

# Humidtropics

New opportunities for improved  
livelihoods in a sustainable  
environment



# The humid tropics

A scenic view of a humid tropical landscape. The foreground shows a lush green field with a winding dirt path. In the middle ground, there are terraced hills covered in dense vegetation, including tall grasses and various trees. Several small houses with red-tiled roofs are nestled among the trees on the hillsides. The background features more rolling hills and a valley, all under a hazy, overcast sky.

**3 billion hectares of land**

**2.9 billion people**

**High proportion of poor smallholder farmers**

**High potential**



**High risk**





ecological / human potential  
**GAP**  
productivity / livelihood standards



ecological / human potential

↑ ↑ ↑ ↑ ↑

productivity / livelihood standards

# Unlocking the potential

## - Humidtropics as key

### Integrated systems approach...

People

Partnerships

Production systems

Innovation

Policies

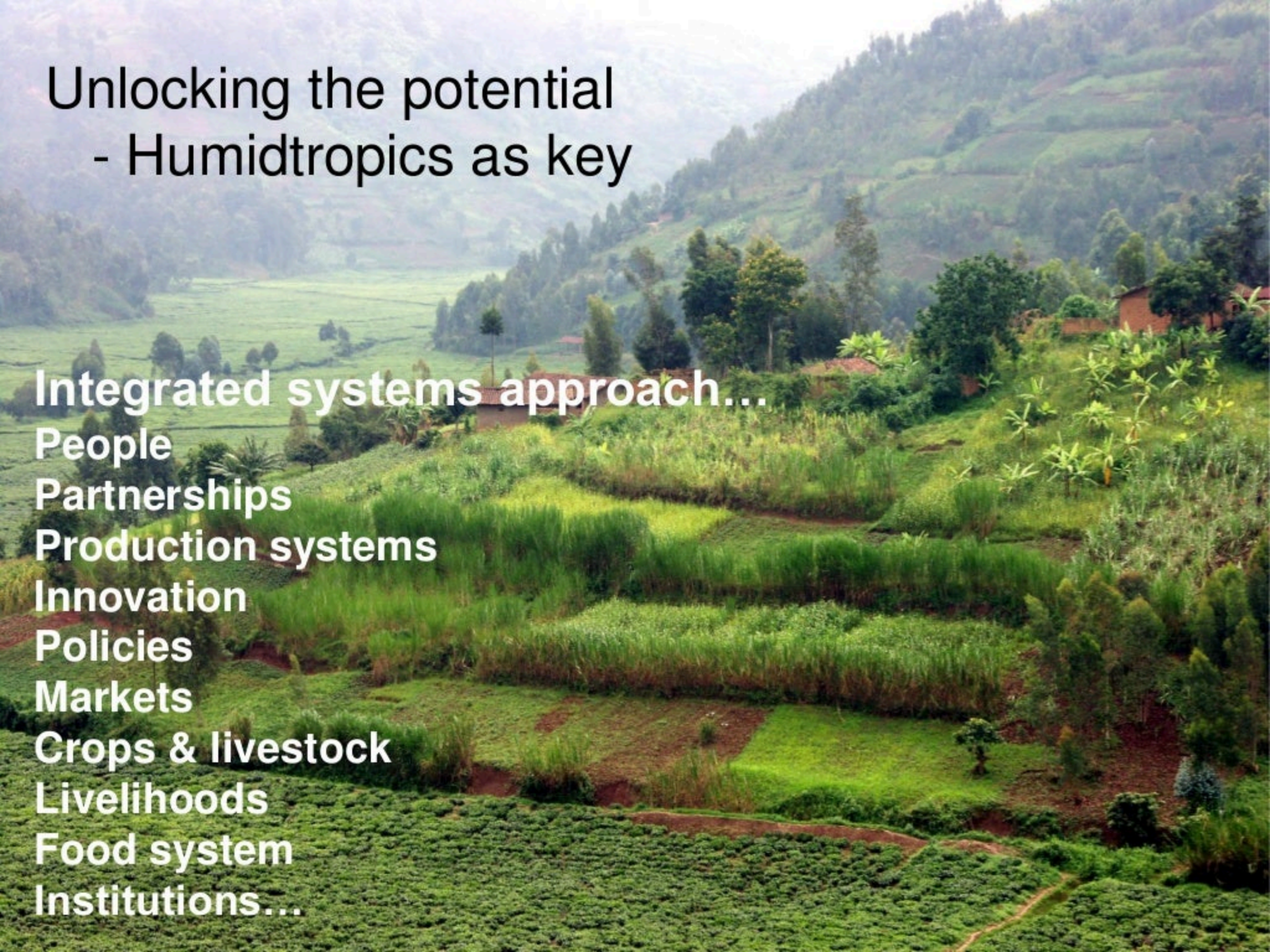
Markets

Crops & livestock

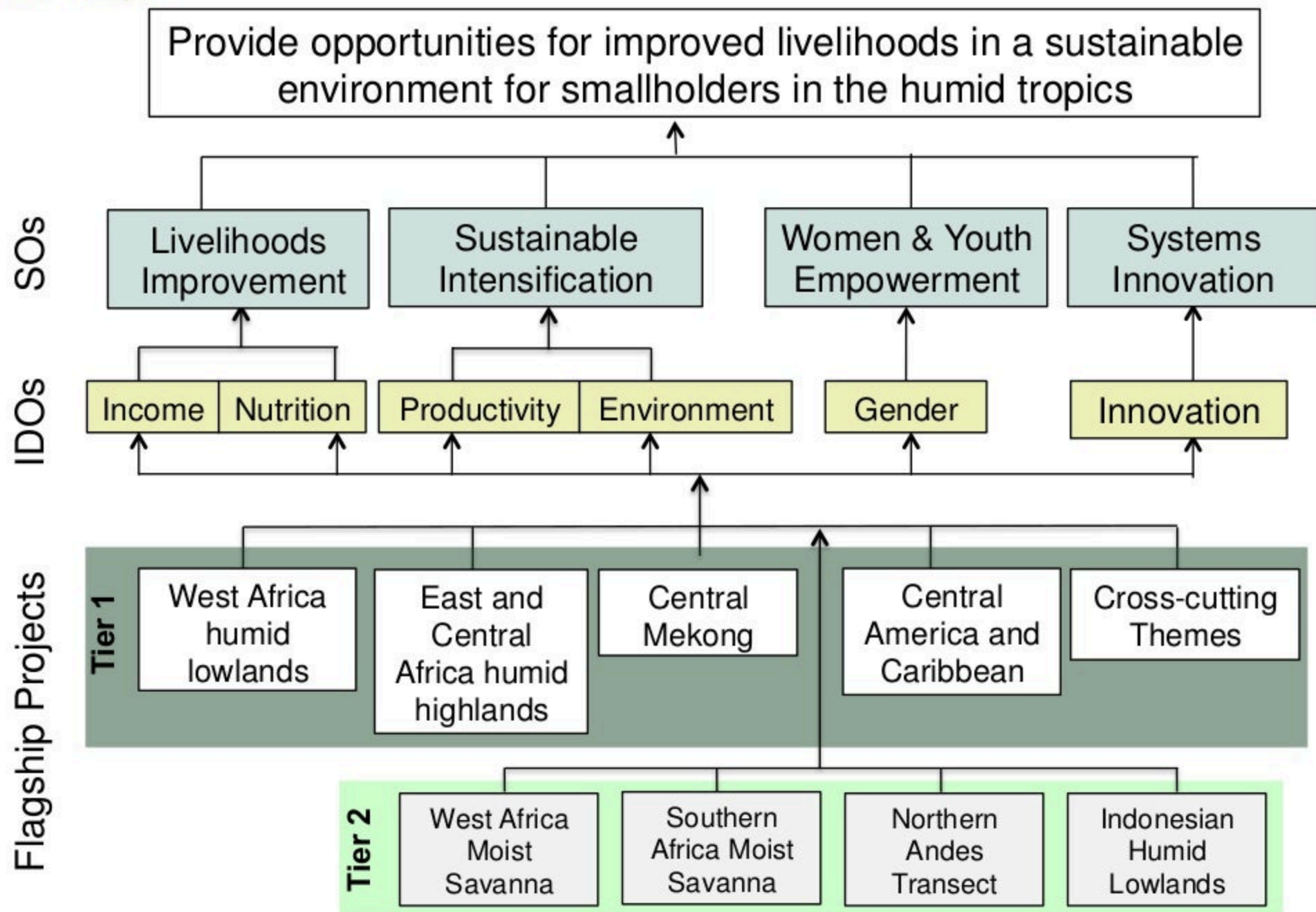
Livelihoods

Food system

Institutions...



