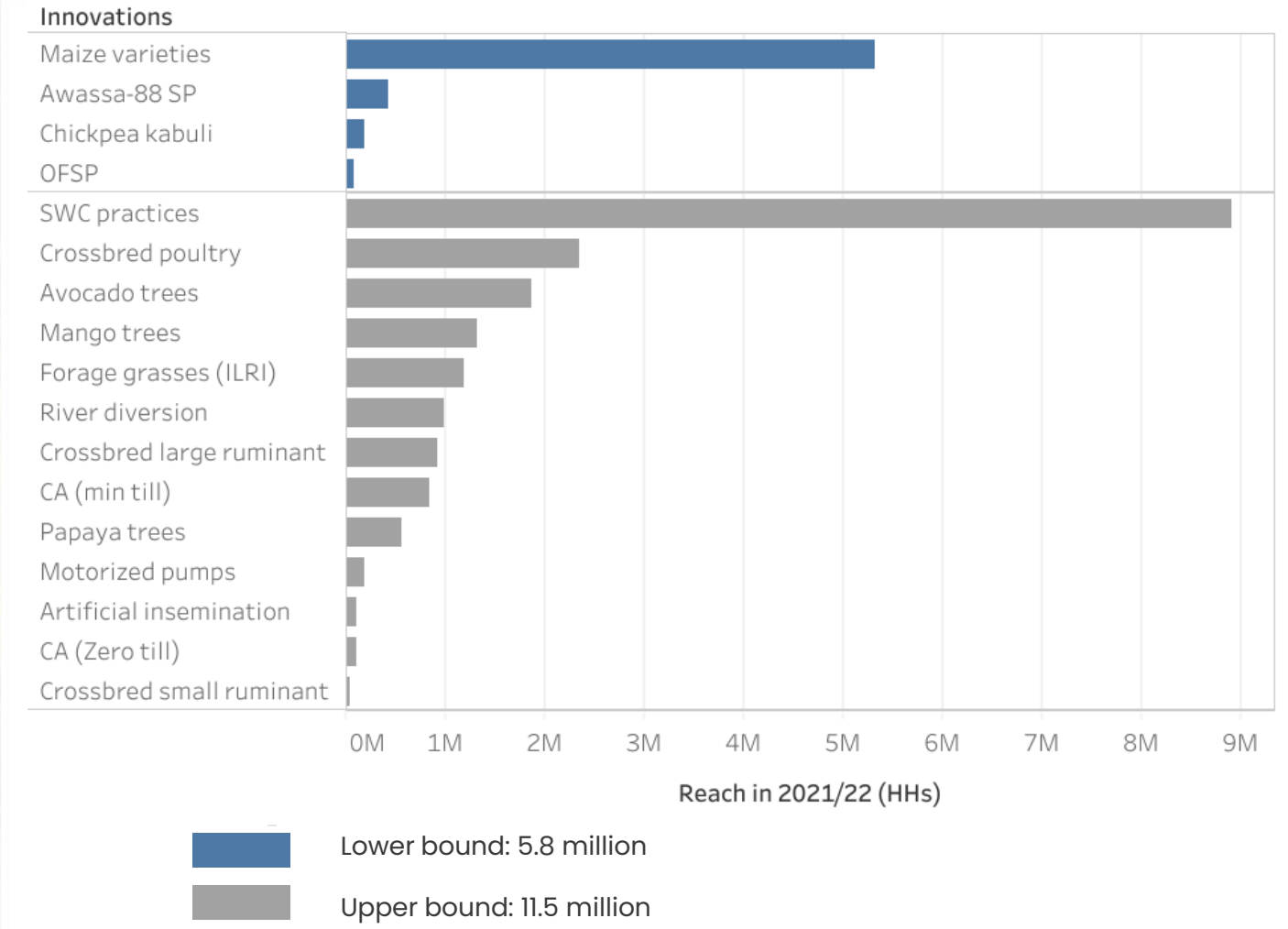


Photo: N.Palmer/The Alliance

Bangladesh

Context

- 35% employment in agriculture in 2023, down from 61% in 2000
- Poverty declining with transition out of agriculture to manufacturing and services
- Movement of households into and out of agriculture over time (figure on right shows net exits since 2018/19)
- Rice dominates agriculture – sustained steady growth in productivity over decades
- Sustained rapid growth in aquaculture production (four-fold growth in production since 2000)
    - Recent years with greater concentration in the sector (fewer households, larger ponds, larger harvests)

