



# Pathways for Africa RISING Scaling Innovations

Anthony Whitbread, Kindu Mekonnen,  
Mark Van Wijk, Jim Hammond, Million  
Gebreyes, Haimanot Seifu

For meeting with USAID

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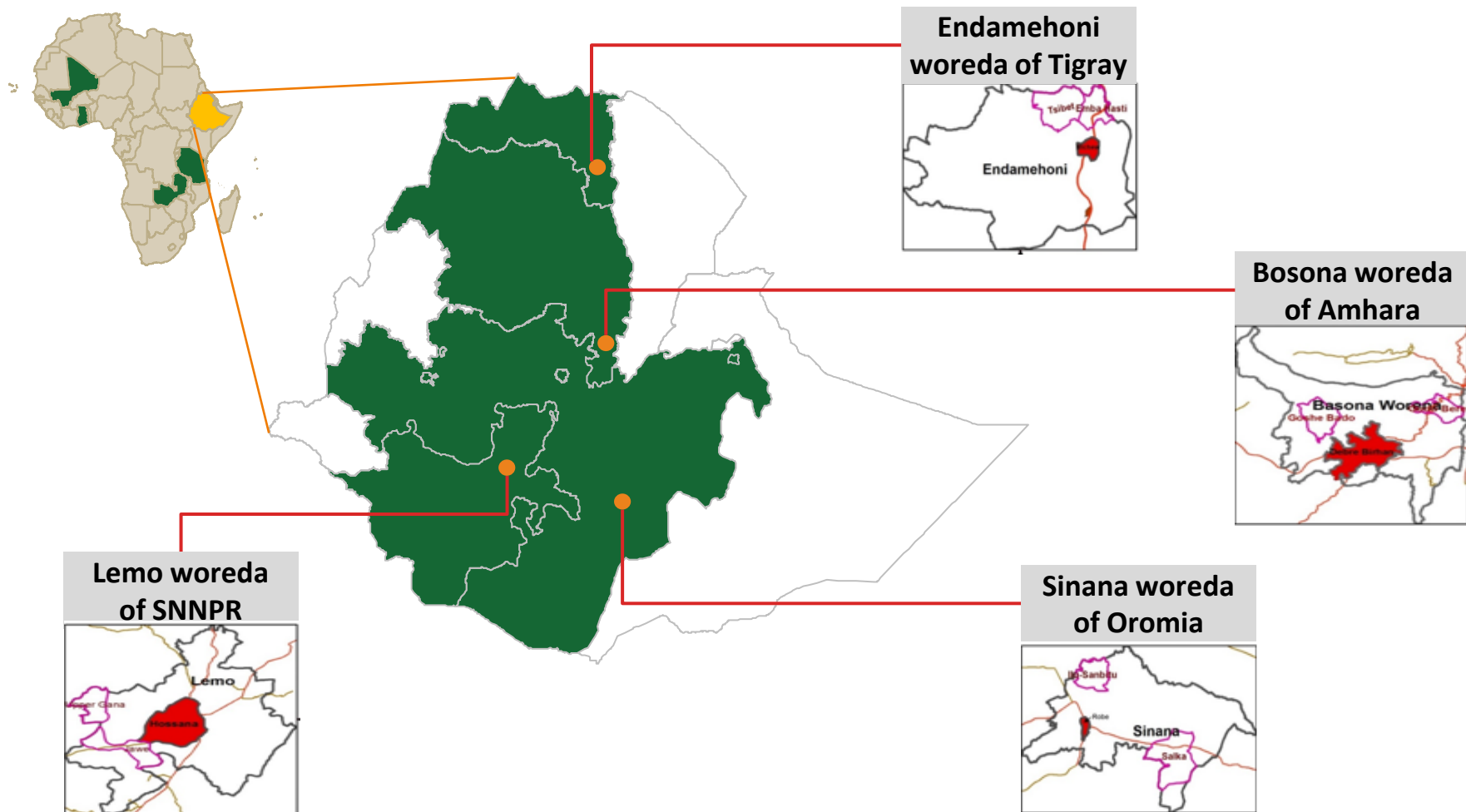