# Programmatic Framework

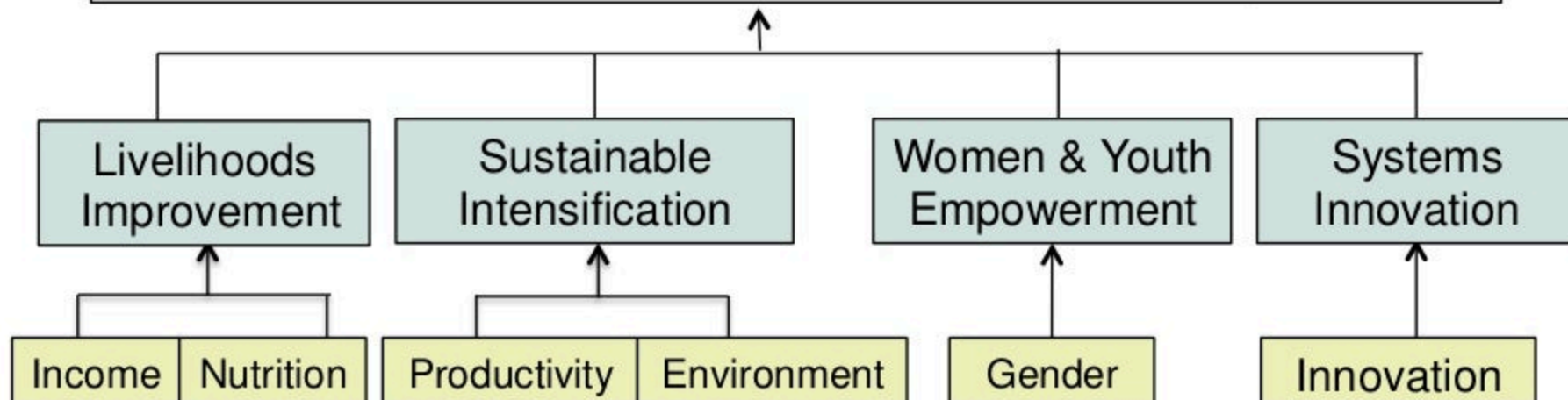


# Programmatic Framework

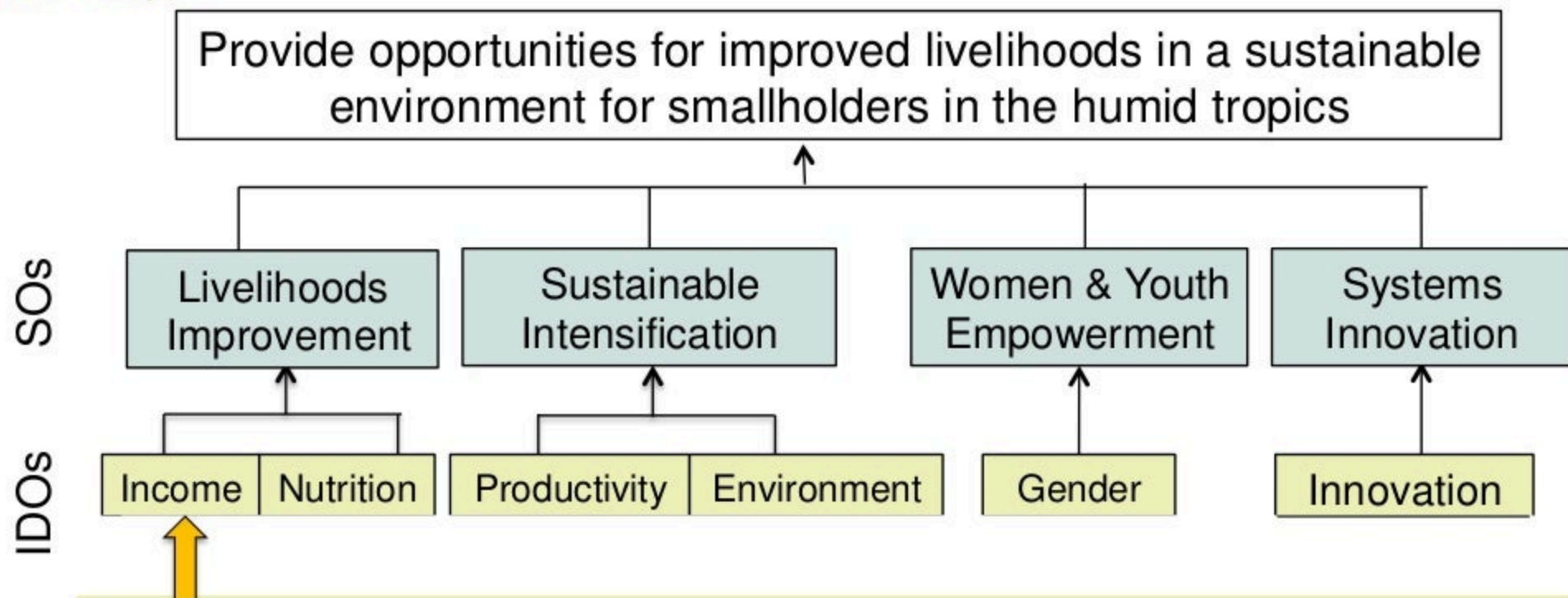
Provide opportunities for improved livelihoods in a sustainable environment for smallholders in the humid tropics

SOs

IDOs



# Programmatic Framework



IDO: Income → SLO 1, 2, 3

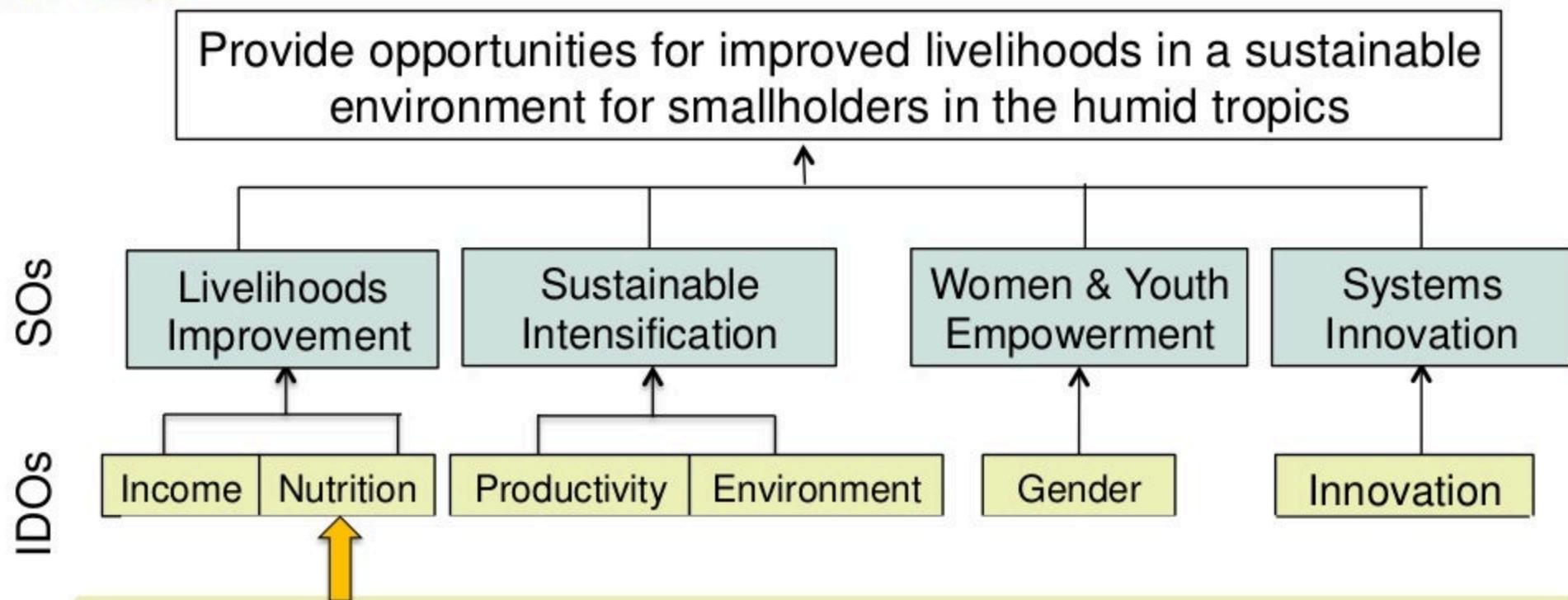
Number of poor households lifted above the poverty line