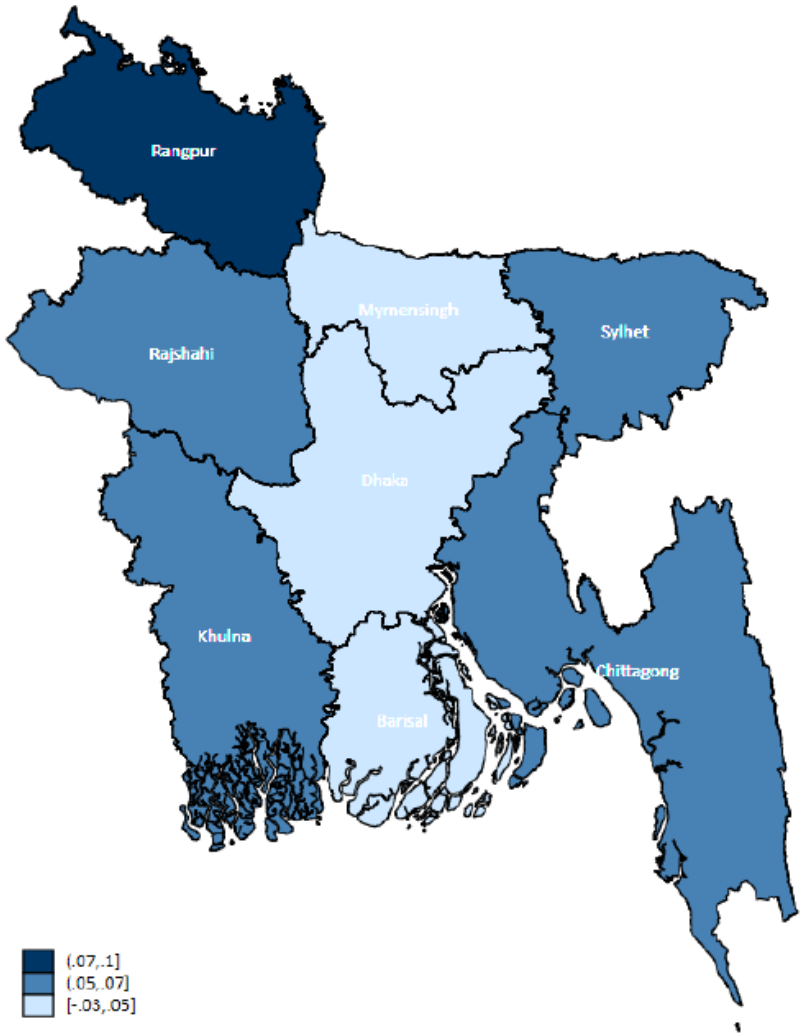


Photo: N.Palmer/The Alliance

Bangladesh

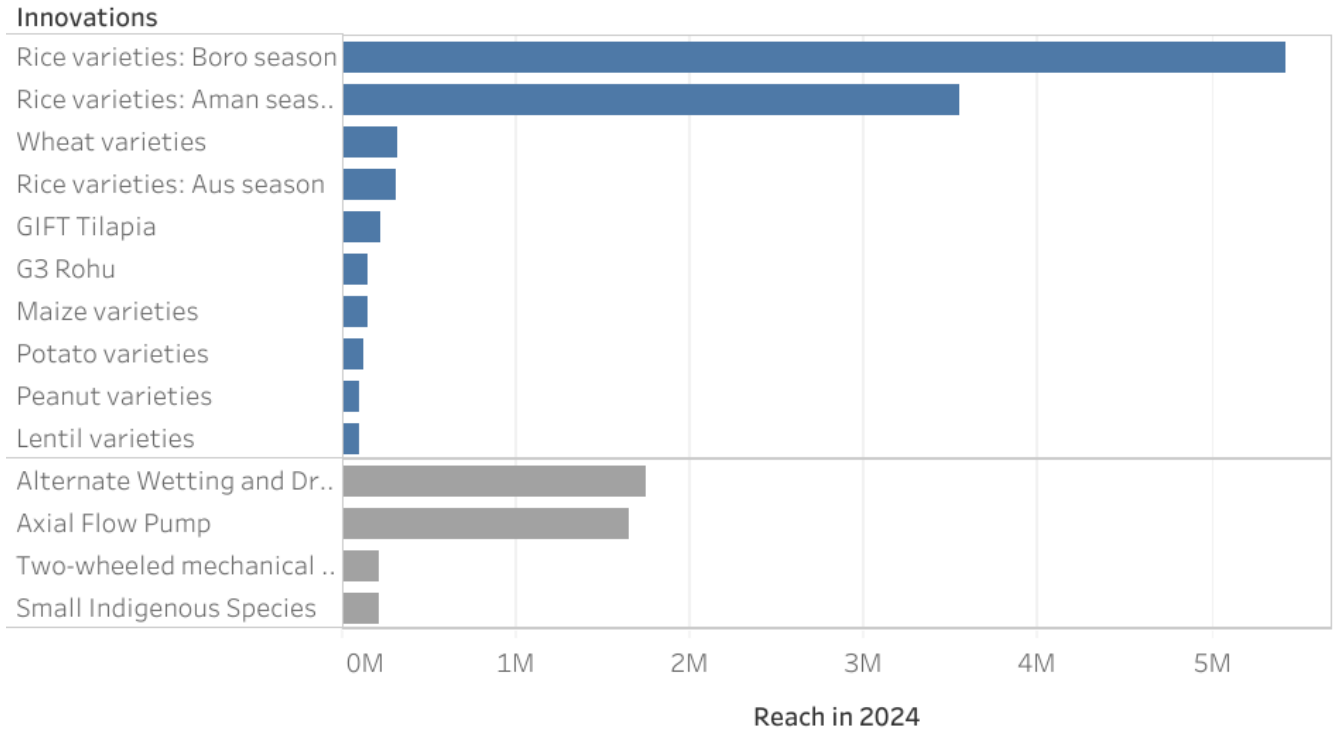
Results

- Boro (irrigated) season:
  - 52% of **rice-growing households** (DNA)
  - 59% of rice-growing households (self-reports)
  - 22.5% / 26% same estimates if just varieties released since 2000

- Aman (rainfed) season:
  - 39% of rice-growing households (self-reports)
    - Submergence-tolerant: 7.3%
    - Lodging-tolerant: 3.6%
    - Salt-tolerant: 3.0%
  - Evidence of stress-tolerant varieties being scaled through the seed system (Travis' focus)

- Alternate wetting and drying a potentially significant innovation
  - lots of measurement challenges and lingering questions (Sujata's focus)

- **G3 Rohu scaling quickly**, reaching 6.5% of Rohu-growing households since release in 2020



Lower bound: 8.0 million

Upper bound: 9.4 million

Photo: N.Palmer/The Alliance

Viet Nam

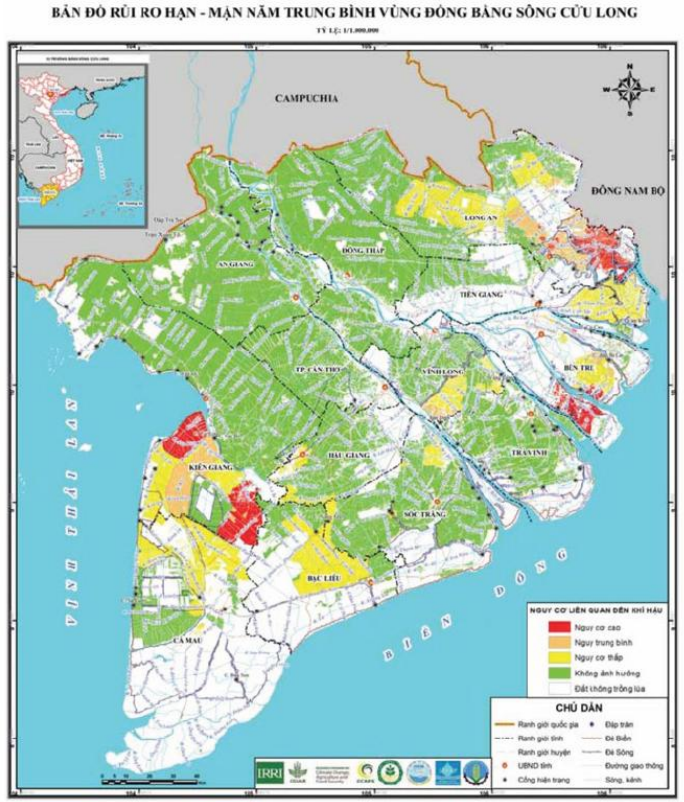
Context

- 29% employment in agriculture in 2021, down from 65% in 2000
- A remarkable **development success story**: from one of the poorest countries in mid 1980s to middle-income country with a generation
- Challenges of rapidly aging population, global trade declining, automation is increasing, environmental degradation is worsening, and **climate change** a greater threat than ever
- High level of **state capacity**: role for research in influencing / informing local administrations – see CS-MAPS (right)
- Development of industrial agri-food systems: changing opportunities and research needs
- **Private sector** now recognized by the Politburo as being the primary driver of economic growth (Resolution 68, May 4th 2025)

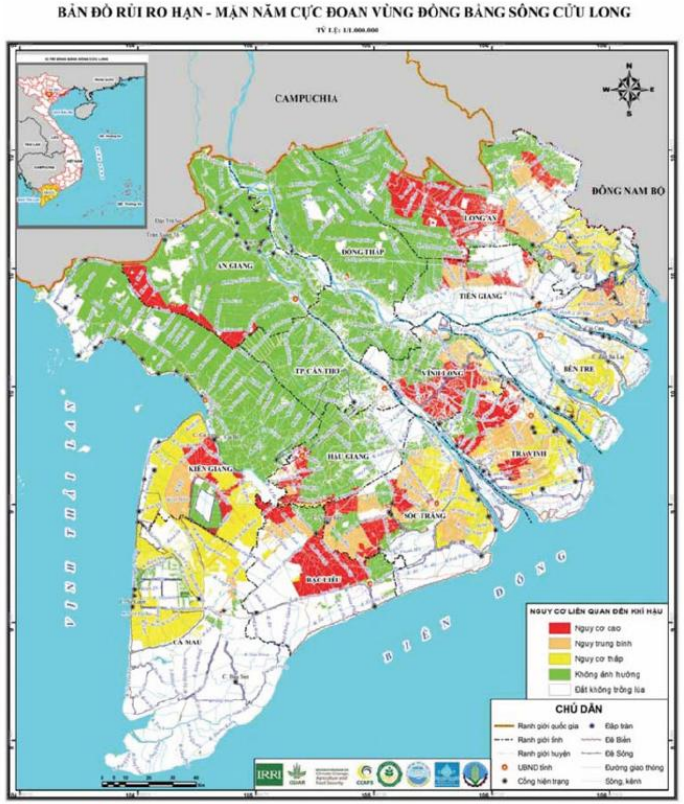
Photo: N.Palmer/The Alliance

Climate-smart mapping and adaptation planning (CS-MAPS)
Salinity risk and associated actions for projected in the cycle of the Oceanic Niño Index

