



**FEED THE FUTURE**

The U.S. Government's Global Hunger and Food Security Initiative

# Feed the Future Program for Sustainable Intensification

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USAID

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## Feed the Future Food Security Innovation Center:

Leads USAID's implementation of FTF Research Strategy in seven priority program areas

- Sustainable Intensification
- Climate Resilient Cereals
- Legume Productivity
- Advanced Approaches to Combat Pests and Disease
- Safe and Nutritious Foods
- Policy and Markets Research and Support
- Human and Institutional Capacity Development



**<http://feedthefuture.gov/research>**

- Integrate research outputs, policy and nutrition in production systems
- Focus multiple interventions within targeted geographic areas
- Diversify major production systems with improved crops and animals
- Evaluate and disseminate improved soil and water management practices



**Purpose:** Provide pathways out of hunger and poverty for small holder families, particularly for women and children, through sustainably intensified farming systems.

	<b>Lead Institution</b>
Cereal Systems Initiative for South Asia	CIMMYT
Africa RISING	ILRI/IITA/IFPRI
FTF Innovation Lab for Small-scale Irrigation	Texas A & M
Integrated Pest Management FTF Innovation Lab	Virginia Tech
IPM Innovation Lab AFSI Associate Award	Virginia Tech
SANREM FTF Innovation Lab	Virginia Tech
Water and Livelihoods Initiative	ICARDA
CGIAR – Aquatic Agricultural Systems	WorldFish
FTF Innovation Lab for Sustainable Intensification	???



## Inputs

### INDIRECT:

- Financial capital
- Knowledge
- Infrastructure
- Technology
- Markets

### DIRECT:

- Labour
- Water
- Inorganic chemicals and/or organic matter
- Biodiversity

## SUSTAINABILITY MEASURES

- Same or less land and water
- Efficient, prudent use of inputs
- Minimised GHG emissions
- Increased natural capital
- Strengthened resilience
- Reduced environmental impact

## INTENSIFICATION PROCESS

- Ecological
- Genetic
- Socio-economic

FARMER & COMMUNITY



## Outputs

Production Income Nutrition



## Genetic Intensification

- Improved varieties and breeds
- Drought & heat tolerance
- Pest & disease resistance/tolerance
- Nutrient use efficiency
- Photosynthesis, C assimilation, perenniality



## Socio-economic intensification

- Enterprise diversification
- Market linkages
- Farmer organizations & field schools
- Innovation platforms
- Extension & education



## Ecological intensification

- Crops, livestock, shrubs & trees
- Nutrient cycling
- Fertilizer management
- Intercropping & rotations
- Whole-farm—cropped & non-cropped areas
- Above- and below-ground



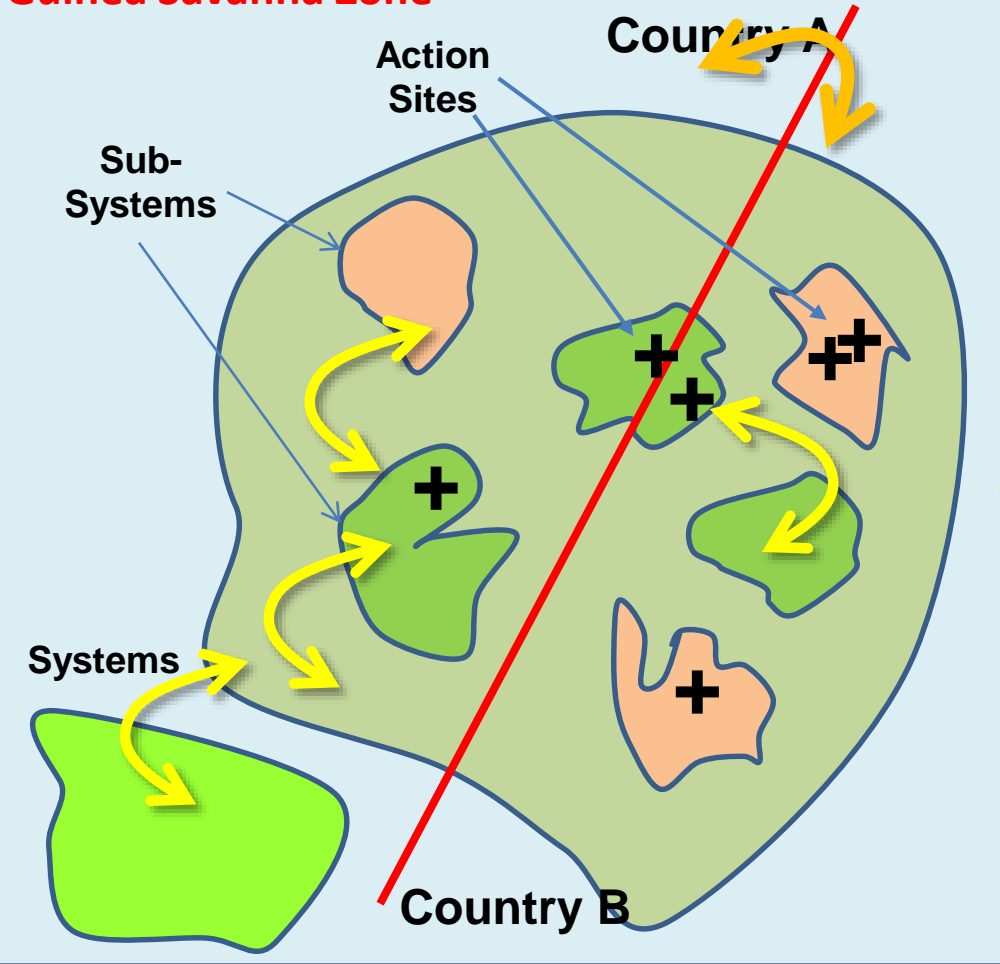


## SI Targeting

### Eastern & Southern Africa Maize-based Systems

#### Ethiopian Highlands

#### Guinea Savanna Zone



### Fostering Spillover by Design

1. Implementation sites to local sub-systems
2. Implementation to non-implementation sub-systems
3. Sub-systems to (sub-) systems
4. Systems to systems
5. Sites to sites
6. Country to country barriers to spillover



- Data management & accessibility
- Cross-program integration & communication
- Expanded collaboration between CGIAR, National Ag Research, and U.S. university partners
- Greater linkages to development projects and partners
- Private sector engagement
- Increased emphasis on socio-economic components—  
decision making, behavior change, participatory research
- Linking field- and farm-scales to community and  
landscape scale impacts



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