3 years – 400 000

6 years – 1.3 million

9 years – 3 million

# Programmatic Framework

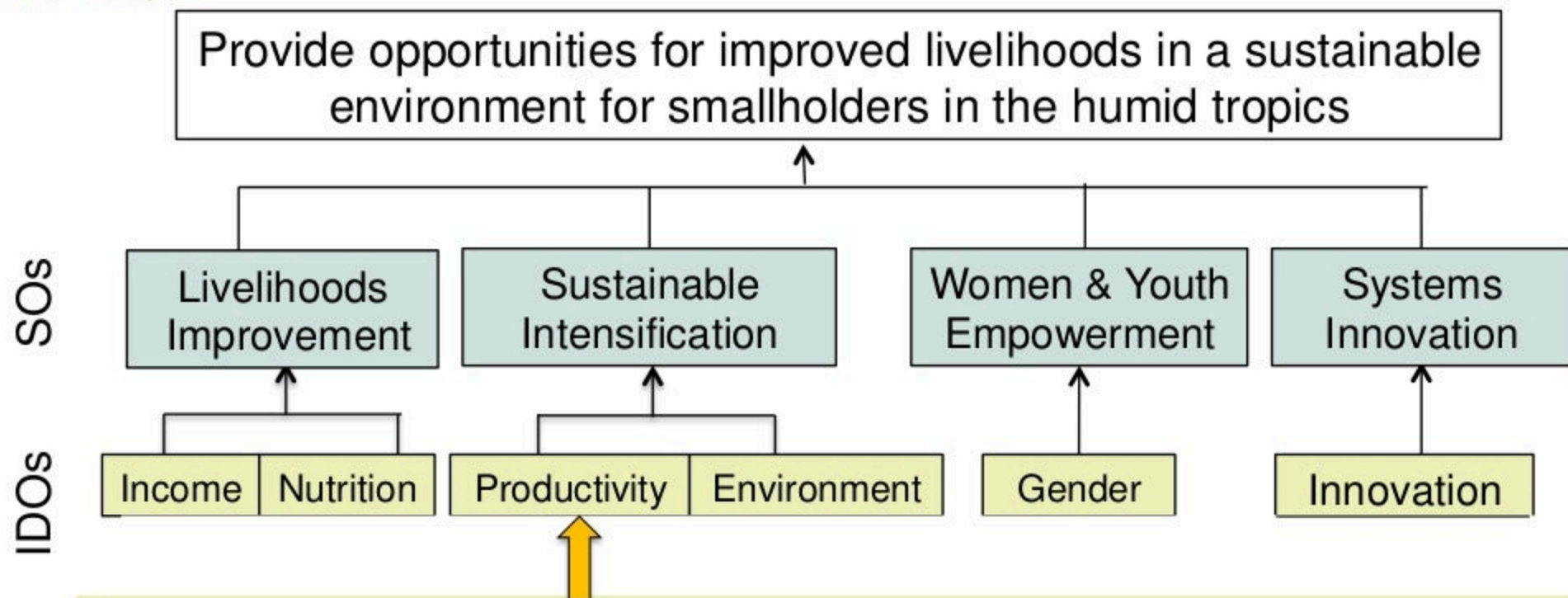


IDO: Nutrition → SLO 2, 3

Number of household with increased dietary diversity

3 years – 22 000  
6 years – 220 000  
9 years – 2 million

# Programmatic Framework



IDO: Productivity → SLO 1, 2

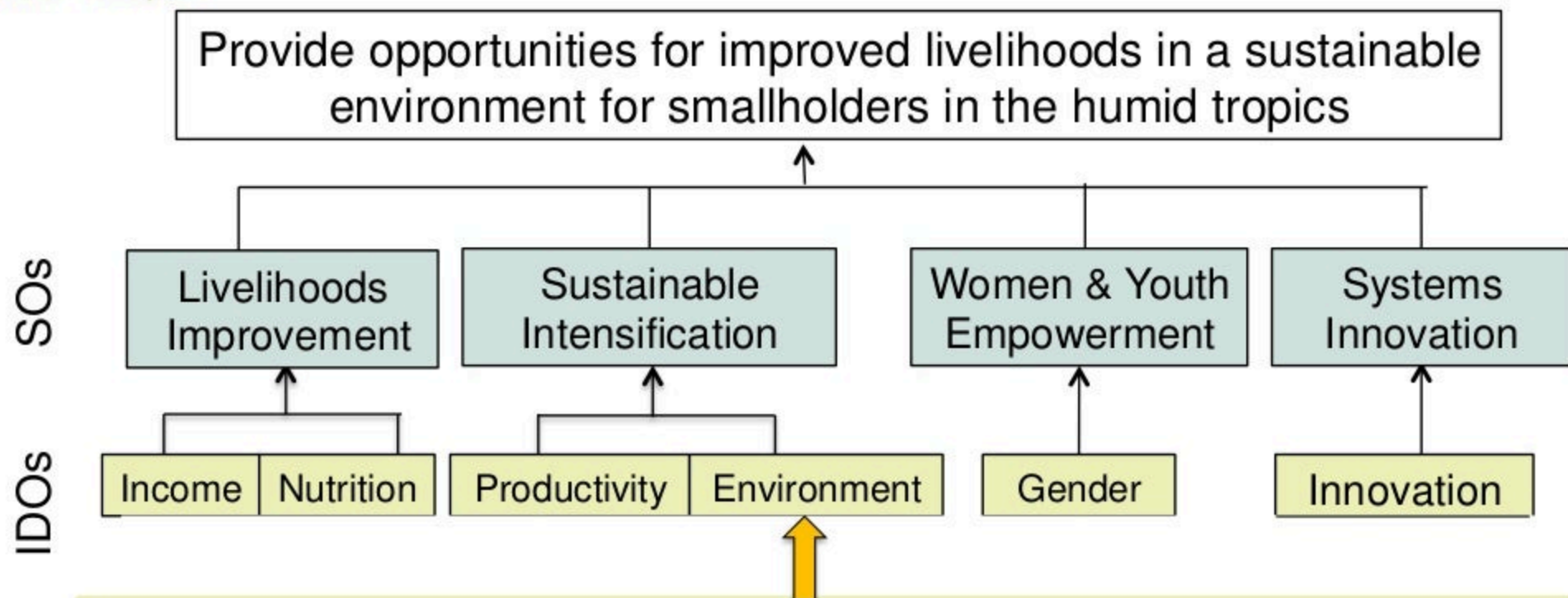
60% increased total farm productivity in integrated systems (number of households)

3 years – 400 000

6 years – 1.3 million

9 years – 3 million

# Programmatic Framework



IDO: Environment → SLO 4

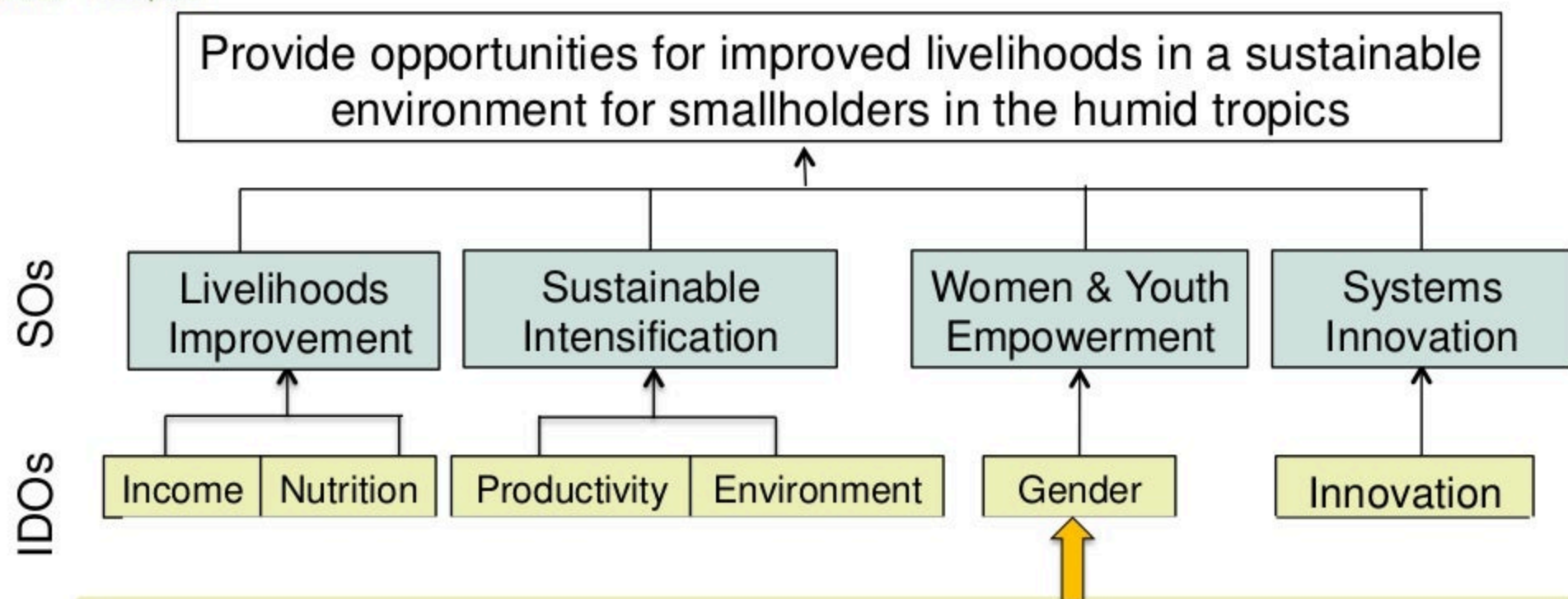
Acreage (ha) restored to sustainable management

3 years – 200 000

6 years – 900 000

9 years – 3.5 million

# Programmatic Framework



**IDO: Gender equity → SLO 1, 2, 3, 4 (9 years)**

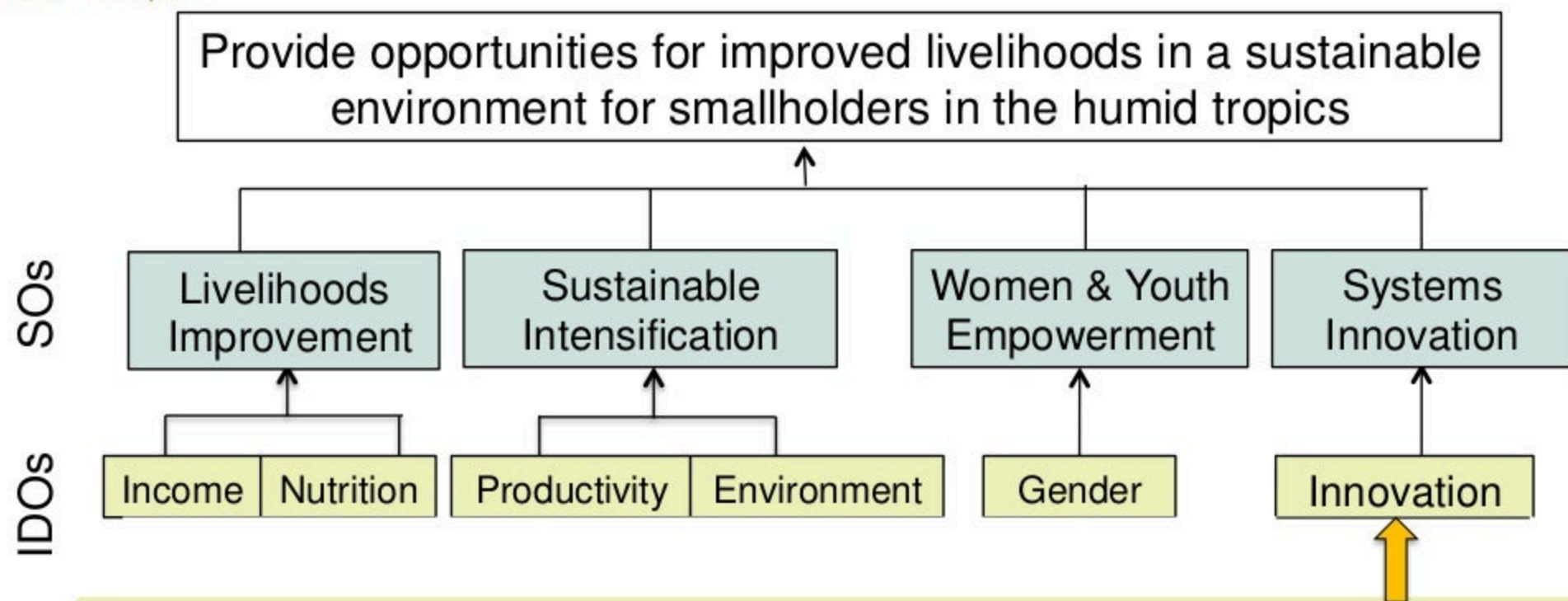
Number of women and youth in target households that perceive they have better control over assets, input and benefits