(A) Normal year



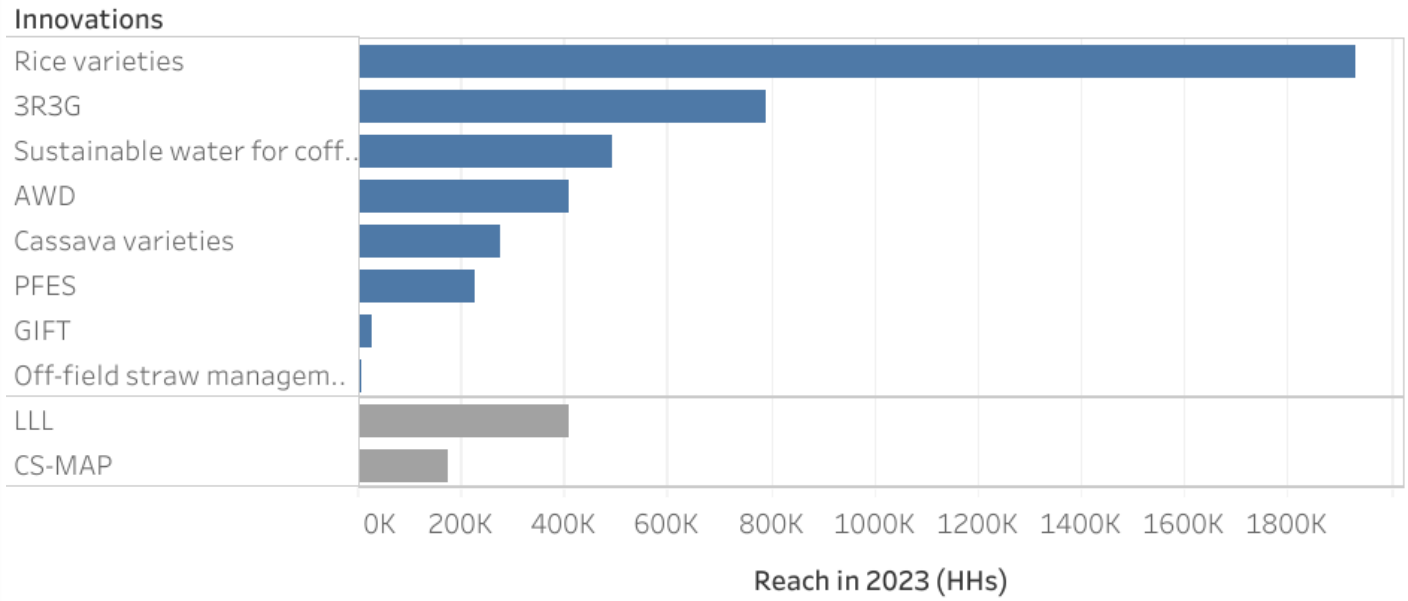
(B) Severe year



Viet Nam

Results

- Approx 2 million (about 25% of rice-growing households) cultivate IRRI-related **rice varieties**
  - *Saltol* gene found in 31% of sampled plots (not just IRRI varieties, also present in landraces)
- 54% of **cassava**-growing households grow CIAT-related cultivars
  - Higher adoption rates in SE and Central regions
- **Tilapia** aquaculture not widely practiced, but 96% of commercial tilapia hatcheries found to have GIFT-derived strains
- 27% of rice-growing households in the Mekong River Delta planted on dates in line with recommendations from climate-smart maps (**CS-MAPs**), a project of CCAFS



Lower bound: 3.7 million

Upper bound: 3.9 million

Photo: N.Palmer/The Alliance

CGIAR-related innovations' combined reach: in millions of households

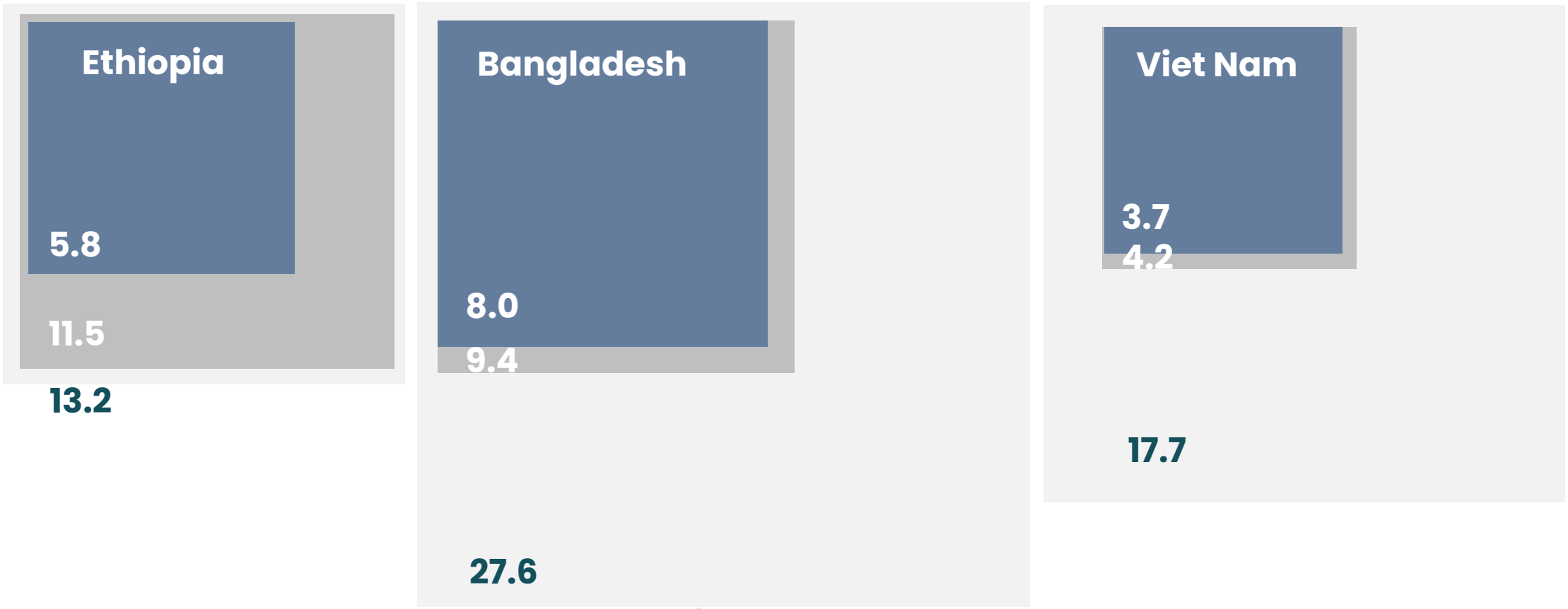


Photo: N. Palmer/The Alliance

CGIAR Standing Panel on Impact Assessment

In-Country Launch Events

Photo: G. Smith/The Alliance

Media Coverage

Viet Nam Event – 26 Feb 2025
6 mentions including national TV.

Uganda Event – 7 Mar 2025
3 mentions and a press conference with national coverage.

Viet Nam

"a Hot Spot for Agricultural Science Collaboration" The Nông Nghiệp Vietnam

*"the **importance of scaling Smart Agriculture Innovations"** The Nông Nghiệp Vietnam*

*"(…) innovations have been applied in Vietnam's rice sector, **improving resilience and productivity"** VTC News*

*"3.9 million farming households have created livelihoods **thanks to innovation**" (the Công Thương)*

*"Importance of application and **replication of scientific and technological advances** in agriculture"* Doanh Nghiệp Hội Nhập

*"The innovative projects of the CGIAR have **positively impacted about 4 million** smallholder farmers"* The KHCN Hưng Yên

Uganda

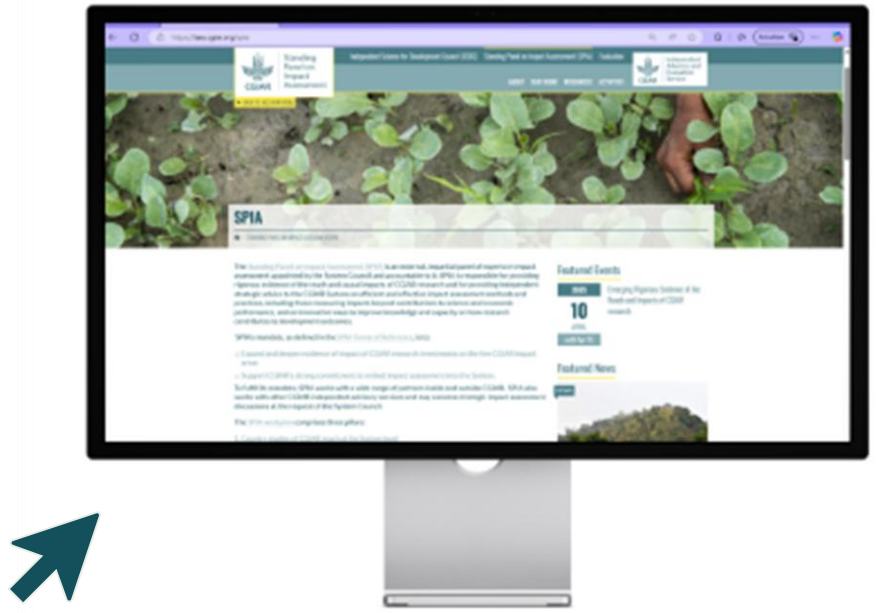
Press Conference

- **Questions** about information gaps toward farmers (awareness, adoption, scaling, transmitting benefits) and policy implications.
- **Replies** include investment to spread knowledge, time-frame of technologies improvement (15-20Y), robust data collection methods, making supply available, policy recommendations from the WB.