# Overview of the Africa RISING

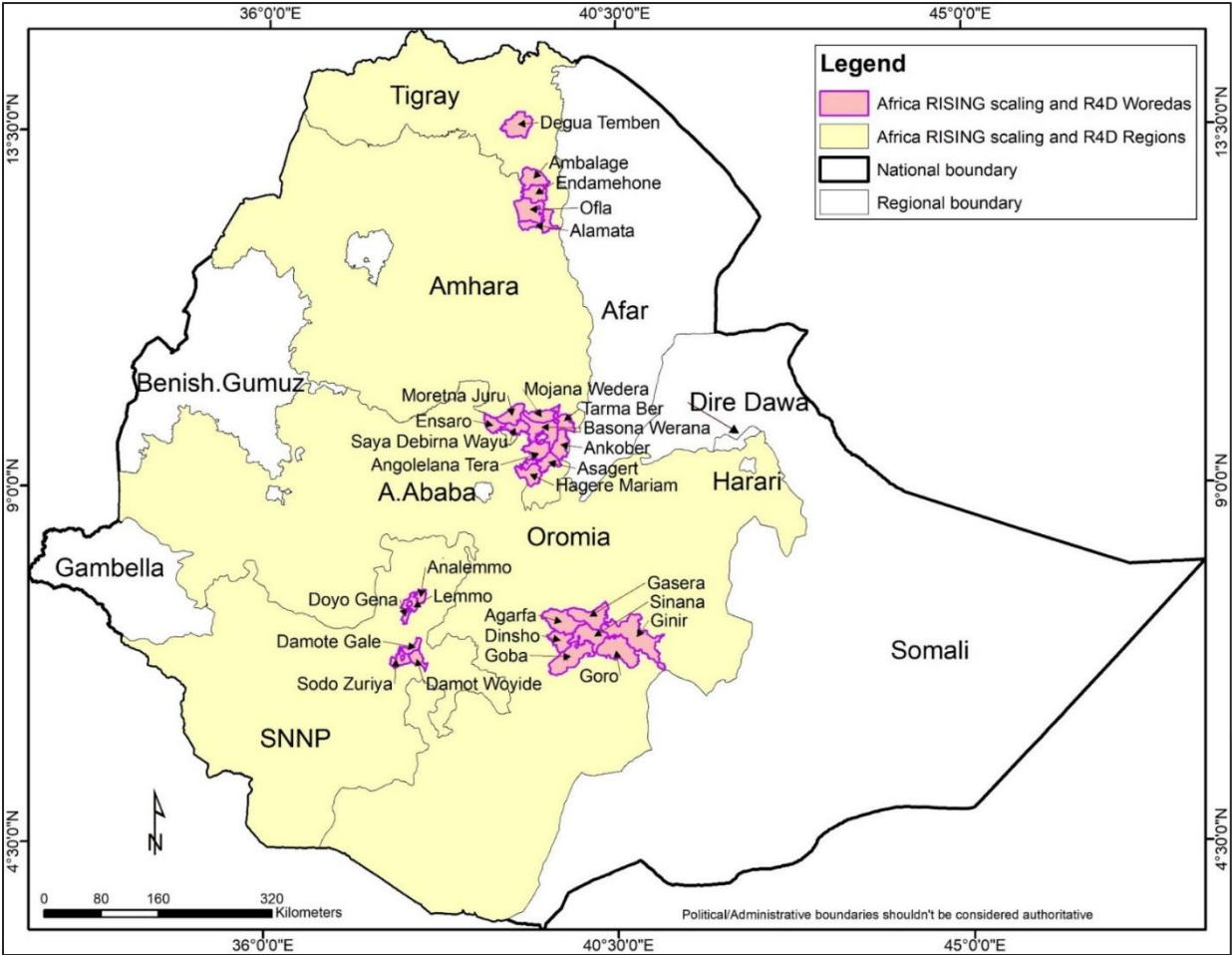
- Africa RISING was a multidisciplinary and integrated research project that focused on the Sustainable Intensification (SI) of mixed farming systems.
- The project was funded by USAID
- Focus areas: Climate smart development, gender integration, improved nutrition, inclusive agricultural sector growth, private sector growth, research and capacity building.
- The project used a variety of approaches to improve smallholder farming systems, including: On-farm research to develop and test new technologies, Innovation platforms, Policy advocacy and Capacity development.
- The project reached over 455,000 beneficiaries with validated technologies in its second phase.
- Over 600 project outputs have been produced since 2012, of which 51 are journal articles.