3 years – 140 000

6 years – 450 000

9 years – 1 million

# Programmatic Framework

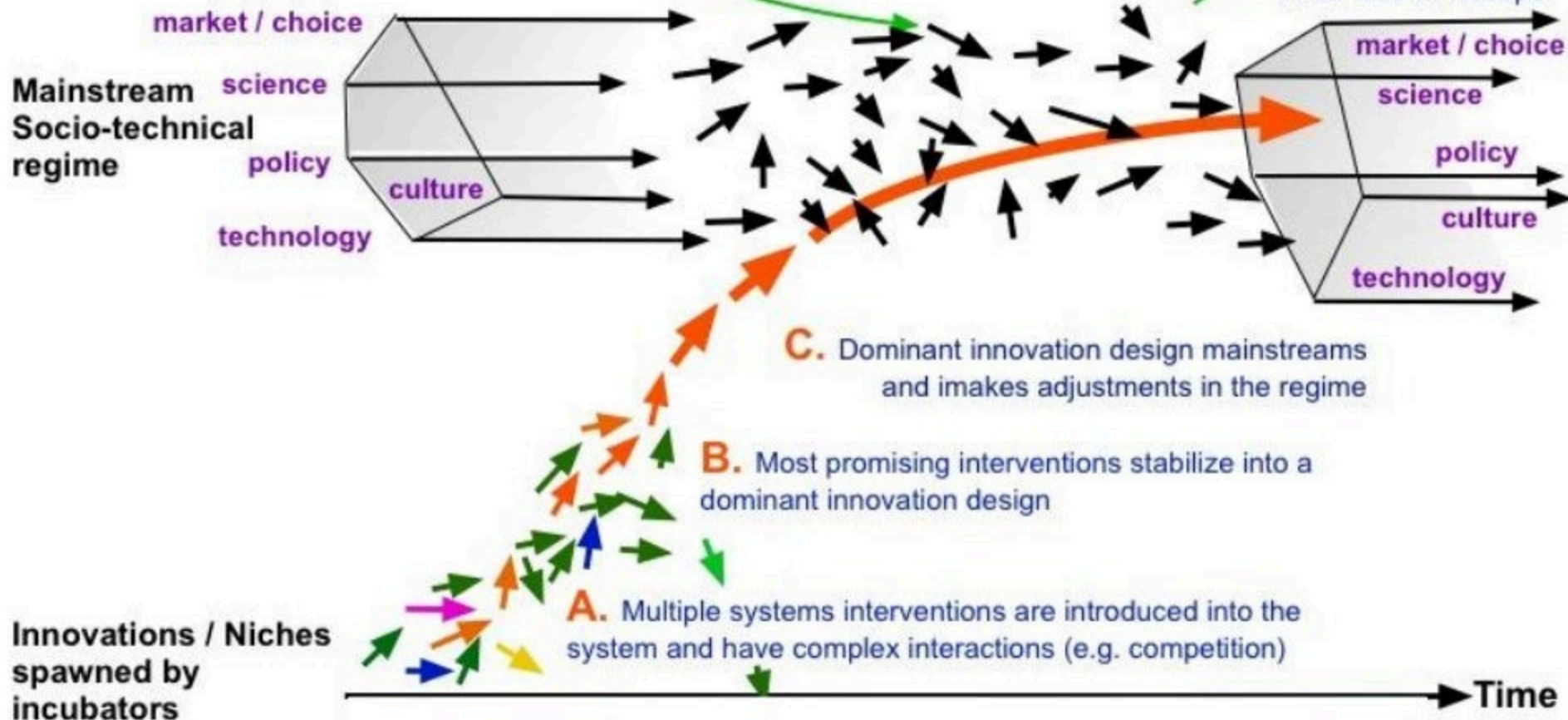


IDO: Systems innovation → SLO 1, 2, 3, 4 (9 years)

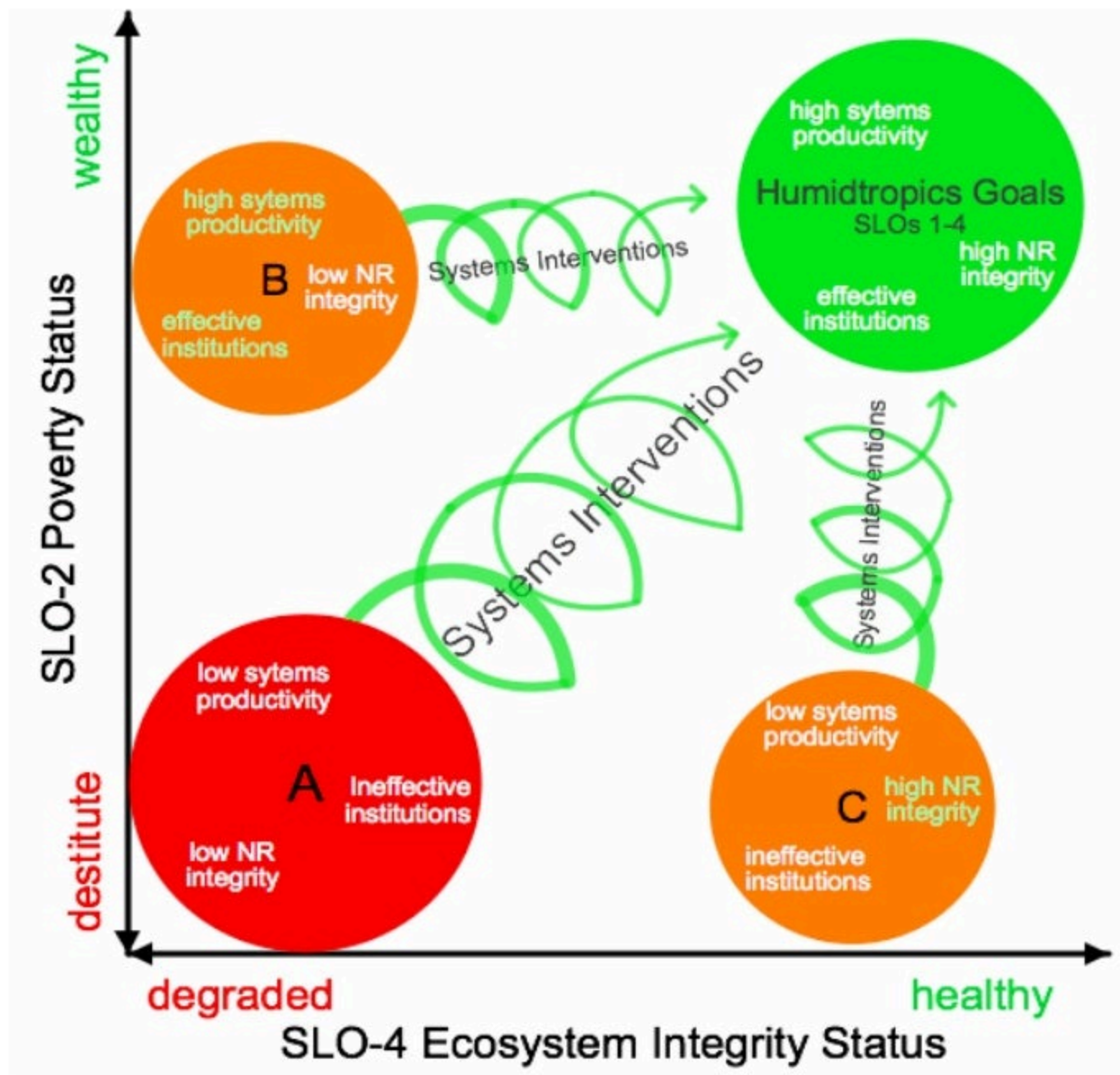
- Multiple socio-technical experiments ongoing in X number of platforms
- Coalitions for change growing and extending into other spheres of action
- Shifting discourses in policy networks
- Constraining conditions for technology uptake lifted
- New methods, processes and strategies tested, developed and institutionalized in innovation systems
- Innovation networks and activities continuing autonomously