COUNTRY STUDIES website

First Phase

- Viet Nam
- Ethiopia
- Bangladesh
- Uganda



GUIDED VIDEO

Access SPIA's website

Go to "Our Work"

Country Studies dropdown list

Teams taking on work moving forward

Community of Practice
Meet the investigators across seven research partnerships

CGIAR Standing Panel on Impact Assessment

Community of Practice

Following two-stage open call in 2024, we now have teams implementing the country studies across seven countries

The goal is track over time how agricultural innovations scale and their contribution to development

Phase 1: Ethiopia, Uganda, Vietnam, Bangladesh
Phase 2: Colombia, Nigeria, Northern India

Scoping work for possible scale-up is happening in an additional 12 countries

Phase 3: Mali, Cote d'Ivoire, Senegal, Ghana, Morocco, Egypt, Kenya, Malawi, Philippines, Nepal, Southern India, Peru

Photo: CIAT / Neil Palmer

CGIAR Standing Panel on Impact Assessment

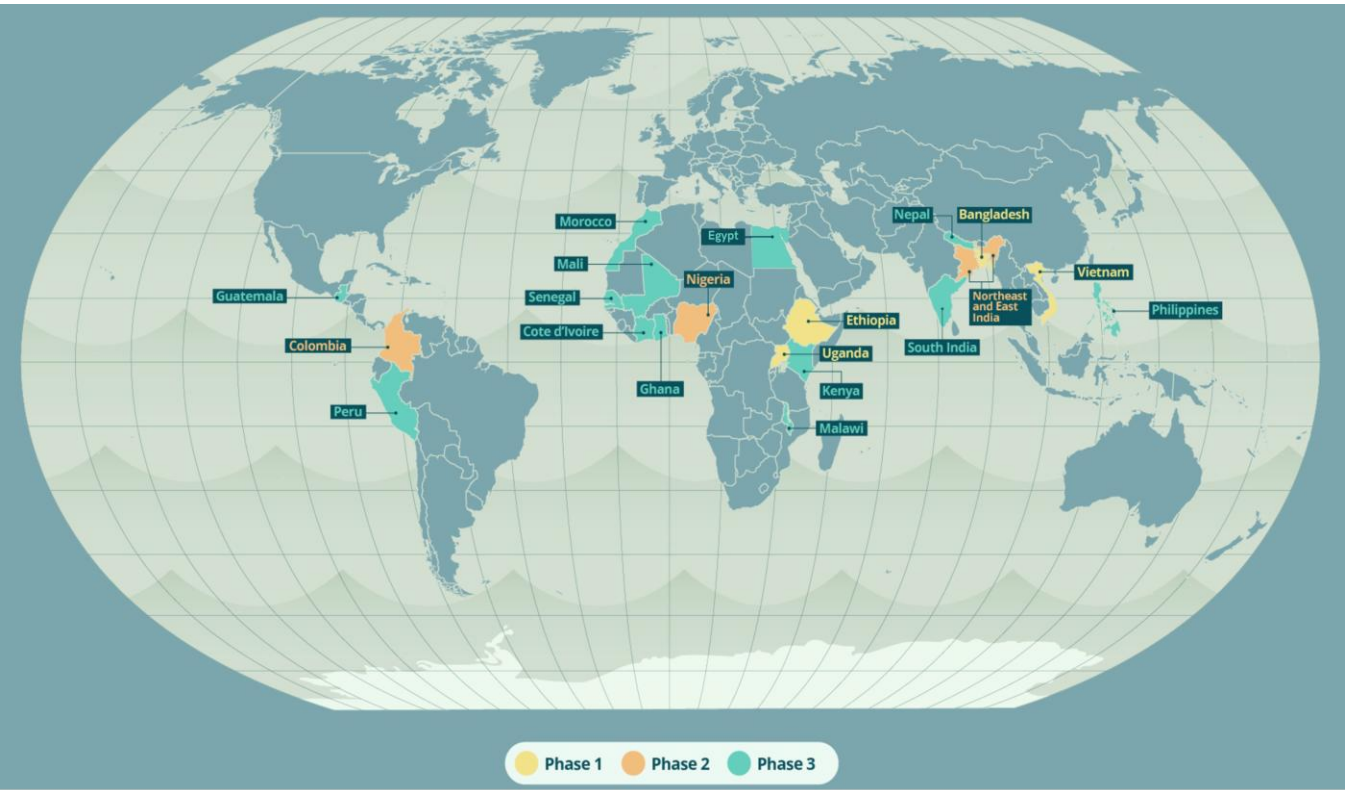
Emerging Themes

System Council, SIMEC, IPB, Global Leadership Team - May 16, 2025

Emerging Themes

From the Country Studies

Cross-Cutting Insights from Country Studies



Stress-Tolerant Varieties
Drought-tolerant maize and stress-tolerant rice

Natural Resource Management
Alternate Wetting and Drying (AWD) cases from Bangladesh and Viet Nam

Ag Innovation & Economic Transformation
Differences in transformation stage shape diffusion of innovation

Photo: N. Palmer/The Alliance

CGIAR Standing Panel on Impact Assessment

Stress-Tolerant Varieties: A ‘showcase success’ story

Stress-Tolerant Varieties: Reach estimates

Country	Stress-tolerant Variety / Crop	Year	Adoption estimate %	Population (method)
Uganda	Drought*-tolerant maize	2021/22	**58** of which: 41% older DT OPV 17% recent DTMZ hybrids	Maize-growing households (DNA)
Ethiopia	Drought-tolerant maize	2018/19	**24**	Maize-growing households (DNA)
	Drought-tolerant maize	2022/23	**40**	Maize-growing households (DNA)
Bangladesh	Flood*-tolerant rice (Aman)	2024	**7.3**	Rice-growing households (self-report)
Vietnam	Flood-tolerant rice	2022	**1.5**	Rice-growing households (DNA, Sub1 QTL)
	Salt-tolerant rice	2022	**30.8****	Rice-growing households (DNA, saltol gene)

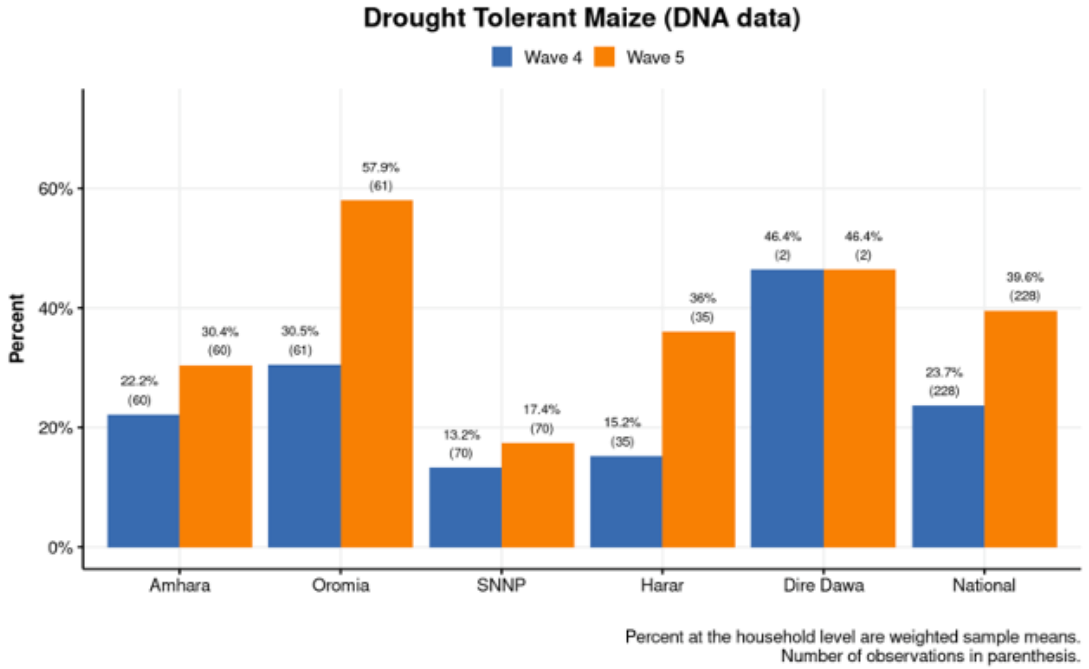
* Drought risk is more uniform across space, whereas flood risk can be vary widely depending on local topography.

** The saltol gene is present in some landraces and in non-CGIAR improved varieties, so this reach is not entirely due to CGIAR.

