



Reform in the making:

CGIAR Research Program on Climate Change and Food Security (CCAFS)



Ruben Echeverria,
Director General, CIAT

CCAFS: the partnership! The largest global coalition of scientists working on developing-country agriculture and climate change



Earth System
Science Partnership

The CCAFS framework

Adapting Agriculture to Climate Variability and Change

Technologies, practices, partnerships and policies for:

- 1. Adaptation to Progressive Climate Change**
- 2. Adaptation through Managing Climate Risk**
- 3. Pro-poor Climate Change Mitigation**

4. Integration for Decision Making

- Linking Knowledge with Action*
- Assembling Data and Tools for Analysis and Planning*
- Refining Frameworks for Policy Analysis*

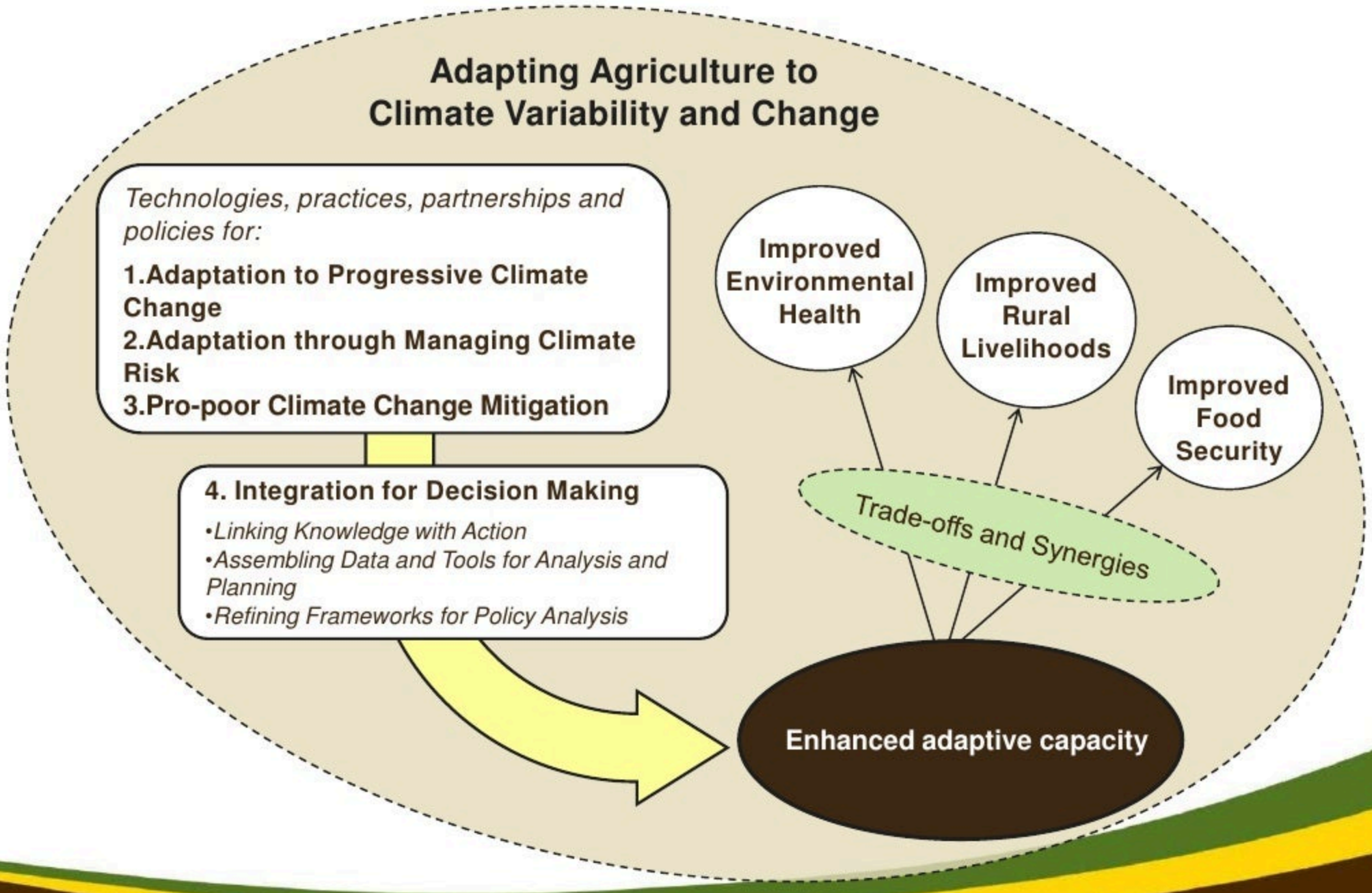
Improved
Environmental
Health

Improved
Rural
Livelihoods

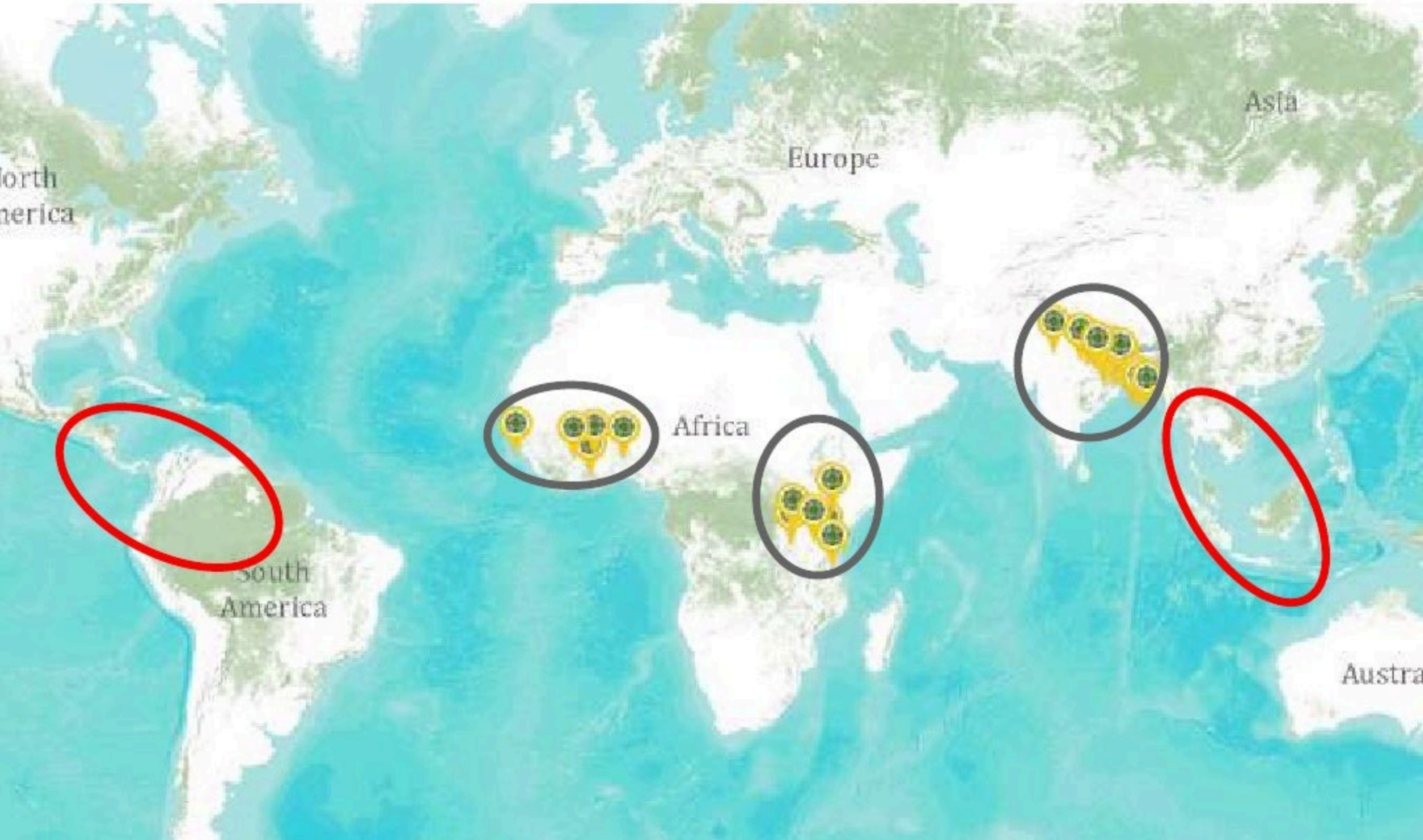
Improved
Food
Security

Trade-offs and Synergies

Enhanced adaptive capacity



Where CCAFS works



THE VISION

To adapt farming systems, we need to:

- **Close the yield gap** by effectively using current technologies, practices and policies
- **Increase the bar:** develop new ways to increase agricultural potential
- **Enable policies and institutions,** from the farm to national level

Theme 1: Adaptation to Progressive Climate Change



Adaptation to Progressive Climate Change

Objective One:

Adapted farming systems via integrated technologies, practices, and policies

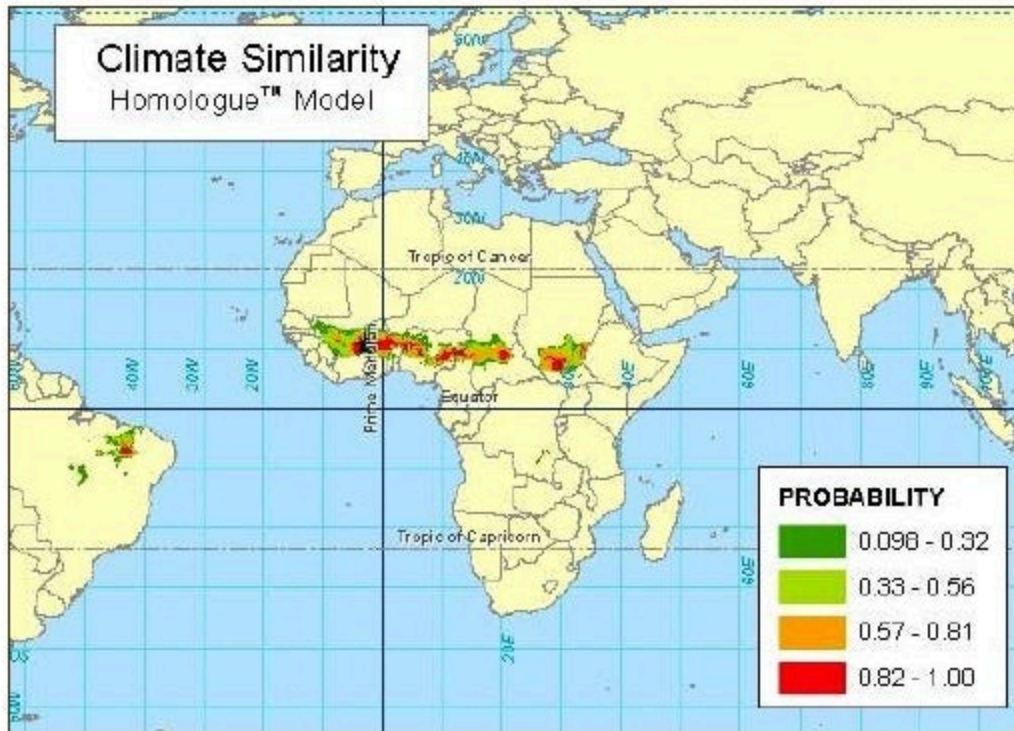
Objective Two:

Breeding strategies to address abiotic and biotic stresses induced by future climates

Objective Three:

Integrate adaptation strategies for agricultural and food systems into policy and institutional frameworks