# Systems Innovations

Landscape Developments



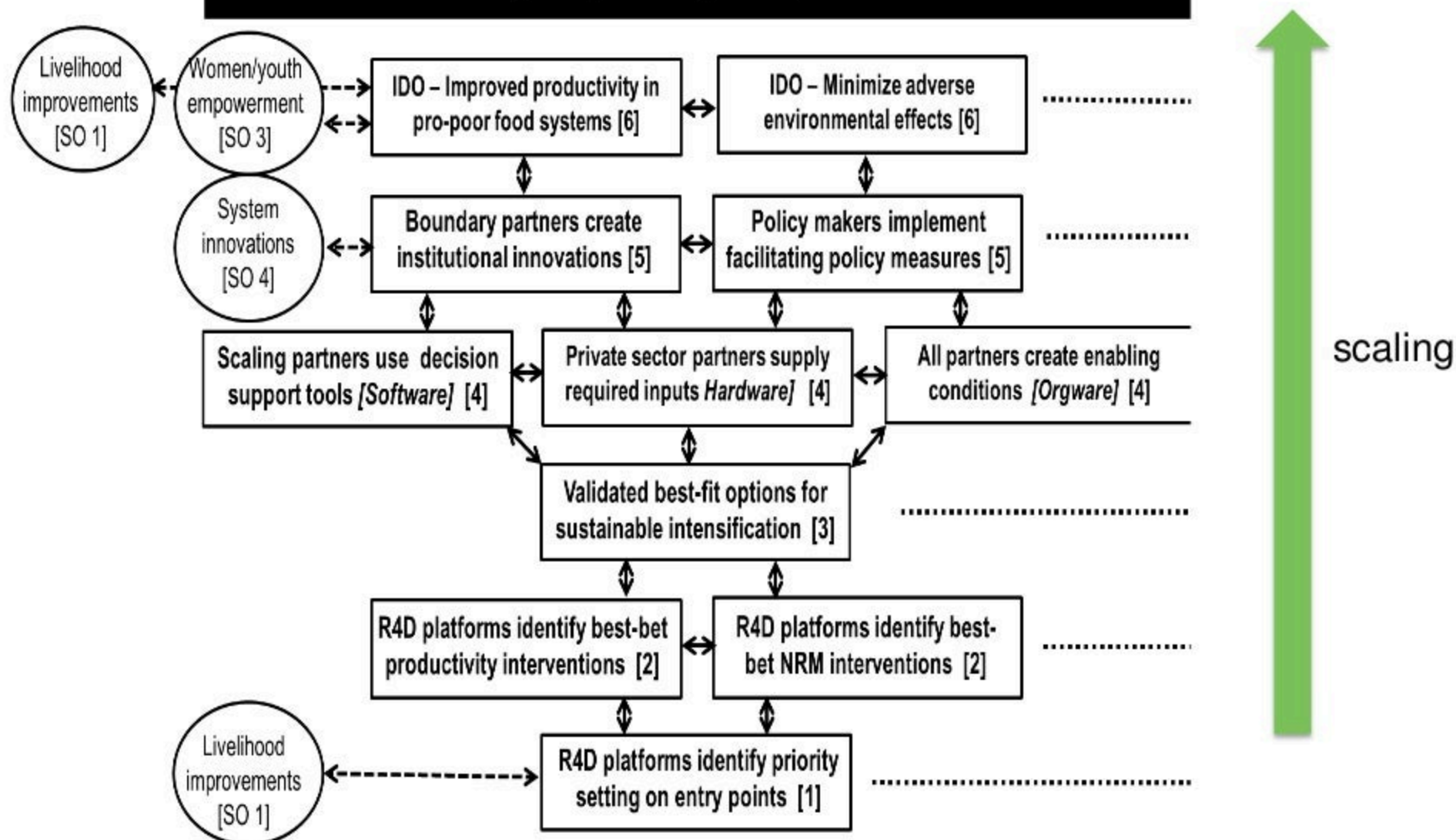
# System innovation trajectories



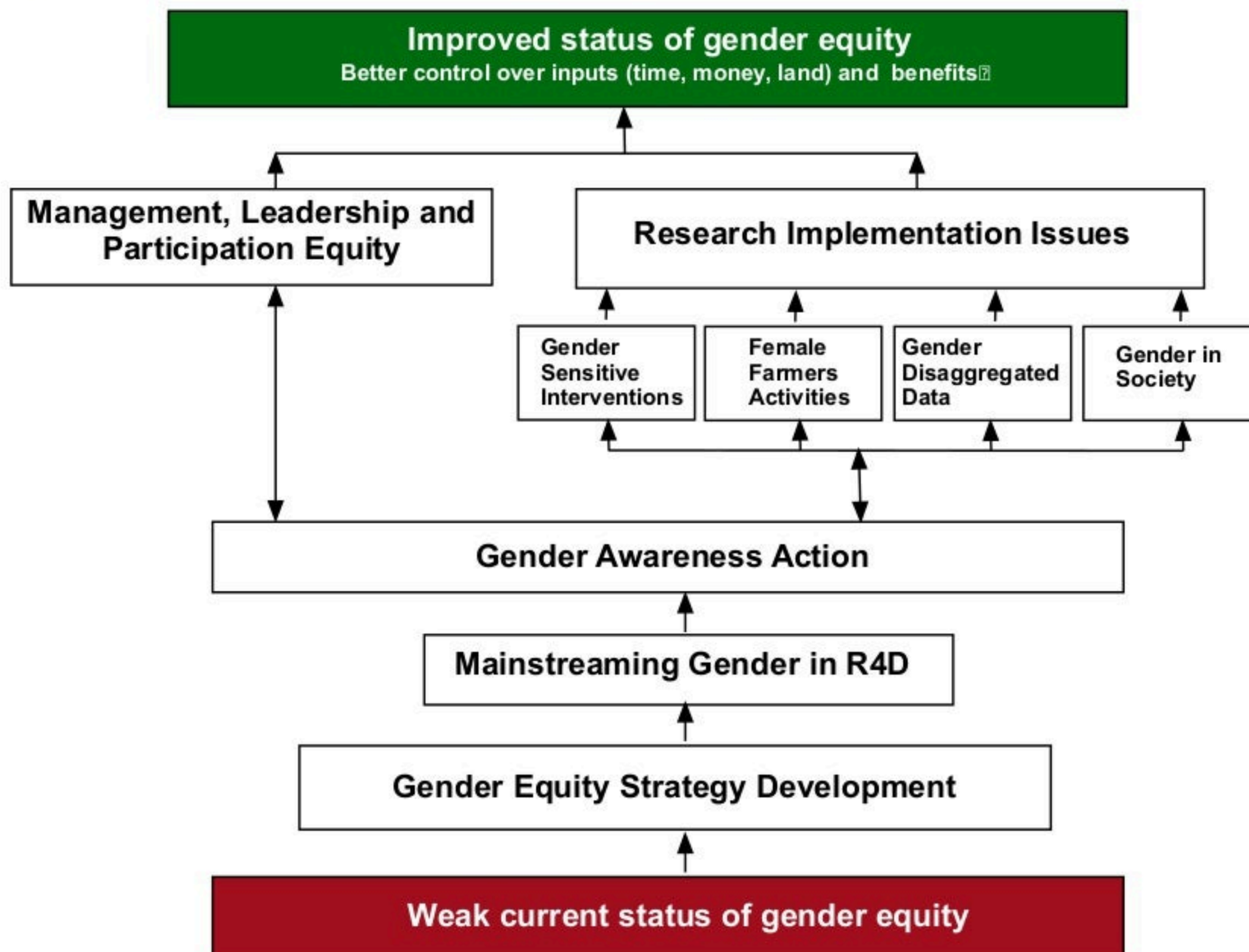
# Impact Pathway

## IDO "Productivity" and "Environment"

### Impact pathway components

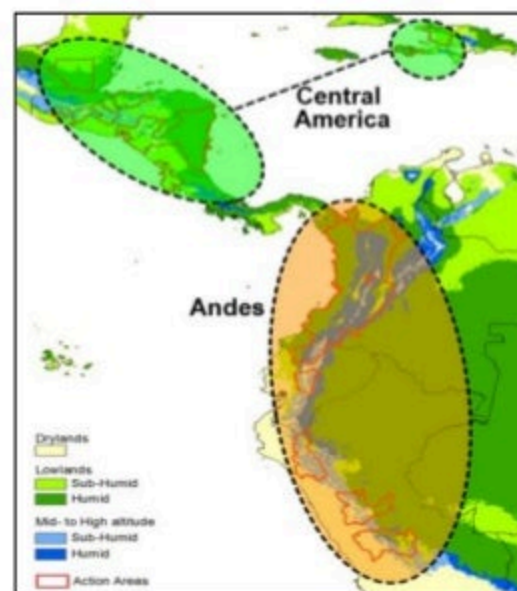
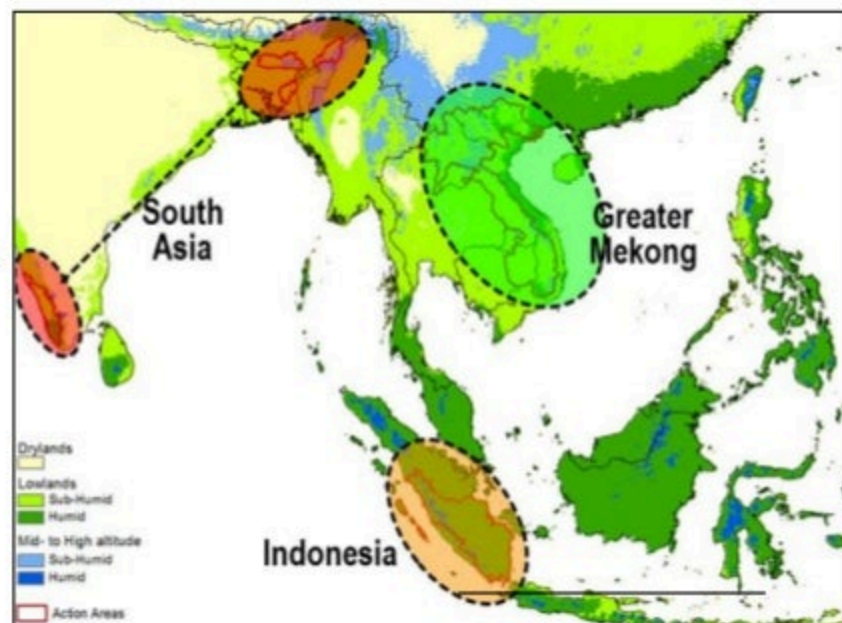
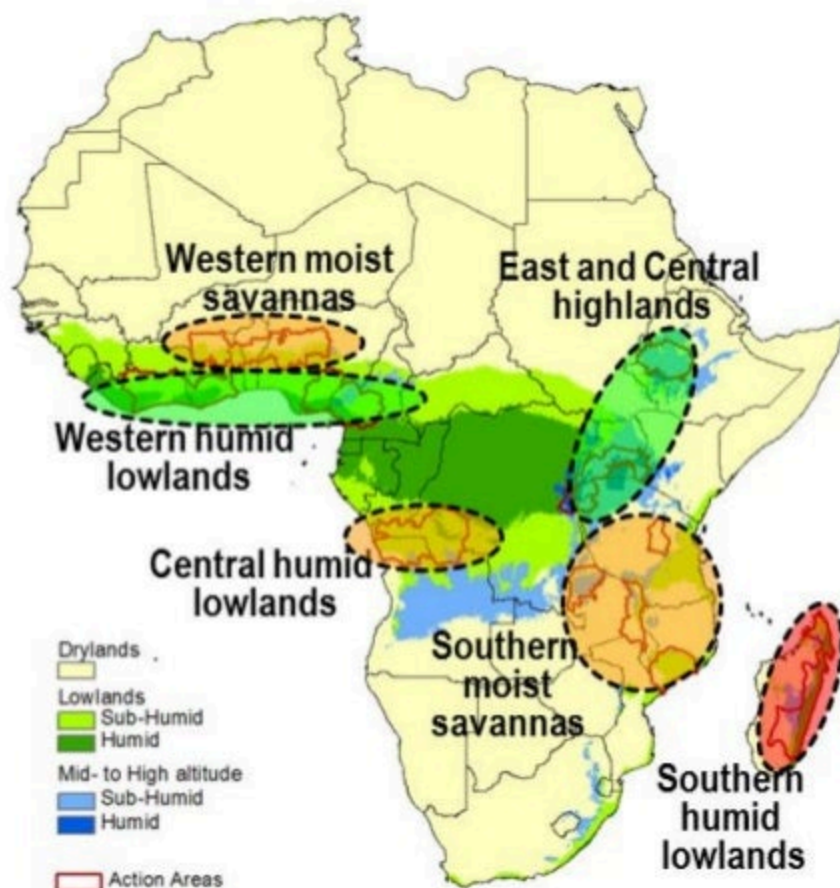