# The AR project in Ethiopia worked in Amhara, Tigray, Oromia and SNNP regions

Phase I: 2012 to 30 Sept 2016 (4 zones, 4 woredas, 8 kebeles)



In phase II (Oct 2016-2022 ) the AR project in ETH reached to 11 zones and 36 woredas.



# Africa RISING innovations: Examples

## a) Feed and forage innovations

Fodder tree



Forage grass



Herbaceous  
legumes /grass  
mixture



Feed trough



- Introduced and validated different feed and forage technologies to improve livestock productivity.

- Generated biophysical and socioeconomic data under on-farm environment - example

- Biomass yields from AR validated forage crops are making significant contributions to fill feed gaps (oat/ vetch- 12 t DM ha<sup>-1</sup>; fodder beet- > 20 t DM ha<sup>-1</sup>; tree lucerne, 4-7 t DM ha<sup>-1</sup>).
- Supplementation of oat/vetch mixture and fodder beet have increased milk yield from 30–50%.
- Feeding trough and storage shed have reduced feed wastage from 30- 50%.



## b) Improved crop varieties and management practices



### Crop varieties

Introduced and evaluated over 127 improved crop varieties (cereal, pulse, oil, potato and enset varieties) through PVS and crowdsourcing approaches.



### Yield Achieved

Obtained significant yield increase (%) under PVS as compared to the national average crop yield (CSA, 2021): bread and durum wheat (52- 89%), faba bean (90%), malt and food barley (120-132%), field pea and lentil (83-111%), chick pea and linseed (36- 83%) and potato (171%).



## C) High value fruit trees



### Varieties

Introduced and validated 5 avocado and 2 apple (Anna and Princissa) varieties.



### Fruiting

Avocado varieties provide fruits in less than 2 years with variation across varieties and sites.



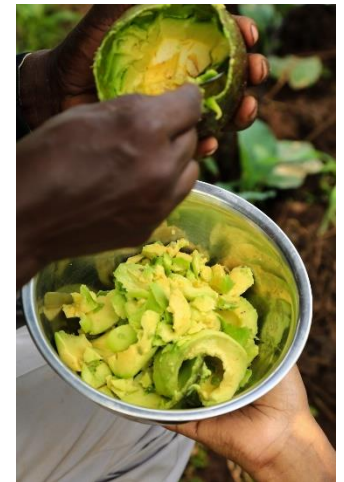
### Yield

Fruit yield per avocado tree ranges from 50 kg for Ettinger to 181 kg for Nabal.



### Quality Test

Quality (test, shelf life and oil content) for avocado varieties is:  
Hass > Ettinger > Fuerte > Reed > Nabal.



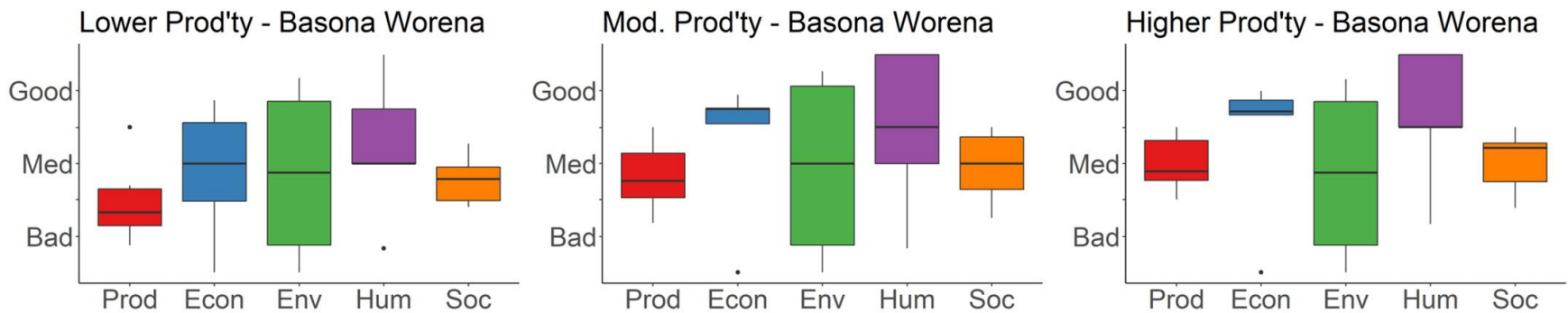
# Potential for scaling Africa RISING Innovations