Farms of the future



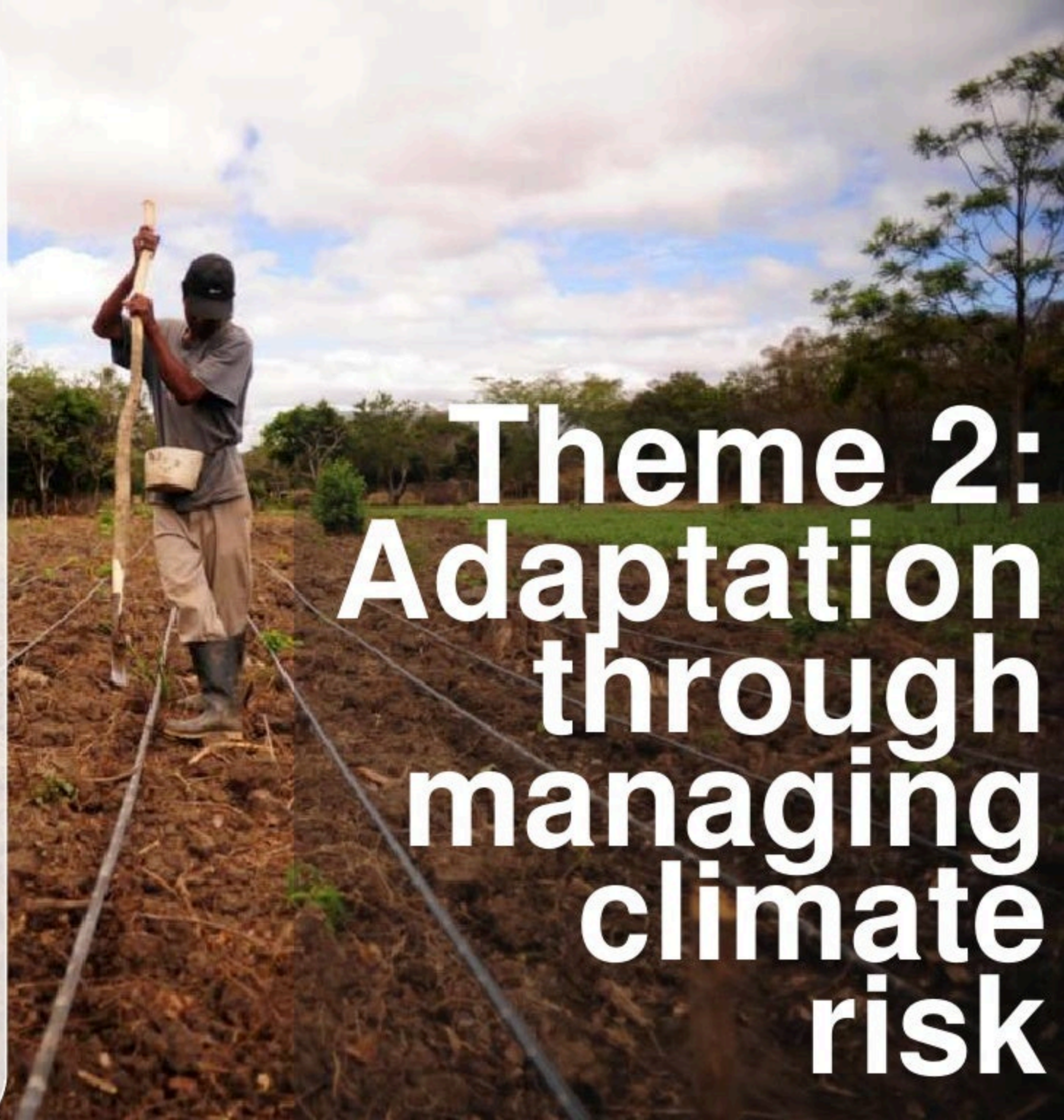
- The climate analogue tool, crucial for adaptation planning
- Choice of sites for cross-site farmer visits and participatory crop and livestock trials

- Joint staff position between CCAFS and GRiSP
- On breeding priorities for a 2030 world

- 
- Joint participatory action research in Bangladesh – WorldFish led (CRP1.3); CCAFS contributing

THE VISION

- **Climate-related risk impedes development**, leading to chronic poverty and dependency
- **Actions taken now can reduce vulnerability** in the short term and enhance resilience in the long term
- Improving current climate risk management will **reduce obstacles to making future structural adaptations.**



Theme 2: Adaptation through managing climate risk

Managing Climate Risk

Objective One:

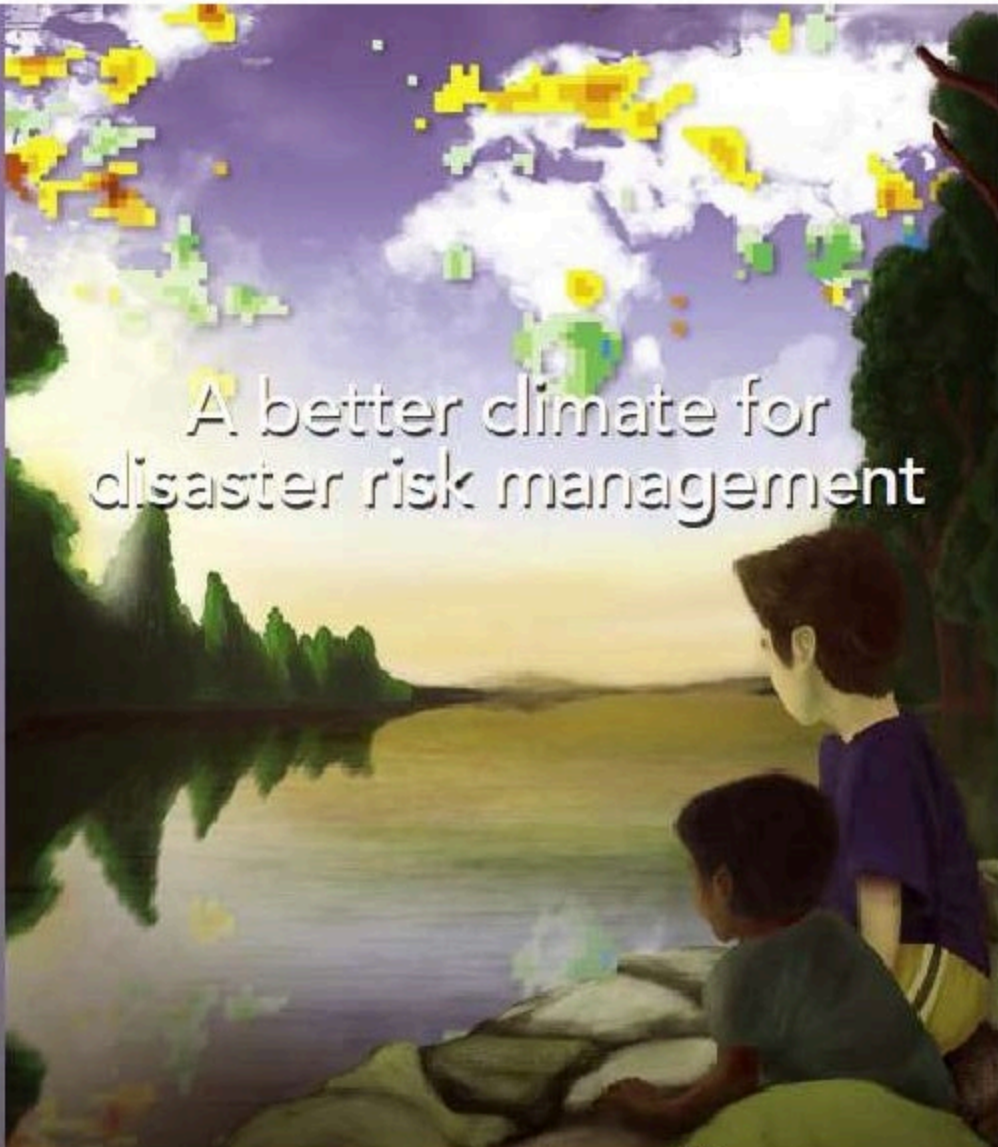
Building resilient livelihoods (*Farm level*)

Objective Two:

Food delivery, trade, and crisis response
(*Food system level*)

Objective Three:

Enhanced climate information and services



A better climate for
disaster risk management

**Improved use
of climate
information by
crisis response
agencies**



International Federation
of Red Cross and Red Crescent Societies



World Food
Programme



OCHA



CLIMATE
CHANGE
AGRICULTURE AND
FOOD SECURITY



CHALLENGES

Short-term:

Identifying options feasible for smallholder mitigation and trade-offs with other outcomes

Long-term:

Conflict between achieving food security and agricultural mitigation

Theme 3: Pro-poor Mitigation

Pro-Poor CC Mitigation

Objective One:

Identify low-carbon agricultural development pathways

Objective Two:

Develop incentives and institutional arrangements

Objective Three:

Develop on-farm technological options for mitigation and research landscape implications