# Gender Impact Pathway



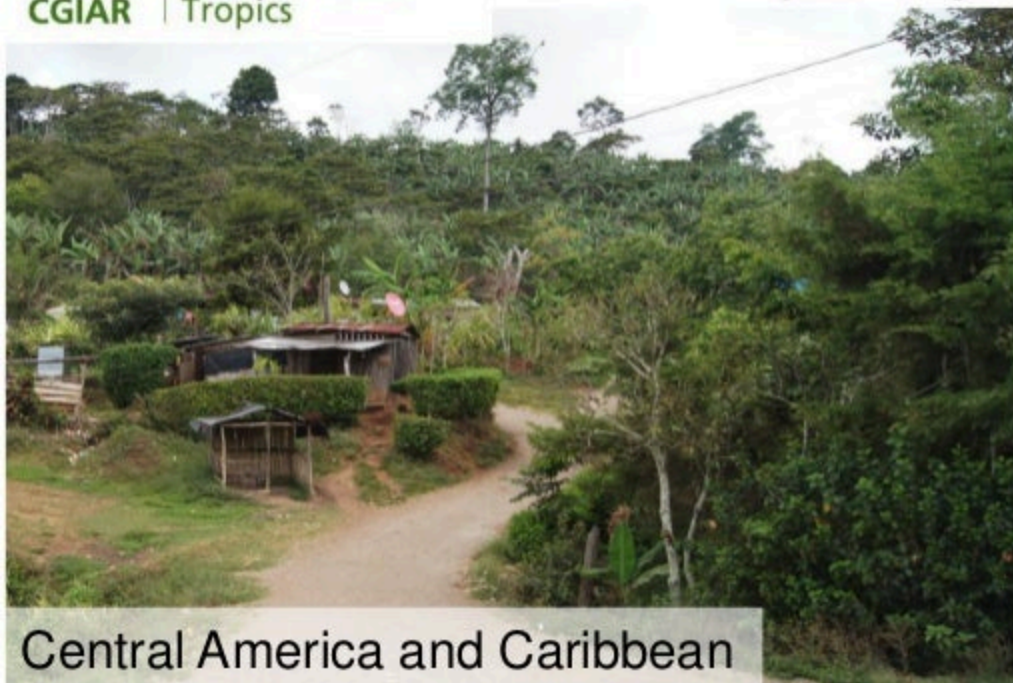
# Action Areas

- Representative and capture diversity
- Urgent need for large-scale impacts
- Advance earlier investments/projects
  - **CIALCA, SSA-CP, Africa Rising, STCP...**
- Build on existing and potential partnerships



1: 2012  
 2: 2017  
 3: 2020

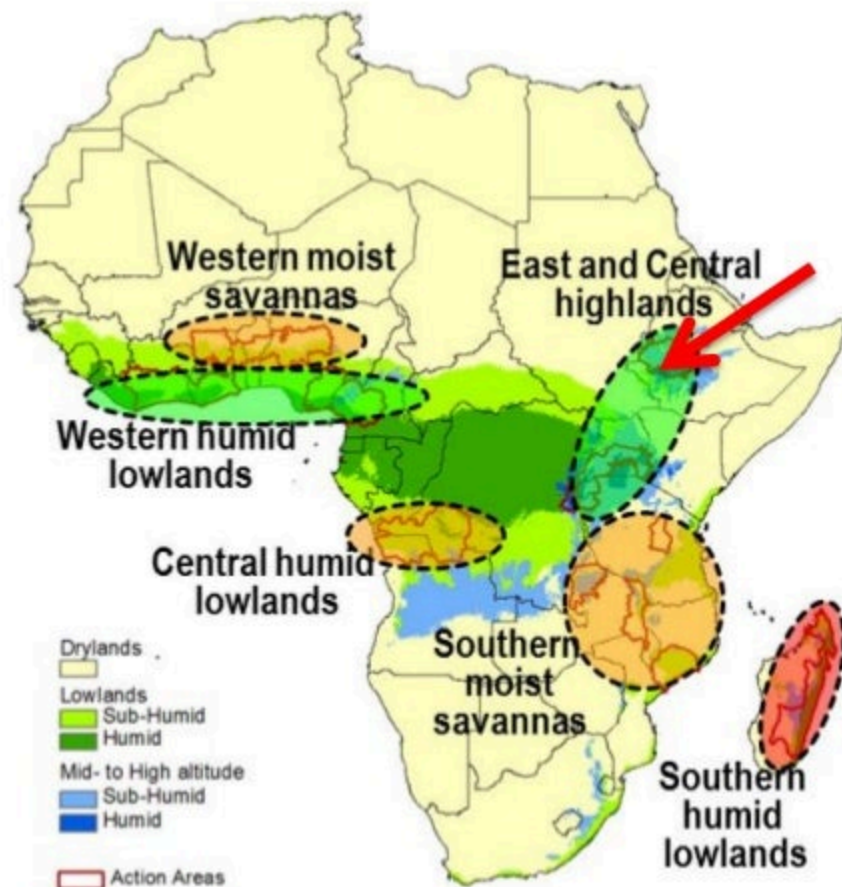
# Flagship Projects



# A Flagship Project Example

## East and Central African Highlands

- 78 million people, mainly smallholder farmers
- 29 million hectares
- Population average 263 persons/km<sup>2</sup>
- Potential in terms of water, soils, and human resources
- High poverty levels: 36% earning less than US \$1.25 / day
- Food insecurity
- High levels of child malnutrition



# Agricultural components

**Diversity – crops, livestock, NRM status, etc**

Food security and cash crops



**Banana**



**Beans**



**Cassava**



**Maize**



**Coffee**

Natural resource status



**Rwanda**



**East-DR Congo**

Livestock



# Socio-technical regime

Diversity – services, policy, markets, etc

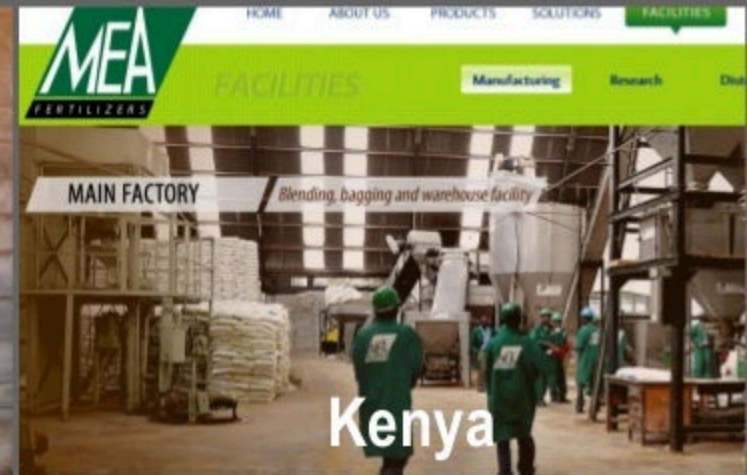
## Market functions



## Service delivery



DR Congo



Kenya

## Policy environment



Prov. Min. of Agric.,  
Sud-Kivu, DR Congo



Website of MoA Rwanda  
Coffee-banana system

# Entry points for system improvement



Action Area meeting, Bukavu, May 2013

# Entry points for system improvement

## Bukavu Action Site

- Integrated management of soil and water
- Diversification of crops for improved nutrition
- Multi-purpose agroforestry
- Crop-livestock integration

## Kenya Action Site

- Striga elimination
- Cassava intensification and diversification
- Legume integration
- Animal enterprises