- Africa RISING scaling reach : 455,000 beneficiaries
- Scaling approaches
- Scaling partnership development
  - Mapping and recruiting development partners
  - Training development partners on AR validated technologies
  - Embedding AR validated technologies in partners operations
- Awareness and demand creation
  - Training of public and NGO extension staff
  - Reaching farmers through community radio
  - Dissemination of technical notes and extension manuals
- Strengthening technology multiplication and delivery
  - Scanning and sourcing planting materials from national pool
  - Multiplying seeds with seed producing farmer cooperatives
  - Financing through project seed fund, revolving schemes, farmers own funds



# Farming System Description and Analysis of Sustainable Intensification

Woreda	Crop land (ha)	Crop Diversity (count)	Livestock (TLU)	Main Crops	Main Livestock	Liters of Milk	Income: Crops (USD/yr)	Income: Livestock( USD/yr)	Income: Off-Farm (USD/yr)
Basona Worena	1.6	5.5	4.1	Bread wheat, fava bean, barley, teff, malt barley	Cattle, sheep, donkeys, chicken	1,400	900	1,200	200
Lemo	1.5	8.4	4.0	Bread wheat, teff, fava bean, maize, enset, barley, chat	Cattle, donkeys, chicken, goats	650	500	330	70
Sinana	3.6	5.5	6.4	Bread wheat, barley, field pea, maize	Cattle, horses, sheep, chicken	800	10,000	730	550

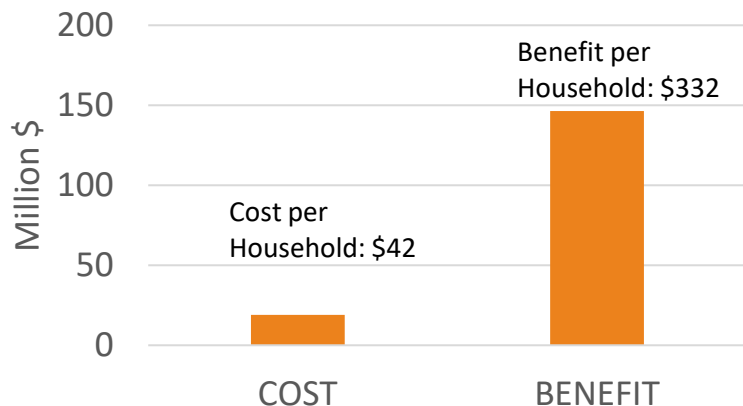


Analysis of the net effects of intensification via AfricaRISING technologies showed improvements in agricultural production, household economy, human welfare, and social indicators. This analysis adapted the SIAF framework.

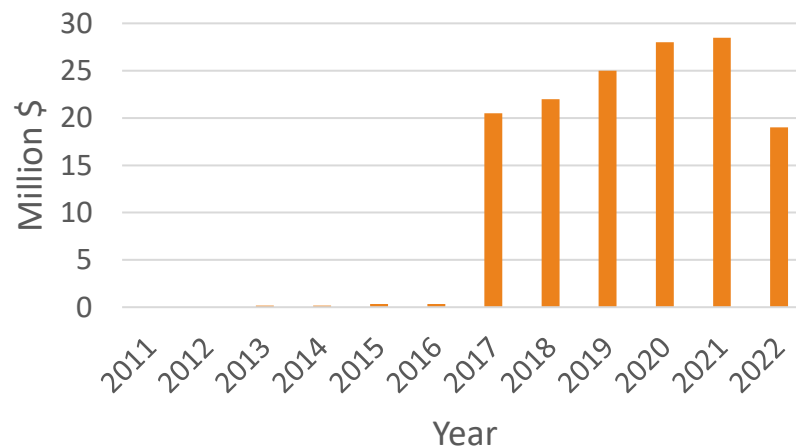
# Financial Return on Investment – cost benefit ratio of 7.8

Method: The impact and adoption of promoted technologies was established using household surveys in 2018 and 2022, in reference to program records, and productivity impacts cross-checked with experimental data where available. The value of production gains was converted to USD\$ in purchasing power parity (PPP) taking 2021 as the reference year. Mean increases in farm income were then extrapolated to the project and scaling kebeles according to adoption rates. No indirect or future benefits are included.