At field level much of the work is participatory action research



e.g. Cross-project learning (community carbon projects) on best-bet research needs and institutional models across East and West Africa

CLIMATE CHANGE MITIGATION AND AGRICULTURE



- Earthscan book on current knowledge (with FAO)
- Involved authors from 8 Centers

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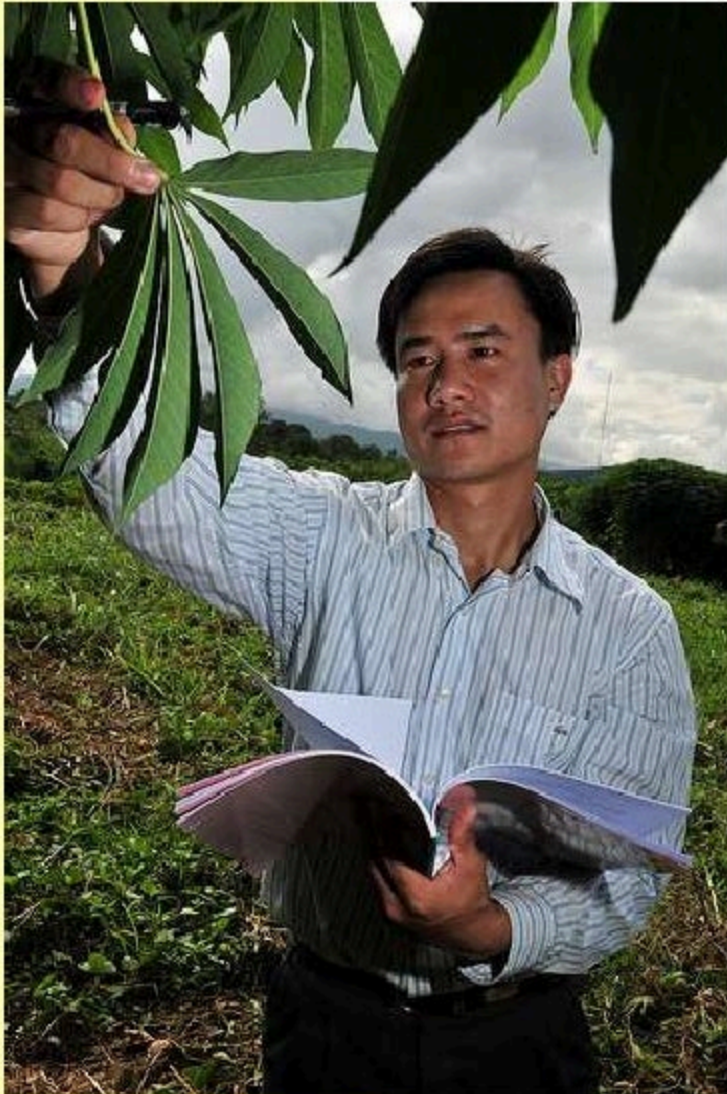
VISION

- Provide an **analytical and diagnostic framework**, grounded in the policy context
- **Effectively engage** with rural stakeholders and decision makers
- **Communicate** likely effects of specific policies and interventions
- **Build partners' capacity**

Theme 4: Integration for decision-making



Integration for Decision Making



Objective One:

Linking knowledge with action

Objective Two:

Data and tools for analysis and planning

Objective Three:

Refining frameworks for policy analysis

Baseline survey

- Household
- Village
- Service organization

Household
survey:
Covering 3
regions, 12
countries, 36
sites, 252
villages, with
5,040
households

[www.ccafs.cgiar.org/
resources/baseline-
surveys](http://www.ccafs.cgiar.org/resources/baseline-surveys)



involved 5 CGIAR Centers

Downscaled climate data

Select climate model

(6 options or their avg)

Select emissions scenario

(3 options)

The screenshot displays the CCAFS web interface. On the left, a sidebar contains input fields for location and model selection. The 'Model' dropdown is set to 'ECHam5' and the 'Scenario' radio buttons are set to 'A2'. The 'Year of Simulation' is set to '2050' and 'Number of Replications' is '10'. The 'Place' field contains 'ILRI Rd.'. A 'Run Model' button is at the bottom of the sidebar. The main area shows a satellite map of a rural area with a red location pin on 'ILRI Rd.'. A 'Go to location' button is at the top right. The bottom of the map shows coordinates (1°15'15.71" S, 35°43'06.51" E) and elevation (1967 m). Logos for ILRI and CIAT are visible on the map.