Ethiopia: Drought-Tolerant Maize

Reach

- Adoption of DT Maize almost doubled in Ethiopia: **24% (2018) → 40% (2022)**
- 62% of households shifted variety between 2018 and 2020
- DT Maize **dis-adopted less often** than non-DT
- Adoption became **more inclusive, with poor and remote households** increasingly accessing these varieties
- Success led by strong **government supply push** through extension system amidst multiple shocks



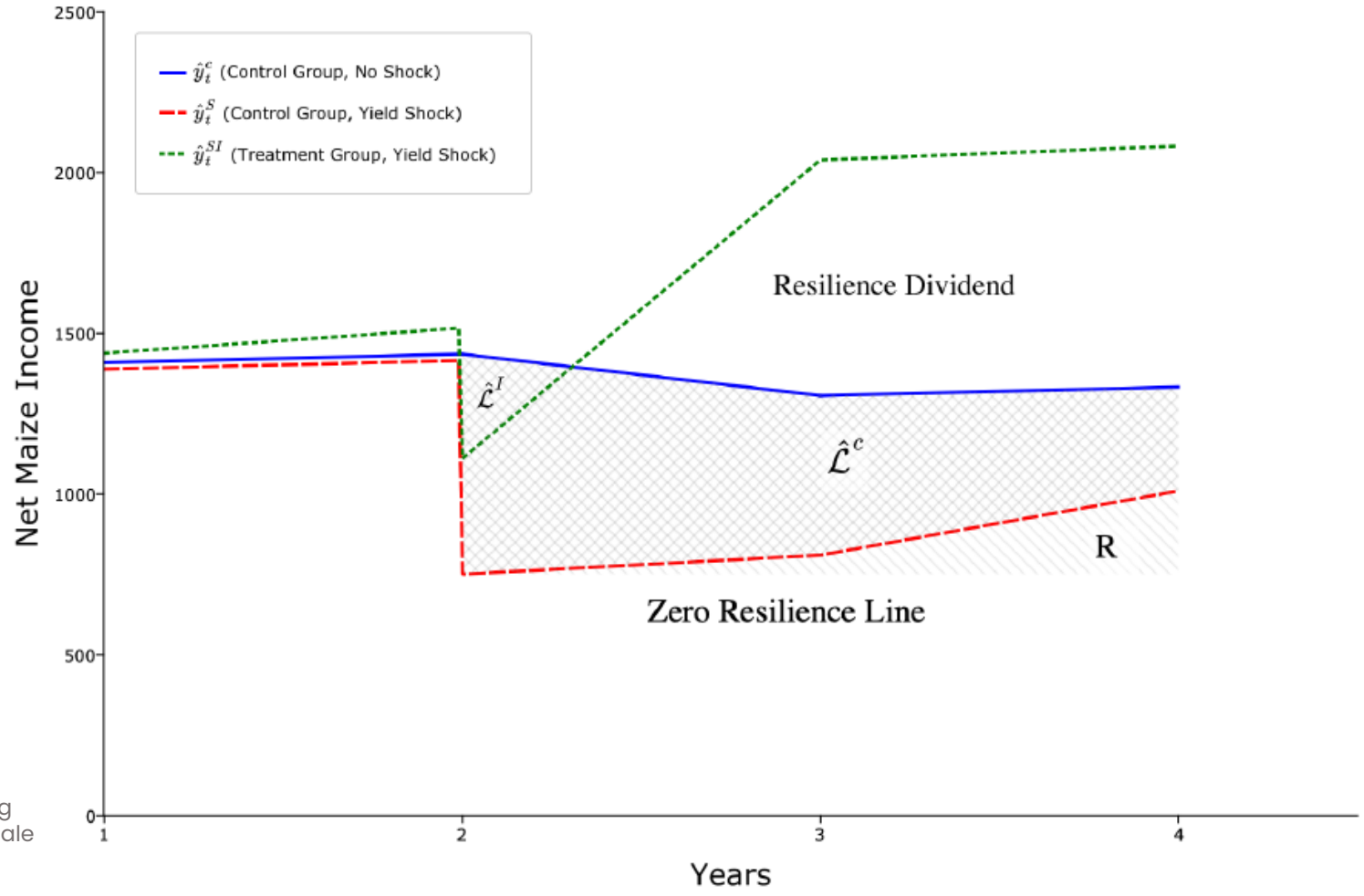
Uganda: Drought-Tolerant Maize

Reach

- CGIAR-related varieties could boost resilience for **57.5% of farmers** by reducing effects of **drought, pests, and diseases.**
- Maize is cultivated by 72% of rural households, but only **9% use seed from the formal system**—most rely on recycled or informal seed sources.
- Over half of hybrid **seeds are recycled** by farmers for multiple seasons; many farmers misclassify their seed as hybrid or traditional, which potentially distorts input investments.
- **Seed market inefficiencies**, outdated varieties (average release year: 2009), and high **plot heterogeneity** hinder the success of plant breeding innovations in the field.

East Africa: Drought-Tolerant Maize Impact (Boucher et at. 2024)

- DT Maize reduces yield loss from mid-season drought and stimulates on-farm investment. Yields increase **145 kg/ha**.
- When bundling DT Maize with insurance, yields increase an **additional 230 kg/ha.**
- **Experience and learning key** to on-farm response to 'protection', which generates **'resilience dividend.'**



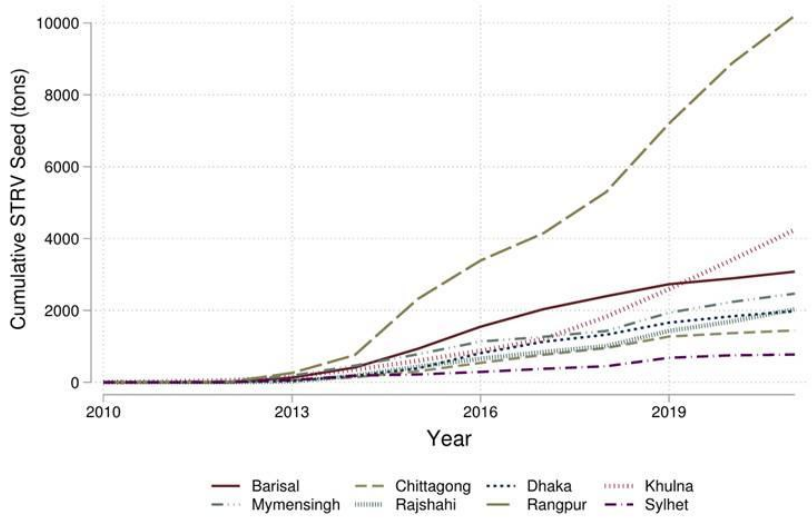
Boucher, Carter, Flatnes, Lybbert, Malacarne, Marenya, and Paul. 2024. "Bundling Genetic and Financial Technologies for More Resilient and Productive Small-scale Agriculture" Economic Journal.

Bangladesh: Stress-Tolerant Rice

Reach

- Administrative seed distribution data show stress tolerant rice varieties (STRV) expanding steadily since 2014.
- We find 7.3% of all rice growing HHs in Aman season 2023 grew flood tolerant rice. 3.0% and 3.6% grew salt and lodging-tolerant varieties, respectively.
- A separate study* found that 21% of rice growing HHs in Aman season 2022 grew stress-tolerant rice.