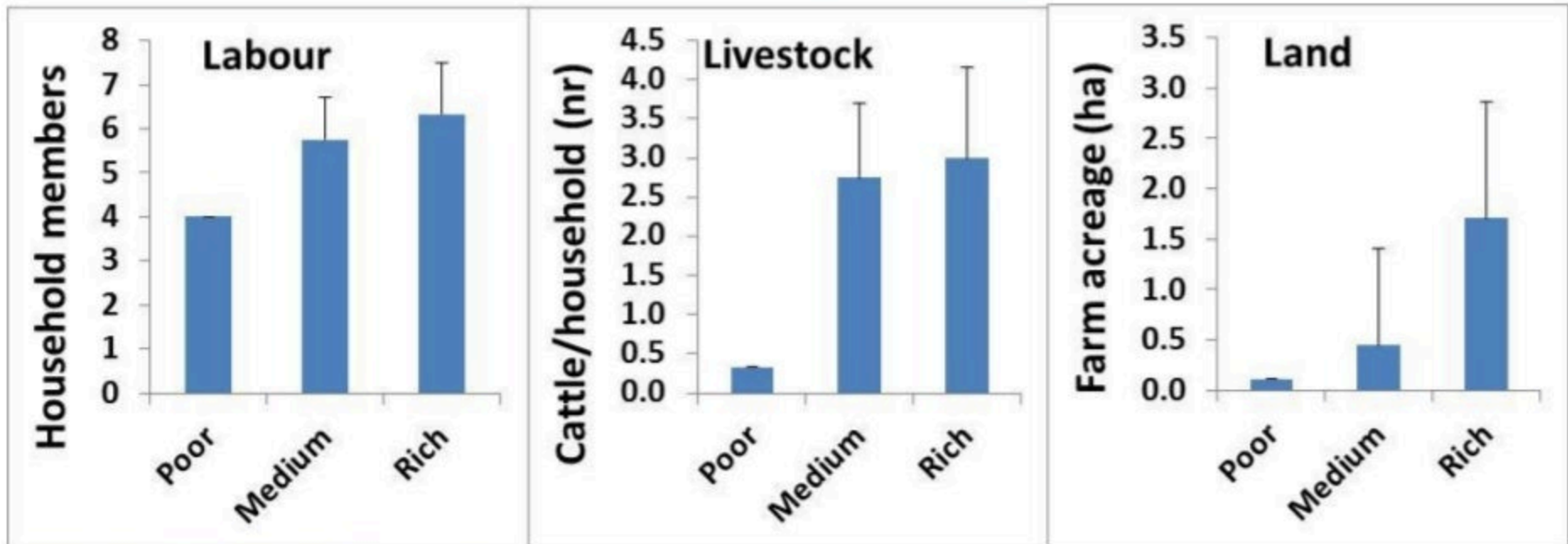


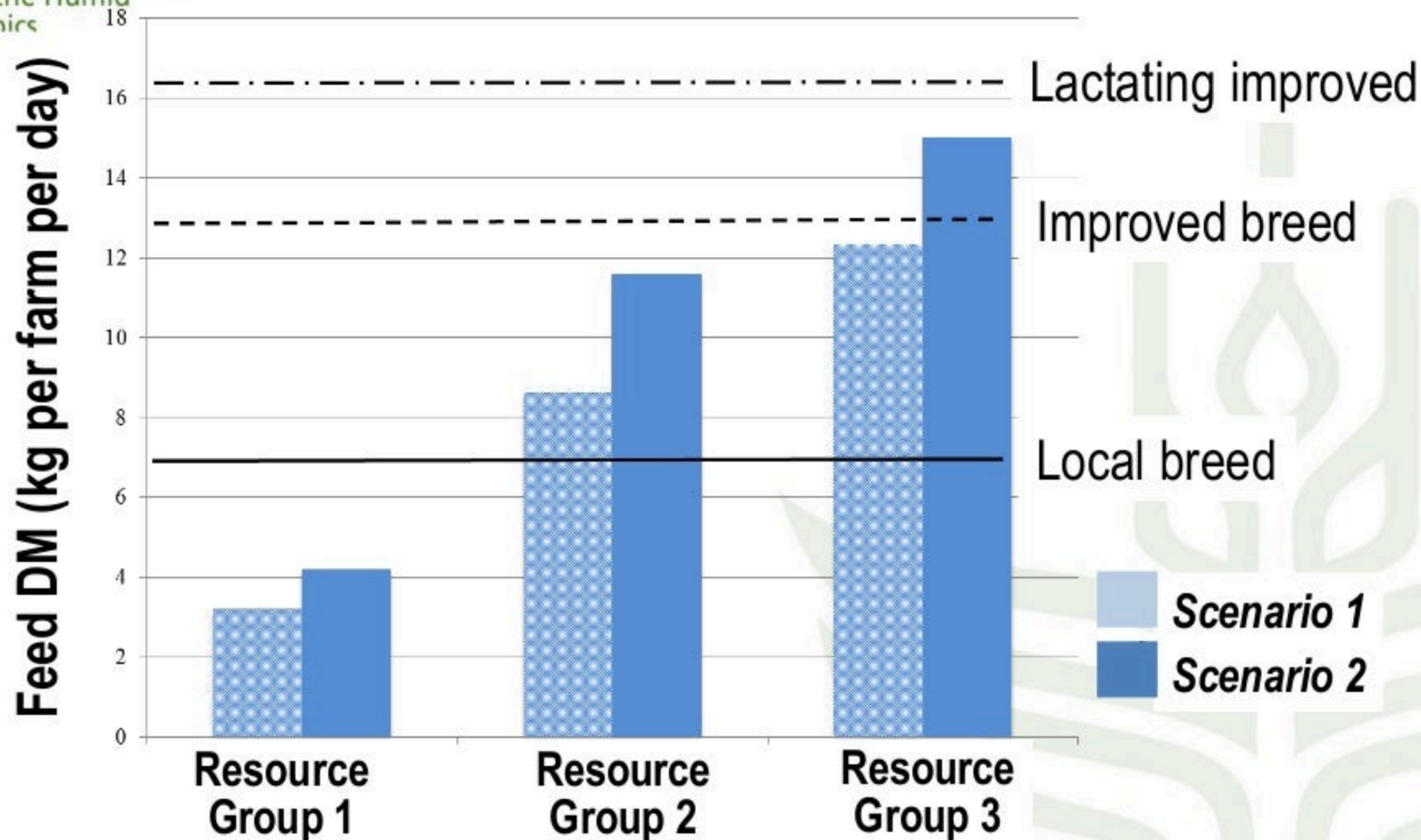
Action Area meeting, Bukavu, May 2013

# ‘One family – one cow’ policy in Rwanda

Is it possible for each farmer to produce sufficient fodder to keep cattle?


→ Situation: Farmers have variable access to resources





1. Currently, **impossible for the poorest farmers** to keep cattle
2. After changes **some** may be able to keep **local cattle**
3. Changing from ***B. taurus* to *B. indicus*** would increase program viability
4. A more viable option could be the **distribution of goats**

# Entry point: Niches for multi-purpose legumes



Banana – bush bean  
intercropping



Banana – climbing  
bean  
intercropping



Innovative maize-  
soybean  
intercropping



Calliandra hedgerows for fodder  
and erosion control



Innovative cassava-bean  
intercropping

# Policy influence: From mono-cropped coffee to banana-coffee intercropping





## MINAGRI

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**MINAGRI and RAB participated in research validation on banana-coffee intercropping**

**The Ministry**

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- Permanent Secretary
- Directorates

**Ministry Institutions**

- NAEB
- RAB

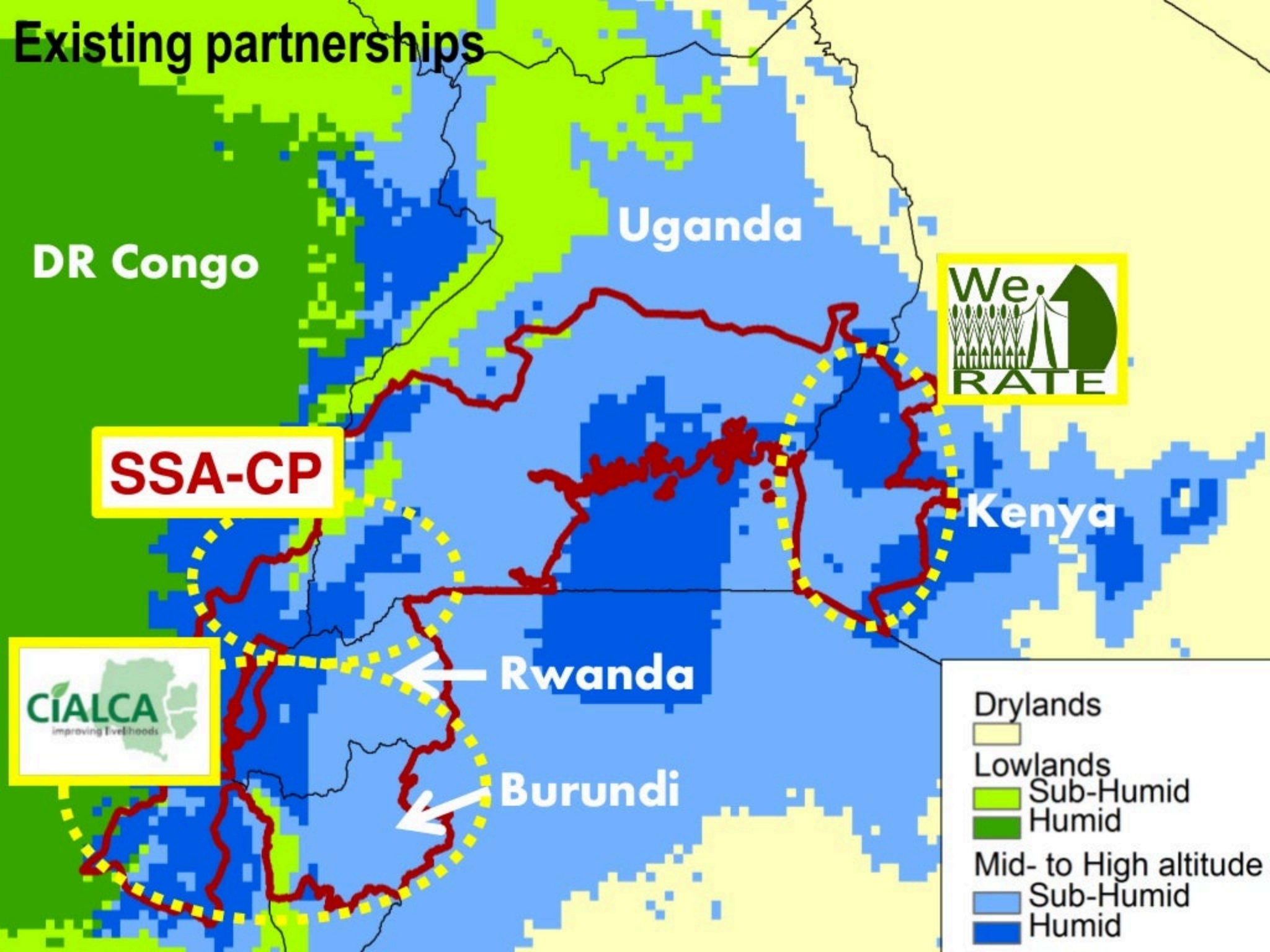
**Ministry Projects**

- CICA
- PAPSTA CLOSED



The slide shows a scatter plot with a regression line. The y-axis is labeled 'Yield (kg/ha)' and ranges from 0 to 1000. The x-axis is labeled 'Minimum temperature (°C)' and ranges from 14 to 28. The data points show a positive correlation between minimum temperature and yield.

# Existing partnerships



# Existing partnerships



**Partners:** Farmer organizations, local and international NGOs, NARS, CGIAR, policy, private sector, donors, etc

**Model:** R4D platforms on specific themes

**Themes:** Banana/legume systems, sustainable intensification, market access, nutrition



**Partners:** Farmer organizations, local NGOs, NARS, CGIAR, policy, private sector, etc

**Model:** Innovation platforms on priority value chains

**Themes:** Various value chains (banana, beans, milk, potato..)



**Partners:** Farmer organizations, NARS, CGIAR, private sector, agro-dealers, etc

**Model:** Development platforms on specific themes

**Themes:** Soybean value chains, striga elimination, maize marketing

## Program expansion through Humidtropics

1. Integration of system components beyond initial target crops
2. Greater emphasis on natural resource integrity
3. Modification of socio-technical conditions for further scaling (e.g., land tenure issues, women empowerment)
4. Enhanced capacity to further innovate
5. Integration of sectors interacting with agriculture (e.g., micro-finance sector)