Select location

Partnership on climate-smart agriculture



- FAO, WB, CGIAR, UNEP, IFAD, Global Mechanism

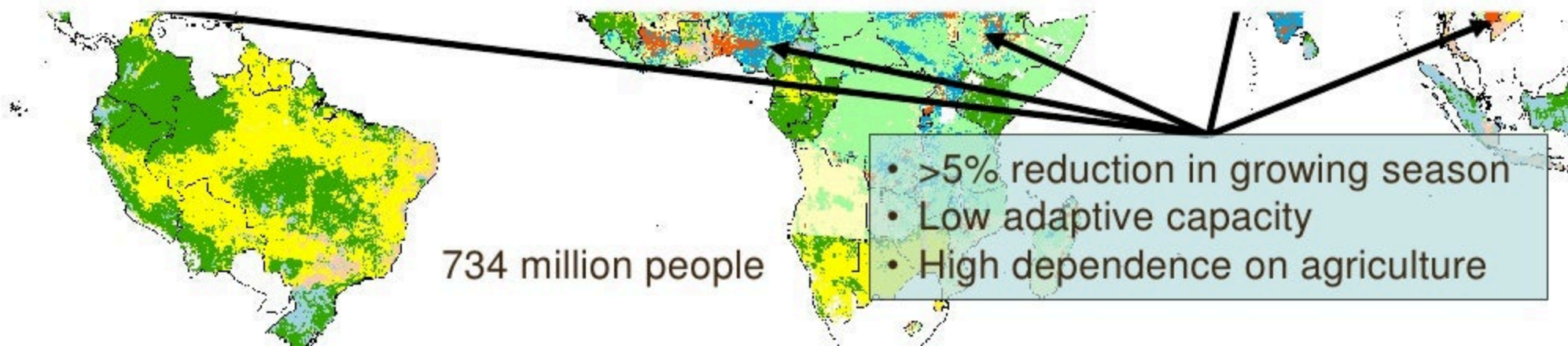
Communicating together: Mapping climate-induced food insecurity

- ILRI research team for CCAFS Theme 4 (ICRAF)
- Communications efforts: CCAFS in collaboration with ICRAF, ILRI and CIAT
- Outreach, online promotion: many CG Centers and partners
- Scientists across Centers: interviews in four languages

The Result:

- Online coverage at TIME.com, BBC, Guardian, Reuters, NatureNews, VOA, and more...
- Report downloaded 1038 times in first week
- Traffic to CCAFS website increased by 500 in 1 week

See details at <http://ccafs.cgiar.org/resources/climatehotspots>



Collaborating on major events

Landscape weekend at COP17: CIAT, CIFOR, ICRISAT, ICRAF

FOREST DAY



Shaping the global agenda for forests and climate



**Agriculture & Rural
Development Day**

Durban, South Africa 3 December 2011



<http://www.agricultureday.org/>

Agriculture & Rural Development Day

Durban, South Africa 3 December 2011

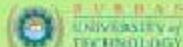
Contributing
to Agr. Day
with 20
partners



Sponsored by



Hosted by



Organised by





Introducing the International Commission on Sustainable Agriculture and Climate Change

Established the Commission


- Chair: Sir John Beddington, UK Chief Scientist
- Includes senior scientists from Australia, Bangladesh, Brazil, China, Ethiopia, France, India, Kenya, Mexico, South Africa, United States, Vietnam

Social differentiation and gender

- > 30% of milestones have gender/differentiation elements
- >20% of research budget goes to research with explicit gender/differentiation elements



Real CGIAR reform at work!

- Program Director based outside a CGIAR center (@ U of CPH, Denmark)
 - 30% budget to non CGIAR partners
 - Program Management Committee: 2 of the 6 members not from CGIAR
 - Independent Science Panel (sets strategy & oversees budget allocation) – consists of individuals not from CGIAR
 - All 15 CGIAR Centers contributing
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CIAT: Science for Impact



www.ciat.cgiar.org