Figure 4: Growth of STRV Available by Division

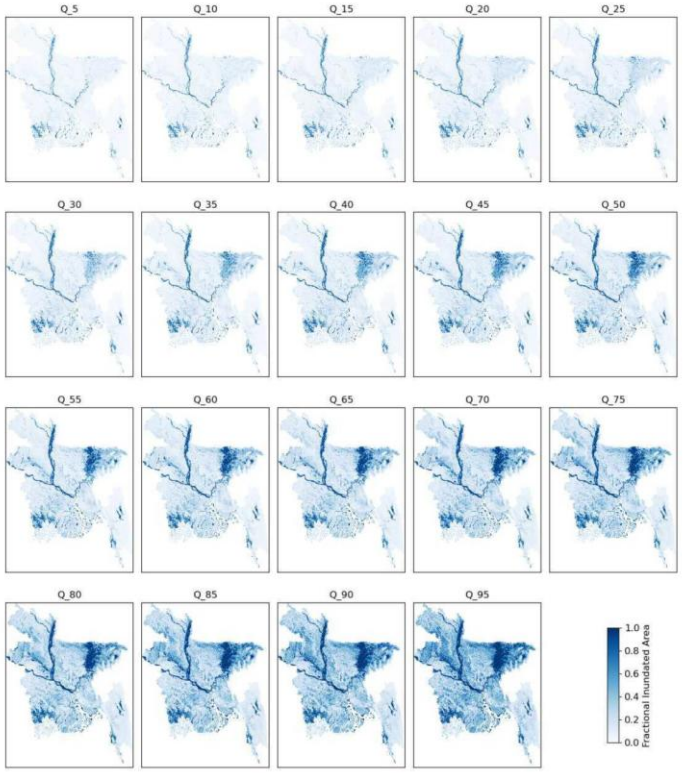


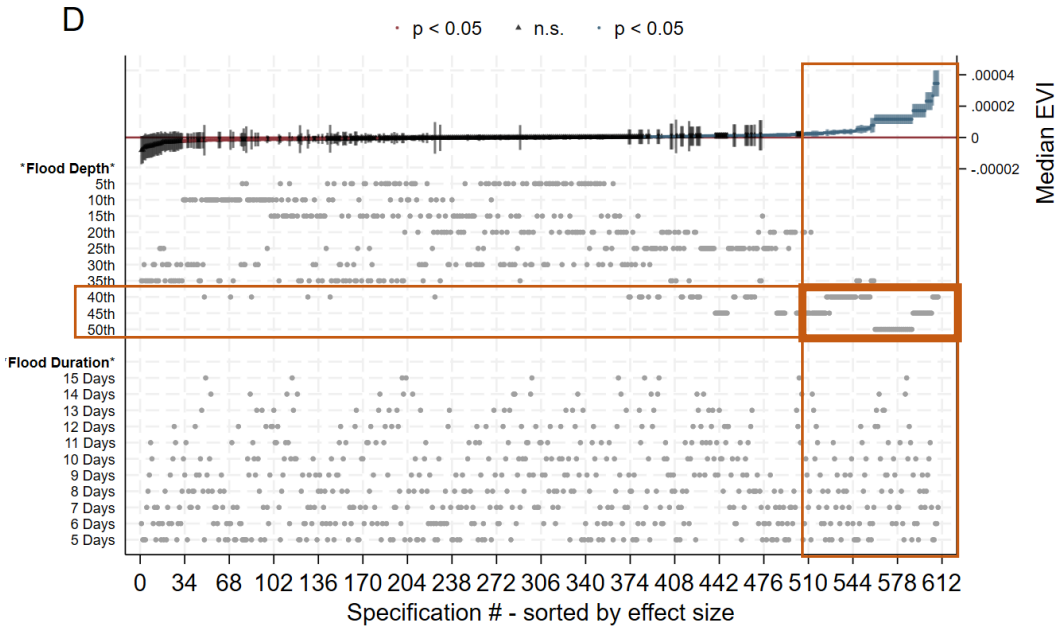
*Michler, Rafi, Giezendanner, Josephson, Pede, and Tellman, 2024 "Imapct Evaluations in Data Poor Settings: The Case of Stress-Tolerant Rice Varieties in Bangladesh" Working Paper.

South Asia: Stress-Tolerant Rice

Impact (Emerick et al. 2016; Michler et al. 2025)

- Flood tolerant rice increases productivity and generates a **'resilience dividend'** in Odisha.*
- Geo-spatial evidence suggests that flood tolerant rice increases productivity in Bangladesh – but only for very **specific flood depths**.**
- Expanding adoption in flood-prone areas could lead to major gains in resilience to (*the right kind of*) flooding.





* Emerick, K., De Janvry, A., Sadoulet, E. and Dar, M.H., 2016. Technological innovations, downside risk, and the modernization of agriculture. American Economic Review, 106(6), pp.1537-1561.

** Michler, Rafi, Giezendanner, Josephson, Pede, and Tellman, 2024 "Imapct Evaluations in Data Poor Settings: The Case of Stress-Tolerant Rice Varieties in Bangladesh" Working Paper.

Photo: N. Palmer/The Alliance

CGIAR Standing Panel on Impact Assessment

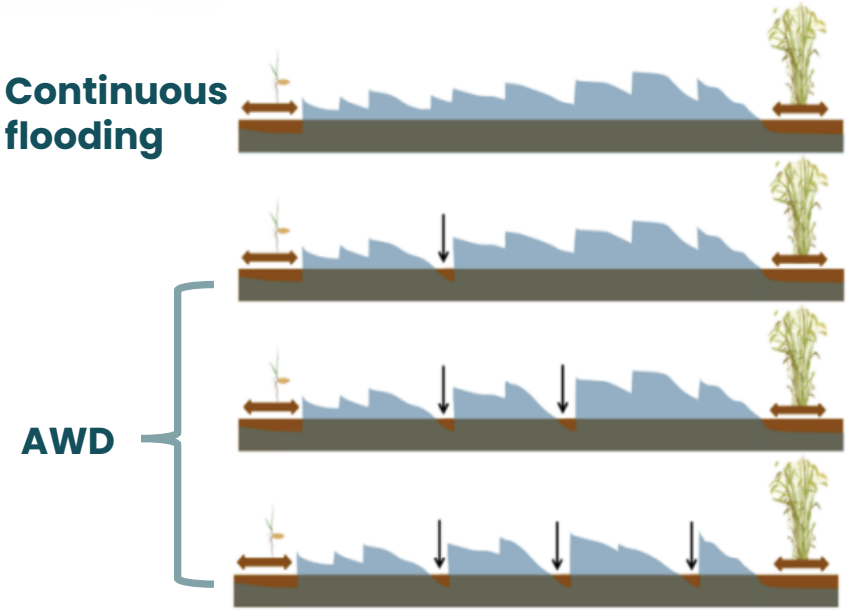
Natural Resource Management: The Case of AWD

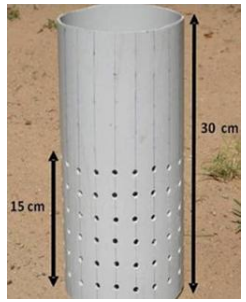
Photo: N.Palmer/The Alliance

Alternate Wetting and Drying (AWD)

- Technique to reduce water use in rice fields while maintaining yields, by strategically applying only the amount of water necessary for crop growth.
- Can prevent anaerobic bacteria proliferation and reduce methane emissions.
- IRRI recommends:
    - Flood the field, then let water recede to a certain depth before re-flooding.
    - Use **“pani pipe”** to easily monitor water depth.
- In agronomic trials when applied correctly, AWD can **maintain yields**, and **reduce water use** and **methane**.

CGIAR Standing Panel on Impact Assessment





PVC field water tube ("pani pipe")

From Agronomic Trials to Farmer Fields: "The Cup & the Lip"

Photo: CGIAR

- Not straightforward to extrapolate from agronomic trials to real-life impacts*
  - Plot and farmer **selection**
  - Additional **scientist input**
  - Farmers **change effort** and **practices**

*"These results are strictly applicable only to the research environment in which they were conducted; many farmers do not achieve these yield levels… We assume that the changes identified in this study are broadly similar to changes that could be achieved in farmers' fields." ***

*Laajaj, R., Macours, K., Masso, C., Thuita, M., & Vanlauwe, B. (2020). Reconciling yield gains in agronomic trials with returns under African smallholder conditions. *Scientific Reports,* 10, Article 14286.

** Wassmann, R., Nelson, G. C., Peng, S. B., Sumfleth, K., Jagadish, S. V. K., Hosen, Y., & Rosegrant, M. W. (2010). Rice and global climate change. In S. Pandey et al. (Eds.), *Rice in the global economy: Strategic research and policy issues for food security* (Chapter 4.1). International Rice Research Institute.

AWD reach & benefits

Randomized controlled trials on farmer-managed farms (Chakravorty et al. 2023)

- **Methane reduction:** no studies so far
- **Water use** (Bangladesh):
  - Training farmers to implement AWD reduced water use
  - but *only if* farmers paid per hour of water use ("volumetric" pricing)
  - no effect if farmers paid according to area cultivated
  - But: if farmers face volumetric pricing, they dry down after flowering stage *anyway*