### Total Project Cost vs Direct Benefit to Farmers



### Benefit received by farmers per year



A 10 to 15% increase in annual household income, over the 455,000 households engaged.

Total cost \$19M, direct benefit \$146M

Some practices were more financially valuable (e.g. wheat), some more synergistic (e.g. feed troughs), or environmental (e.g. watershed restoration).

The scaling phase (post 2016) achieved the big returns in terms of impact. This underlines the importance of continuing to scale these validated technologies.

# Potential for scaling Africa RISING Innovations

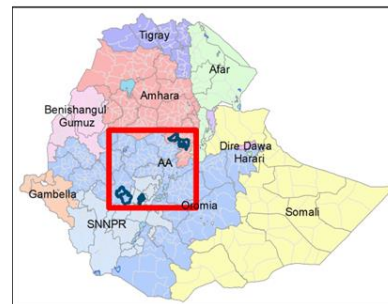
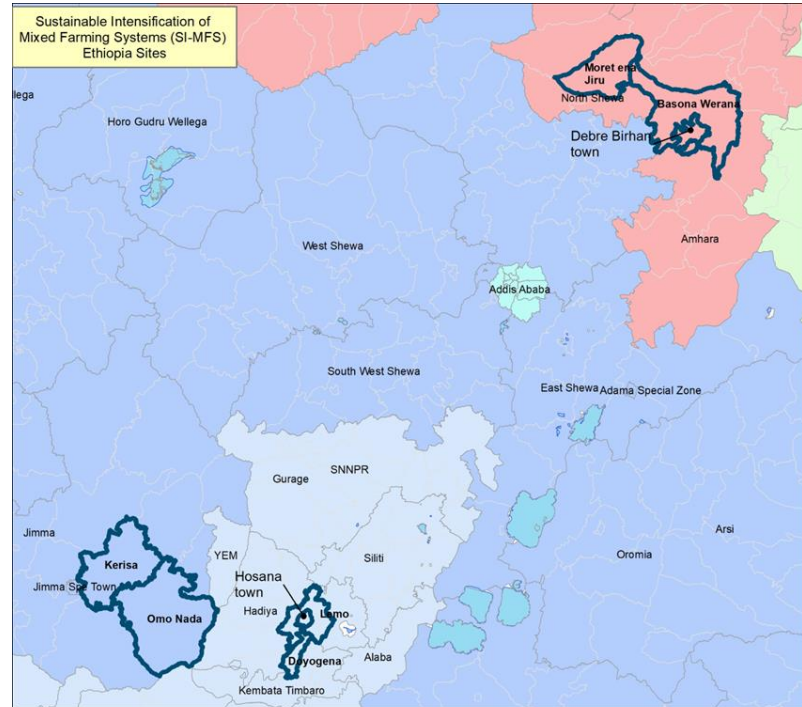
A new scaling ambition: ILRI led CGIAR partners together with national partners reach 6 million farmers in Ethiopia with validated technologies in five years time

## Scaling approaches

- Identify scalable innovations through innovation profiling
- Establish multi-location demonstrations and technology parks with scalable innovations
- Develop context specific innovation packages for different agro-ecologies
- Design and execute context specific scaling strategies
  - Leveraging existing government and donor initiatives
  - Taping AR experiences in community radio and leveraging digital last mile delivery methods
  - Hooking value chain development activities on competitive grants for business development
  - Capitalizing on AR experience on short-term and long capacity development

# Mixed farming systems (MFS) Initiative

- Ethiopia is one of the six countries where MFS is operating.
- ILRI, ICARDA, ABC Bioversity-CIAT and CIMMYT jointly manage the initiative in Ethiopia.
- The initiative integrates innovations and addresses core farming systems issues.
- MFS in Ethiopia has 3 sites:
  - Omo Nada and Kersa- Jimma- Oromia region: Basona and Morete and Jiru- North Shewa, Amhara region: and Doyogena and Lemo- SNNP region.





# Project partners in Ethiopia







# Thank You

*Africa Research in Sustainable Intensification for the Next Generation*

[africa-rising.net](http://africa-rising.net)

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