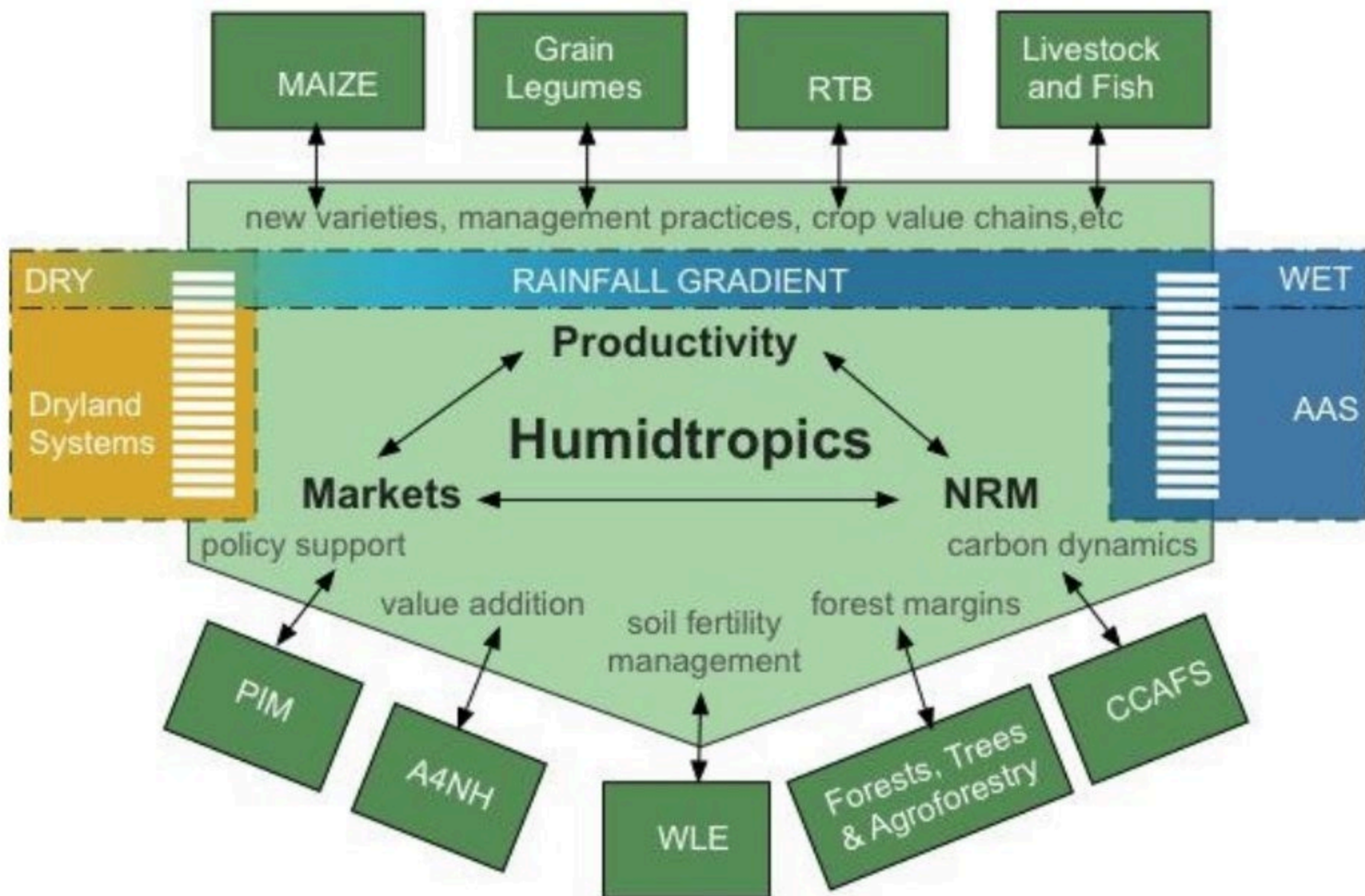
# Flagship 5 – Strategic Cross-cutting Theme

## Key cross-cutting R4D components

- Innovation systems research
- Methods and tools development
- Capacity development
- Gender and youth research and development
- Communication and partnerships
- Global synthesis and analysis



# Collaboration with other CRPs



# Collaborations and partnerships

- CGIAR Centers
  - IITA, ICRAF, ILRI, CIAT, Bioversity, CIP, IWMI
- Non-CGIAR partners
  - AVRDC, Wageningen University, *icipe*, FARA
- Advanced Research Institutes
  - Cirad, CSIRO, SLU
- National research institutions
- Development organizations
- Farmer organizations

Funding from W1&2:  
65% to CGIAR partners, 35% to non-CGIAR partners

# Regional Collaboration

## West Africa Humid Lowlands

	Name of Organization	Nature of Collaboration
1.	West African Council for Agricultural Research and Development (CORAF / WECARD)	<ul style="list-style-type: none"> <li>• CAADP entry point - WAHL</li> <li>• Partnership in out scaling and links to countries</li> <li>• Policy for impact linkage</li> </ul>
2.	Forum for Agricultural Research in Africa (FARA)	<ul style="list-style-type: none"> <li>• Lead in SSA-CP</li> <li>• Mainstreaming of SSA-CP into Humidtropics</li> <li>• Links with NARS at continental level; policy and out-scaling</li> <li>• CAADP and NEPAD links</li> </ul>
3	West African Farmers Federation (ROPFA)	<ul style="list-style-type: none"> <li>• Farmer perspectives</li> <li>• Farmer group interactions management</li> </ul>
4	Food and Agriculture Organization of UN – Regional Office	<ul style="list-style-type: none"> <li>• Partnership mainly on food security, seed production, natural resources management and policy</li> </ul>

# Regional Collaboration

## East and Central Africa Highlands

	Name of Organization	Nature of Collaboration
1.	Association for Strengthening Agricultural Research in East and Central Africa (ASARECA)	<ul style="list-style-type: none"> <li>• CAADP Pillar 4 entry point - ECAH</li> <li>• Partnership in out scaling and links to countries</li> <li>• Policy for impact linkage</li> </ul>
2.	Forum for Agricultural Research in Africa (FARA)	<ul style="list-style-type: none"> <li>• Lead in SSA-CP</li> <li>• Mainstreaming of SSA-CP into Humidtropics</li> <li>• Links with NARS at continental level; policy and out-scaling</li> <li>• CAADP and NEPAD links</li> </ul>
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# Regional Collaboration

## Central America and Caribbean

	Name of Organization	Nature of Collaboration
1.	IICA (Instituto Interamericana de Cooperación para la Agricultura.	<ul style="list-style-type: none"> <li>• Coordination institution for agricultural development and research, with strong links to CAC - Central American Council of Ministers of Agriculture – coordination</li> <li>• Policy interactions and links to political processes</li> <li>• Fund raising opportunities</li> </ul>
2.	CATIE / CIRAD	<ul style="list-style-type: none"> <li>• Research collaboration (especially in situation analysis, exchanging information and joining resources)</li> <li>• Developing joint project proposals</li> <li>• Capacity building partnerships</li> </ul>
3	Food and Agriculture Organization of UN – Regional Office	<ul style="list-style-type: none"> <li>• Partnership mainly on food security, seed production, natural resources management and policy</li> </ul>

# Regional Collaboration Central Mekong

	Name of Organization	Nature of Collaboration
1.	ASEAN (Association of South East Asian Nations)	<ul style="list-style-type: none"> <li>• Coordination institution for agricultural development and research, with strong links to CAC - Central American Council of Ministers of Agriculture – coordination</li> <li>• Policy interactions and links to political processes</li> <li>• Fund raising opportunities</li> </ul>
2.	FAO regional office Asia-Pacific	<ul style="list-style-type: none"> <li>• Partnership mainly on food security, seed production, natural resources management and policy</li> </ul>
3	RECOFTC (Regional Community Forestry Training Center)	<ul style="list-style-type: none"> <li>• Collaboration in forestry and agroforestry research</li> <li>• Joint proposal development</li> </ul>
4.	CeLAgriD (Centre for Livestock and Agriculture Devt)	<ul style="list-style-type: none"> <li>• Collaboration in research and development</li> <li>• Joint proposal devt.</li> </ul>

# Milestone Events

- Inception Workshop – Nov 2012
- Research framework workshops I&II, Feb & May 2013
- IDOs development workshop, May 1-3
- Launching of Action Areas and Action Sites
  - Central America and Caribbean, May 8-12, Nicaragua
  - Central Mekong, May 13-17, Vietnam
  - East and Central African Highlands, May 20-24, DR Congo
  - West African Humid Lowlands, June 10-14, Nigeria
- CRP-Donors-Stakeholders Engagement, June 24-25, Montpellier

# West Africa Action Area Launching



# Action Site Launching, Oshogbo



# Phased Workplan – 2015-2023

- **Phase 1: 2015 - 2017**
  - Intensification of research across Tier 1 locations.
    - Systems interventions / research
    - M&E – internal review
    - Partnership management & capacity development
- **Phase 2: 2018 - 2023**
  - Launching of Tier 2 Action Areas / 4 New Flagship Projects
    - Initiation of research. Situation analysis, R4D Platforms and System Interventions.
  - Continuation and intensification of research in Tier I locations / Scaling
  - M&E – internal and external review
- **Phase 3: Post - 2023** (initiated in 2020, subject to funding)
  - Launching Tier 3 Action Areas / Flagship Projects
  - Strengthening links with partners.
  - Consolidation of R4D through Impact Assessment
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# 9-year Windows 1 and 2 budget

Flagship Projects	US\$ Million									TOTAL US\$ million
	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7	Yr8	Yr9	
<b>West Africa lowlands</b>	4	4.4	4.8	5.3	5.9	6.4	7.1	7.8	8.6	<b>54.3</b>
<b>East &amp; Central Africa</b>	4	4.4	4.8	5.3	5.9	6.4	7.1	7.8	8.6	<b>54.3</b>
<b>Central America &amp; Caribbean</b>	4	4.4	4.8	5.3	5.9	6.4	7.1	7.8	8.6	<b>54.3</b>
<b>Central Mekong</b>	4	4.4	4.8	5.3	5.9	6.4	7.1	7.8	8.6	<b>54.3</b>
<b>Cross cutting SRTs</b>	1	1.1	1.2	1.3	1.4	1.6	1.7	1.9	2.2	<b>13.4</b>
<b>West Africa Moist Savanna</b>			4.8	5.3	5.9	6.4	7.1	7.8	8.6	<b>45.9</b>
<b>Southern Africa Moist Savanna</b>			4.8	5.3	5.9	6.4	7.1	7.8	8.6	<b>45.9</b>
<b><u>northern</u> Andes Transect</b>			4.8	5.3	5.9	6.4	7.1	7.8	8.6	<b>45.9</b>
<b>Indonesian Humid Lowlands</b>			4.8	5.3	5.9	6.4	7.1	7.8	8.6	<b>45.9</b>
<b>Sub-Total</b>	<b>17</b>	<b>18.7</b>	<b>39.6</b>	<b>43.7</b>	<b>48.6</b>	<b>52.8</b>	<b>58.5</b>	<b>64.3</b>	<b>71</b>	<b>414.2</b>
<b>Governance &amp; Management 10%*</b>	1.7	1.9	4	4.4	4.9	5.3	5.9	6.4	7.1	41.4
<b>TOTAL</b>	<b>18.7</b>	<b>20.6</b>	<b>43.6</b>	<b>48.1</b>	<b>53.5</b>	<b>58.1</b>	<b>64.4</b>	<b>70.7</b>	<b>78.1</b>	<b>455.6</b>

# Thank You



## **Issues to be addressed**

- Productivity x NRM issues
- Ecosystem service dimension of systems
- Urbanization and feeding the world
- Analysis of gaps between potential and actual
- Partnerships
- Labour and agriculture; mechanization
- Foresight issues
- Human resource implications
- Capacity building
- Scaling up and out – pathways