Bangladesh

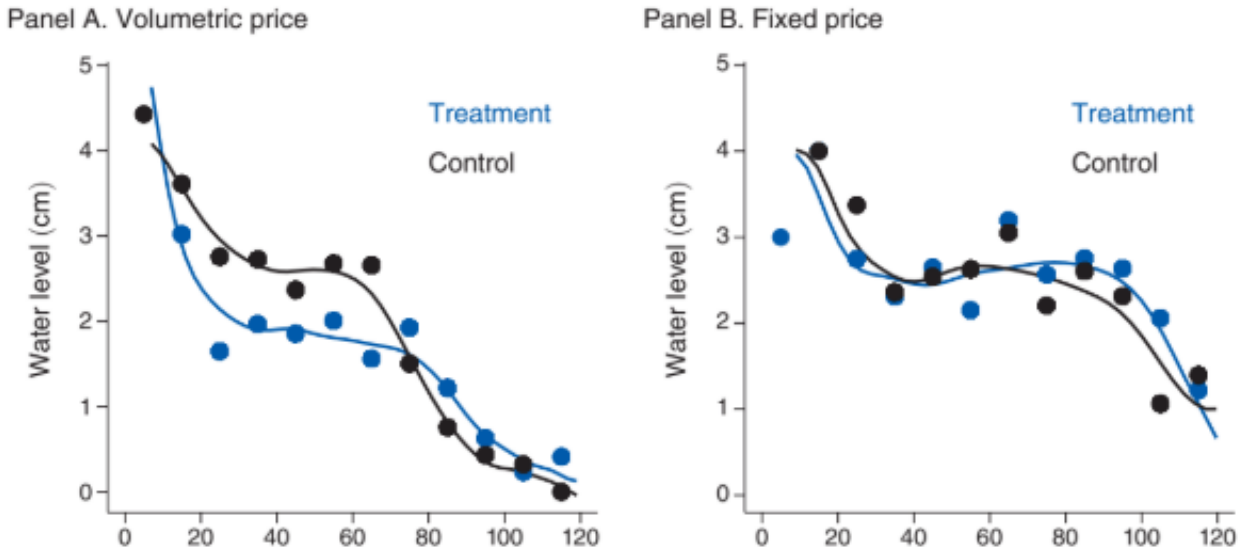


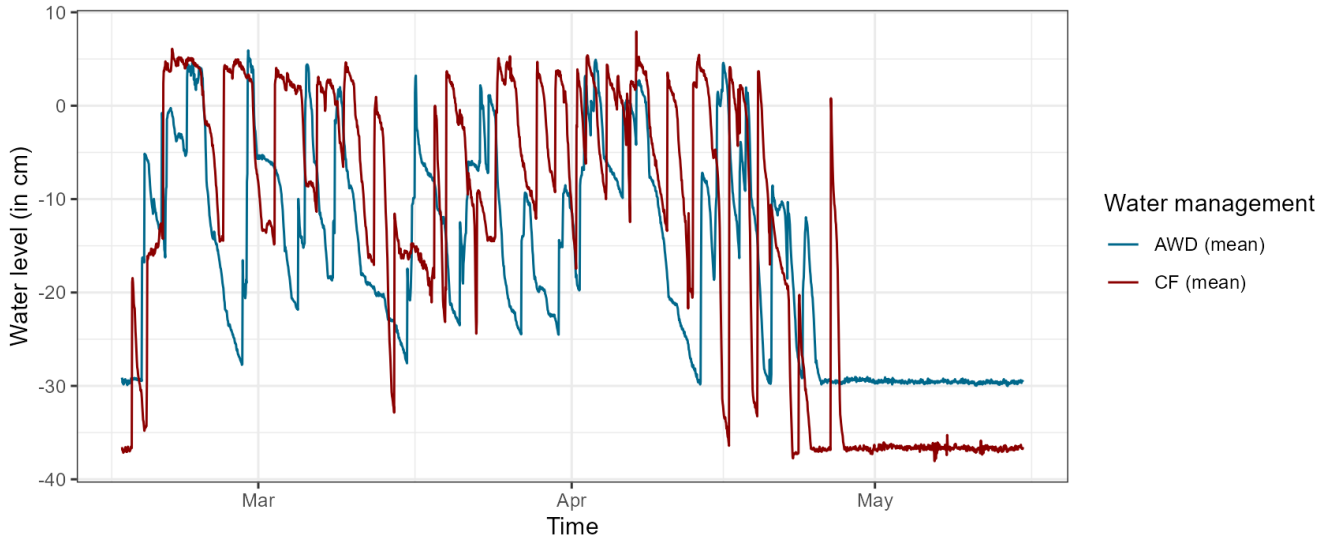
Figure 3* Nonparametric estimates of the treatment effect as a function of days after planting

*Chakravorty, Ujjayant, et al. "Inefficient Water Pricing and Incentives for Conservation." *American Economic Journal: Applied Economics*, vol. 15, no. 1, 2023, pp. 319–350.

Photo: N.Palmer/The Alliance

Measurement Challenges

- **Signature**: No farmers report using the pani pipe.
- **Remote sensing**: to ground-truth the EO signal we measured water levels in the field (Bangladesh)
  - But AWD and continuous flooding look indistinguishable.
- **Survey question**: Unclear how farmers answer "Do you apply AWD?" (Viet Nam)
- **Improved survey measurement**:
  - Detect AWD by asking farmers to list water applications at different rice growth stages
  - If dry-down was deliberate or incidental (Bangladesh only)

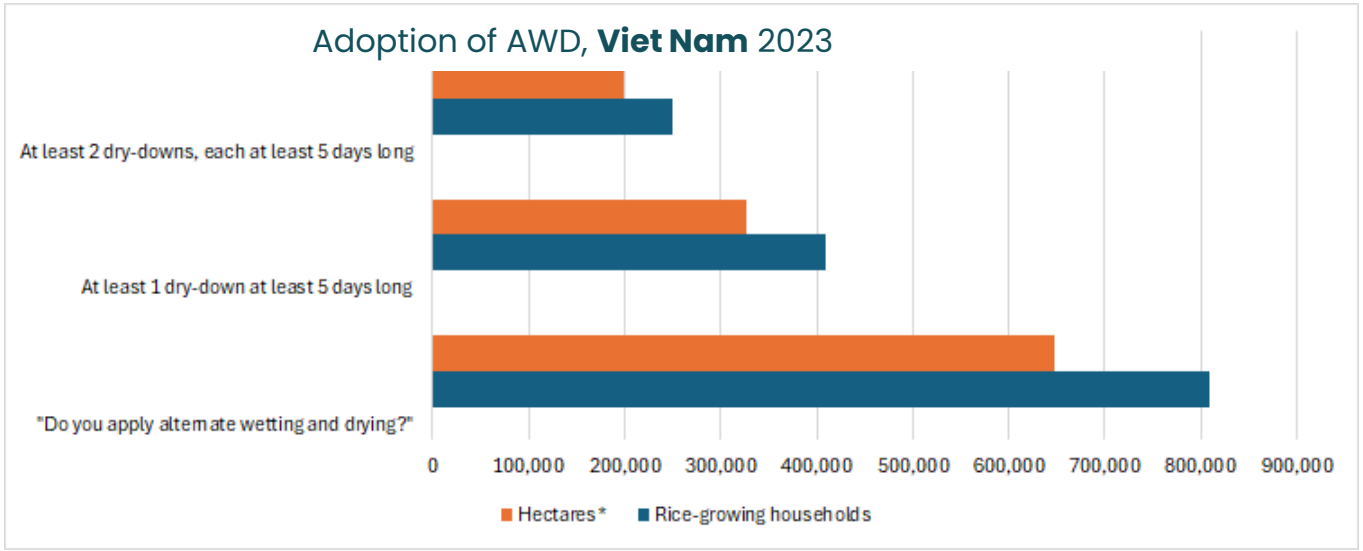


— AWD — Continuous Flooding

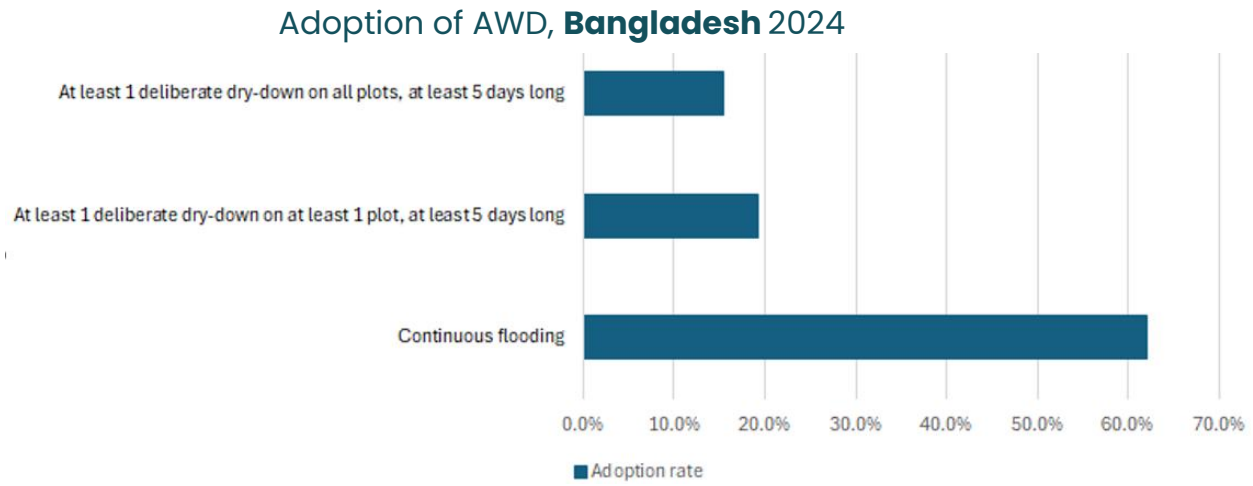
Mean water readings from water-loggers installed in experimental fields, Bangladesh

Photo: N.Palmer/The Alliance

Measuring Adoption at National level



Viet Nam adoption rate
5.4% (≥ 1 dry-down)
3.3% (≥ 2 dry-downs)



Bangladesh adoption rate
19.3% (≥ 1 deliberate dry-down; ≥ 1 plot)
15.4% (≥ 1 deliberate dry-down; all plots)

*Hectares estimated using a back-of-the-envelope calculation based on average farm size in Viet Nam and should be interpreted with caution accordingly.

Possible Explanations

Standing Panel on Impact Assessment
CGIAR

Viet Nam

- Irrigation managed at multiple levels above farmers
  - **cooperatives** (level 3 and level 2 canals)
  - state-owned **irrigation companies** (level 1 canals)
- **Difficult for communes / local cooperatives to "impose" AWD in their command area**
  - low-lying v. high-lying fields
  - closer v. further away from water source
- Cooperatives tend to reduce water **during tillering phase only**
  - not "alternately wetting and drying"

Bangladesh

- Farmers buy from water sellers **(Chakravorty et al. 2023)**
- Farmers who face a **financial incentive** to reduce water use more likely to adopt AWD
- Farmers unwilling to switch to volumetric pricing
  - **higher costs**:
    - For farmers further from water source
  - **equity concerns**:
    - Water leakage; paying farmers may end up subsidizing non-paying farmers
  - **political economy of water pricing**:
    - Tube well operators may resist switch to hourly pricing
- When **field is not level**, it is difficult to consistently dry down field without risking crop growth

Photo: N. Palmer/The Alliance

CGIAR Standing Panel on Impact Assessment

Agricultural innovation in the context of economic transformation

Agriculture's role in economic transformation: de Janvry and Sadoulet (2019)

Stages of transformation	Underlying processes
1. Asset building	Access to land and human capital for the landless and for smallholder farmers
2. Green Revolution	Adoption / diffusion of new seeds and fertilizers for staple crops
3. Agricultural transformation	Access to water for irrigation Agricultural diversification toward higher-value crops Development of value chains and contracting
4. Rural transformation	Mechanization and land concentration Growth of the rural non-farm economy
5. Structural transformation	Rural-urban migration Urban-based industrialization and services

Agriculture's role in economic transformation

Stages of transformation	Underlying processes	Uganda	Ethiopia	Bangladesh	Vietnam
1. Asset building	Access to land and human capital for the landless and for smallholder farmers	Population pressure on land increasing			
2. Green Revolution	Adoption / diffusion of new seeds and fertilizers for staple crops	+ (maize) Very limited fertilizer	+ (maize, wheat, beans) Fertilizer limited	+ (rice)	+ (rice, cassava) - Too much fertilizer
3. Agricultural transformation	Access to water for irrigation Agricultural diversification toward higher-value crops Development of value chains and contracting	No Limited: Oilseeds; Pork No	Limited Limited: Chicken; Flowers No	Rice Aquaculture Limited	Rice Aquaculture Yes
4. Rural transformation	Mechanization and land concentration Growth of the rural non-farm economy	Limited No	Limited No	Growing (as a service) Growing	Yes Yes
5. Structural transformation	Rural-urban migration Urban-based industrialization and services	Limited	Limited	Yes	Yes

Agricultural innovation in context of economic transformation

Standing Panel on Impact Assessment
CGIAR

Uganda

Stages of transformation	Underlying processes	Uganda
1. Asset building	Access to land and human capital for the landless and for smallholder farmers	Population pressure on land increasing
2. Green Revolution	Adoption / diffusion of new seeds and fertilizers for staple crops	+ (maize) V limited fertilizer

Focal innovation: Orange-fleshed sweetpotato

Scaling mechanism: NGO dissemination

Orange-Fleshed Sweetpotato (OFSP)
HarvestPlus initiative developed and promoted OFSP (2000s to early 2010s) through NGOs

Long-run positive impact on stunting (Macours et al, forthcoming) for the period and locations when the NGO projects were disseminating OFSP vines

No sustained adoption after end of NGO projects
- Revealing a lack of effective demand

HarvestPlus have made projections about ongoing adoption using unrealistic assumptions
- Underlies importance of independent evidence

Current adoption <5% of sweetpotato-growing households

Agricultural innovation in context of economic transformation

Ethiopia

Stages of transformation	Underlying processes	Ethiopia
2. Green Revolution	Adoption / diffusion of new seeds and fertilizers for staple crops	+ (maize, wheat, beans) Fertilizer limited
3. Agricultural transformation	Access to water for irrigation	Limited
	Agricultural diversification toward higher-value crops	Limited: Chicken; Flowers
	Development of value chains and contracting	No

Focal innovations: Drought-tolerant maize; Forage grasses

Scaling mechanism: Government-led dissemination

Drought-tolerant maize and improved forages
Despite COVID-19, protracted civil conflict and drought, we see significant increases in adoption between 2018/19 and 2021/22

Relatively high levels of state capacity to effectively support agriculture during crises, underwritten by major international investments

However, growing concern about politicization of official statistics

- Underlines importance of independent evidence

Wheat production estimates (million tonnes, by year by source)

2022/23 15.1 (ESS)
2022/23 5.8 (USDA / FAO)

2023/24 23 (ESS)
2023/24 7.5 (AfDB)


Middle East & Africa | Grain of untruth

Abiy Ahmed's agricultural revolution is too good to be true

The prime minister claims to have made Ethiopia Africa's breadbasket. The numbers disagree

Agricultural innovation in context of economic transformation

CGIAR Standing Panel on Impact Assessment

Bangladesh

Stages of transformation	Underlying processes	Bangladesh
3. Agricultural transformation	Access to water for irrigation	Rice
	Agricultural diversification toward higher-value crops	Aquaculture
	Development of value chains and contracting	Limited
4. Rural transformation	Mechanization and land concentration	Growing (as a service)

Focal innovation: G3 Rohu

Scaling mechanism: Network of commercial hatcheries

G3 Rohu
Rohu (*Labeo rohita*) is Bangladesh's most widely farmed carp

Rohu Genetic Improvement Program started in 2011 when WorldFish started breeding fast-growing strains

In 2020: Multiplier population of highly-ranked third generation (G3) families from WorldFish was released to hatcheries across Bangladesh

By 2023: Over 30 commercial hatcheries and 24 nurseries supplying G3 Rohu seed to farmers

By 2024, G3 Rohu already grown by an estimated 200,000 households and growing rapidly

Agricultural innovation in context of economic transformation

CGIAR Standing Panel on Impact Assessment

Vietnam

Stages of transformation	Underlying processes	Vietnam
4. Rural transformation	Mechanization and land concentration	Yes
	Growth of the rural non-farm economy	Yes
5. Structural transformation	Rural-urban migration	Yes
	Urban-based industrialization and services	

Focal innovation: Cassava varieties for starch

Scaling mechanism: State-led industrial policy plus private sector investment

Cassava varieties for starch production

National production
2000: 1.9 m tonnes
2015: 11 m tonnes

At least 120 industrial scale cassava factories
- Starch
- Ethanol
- Animal feed

2018: Cassava mosaic disease (CMD) epidemic dented production

CIAT and IITA breeding materials being used in search for new generation of CMD resistant varieties

Integrated value chain can ensure farmers get access to resistant materials
- Contrast with frustration felt by entrepreneurs attempting to foment industrial cassava in Uganda

SPIA Country Studies as Key Learning Opportunity for CGIAR

- Facilitate comparability across high-priority countries for CGIAR
- Allow for tracking of dynamic changes over time
- Taking context seriously
  - Has required sustained attention and institutional stability
- Highlight the CGIAR success cases AND contribute to CGIAR-wide learning
- Pipeline of evidence for the years ahead looks full

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Ethiopia	Pilots/partnerships				Round 1			Round 2				Round 3			Round 4		
Uganda		Pilots/partnerships					Round 1					Round 2			Round 3		
Viet Nam								Round 1				Round 2			Round 3		
Bangladesh									Round 1			Round 2			Round 3		
Phase 2												Colombia, NE India, Nigeria			Round 2		
Phase 3: Stocktake only												Egypt, Ghana, Mali, Senegal, Cote d'Ivoire, Kenya, Malawi Philippines, South India, Nepal, Morocco, Peru					

CGIAR Standing Panel on Impact Assessment

Thank you

Feedback survey

www.linkedin.com/company/iaes-cgiar/

@cgiarspia

www.iaes.cgiar.org/spia

Independent Advisory and Evaluation Service