

Integrating Public and Private Sector Research Goals for Sustainable Food Security

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“In the next 50 years we will need to produce as much food as has been consumed over our entire human history.”

Megan Clark

Former CEO of the Commonwealth Scientific and Industrial Research Organization (CSIRO)
Australia



More



Less



Better



From Vision to Impact: Where is the CGIAR Heading?

A world free of poverty, hunger and environmental degradation



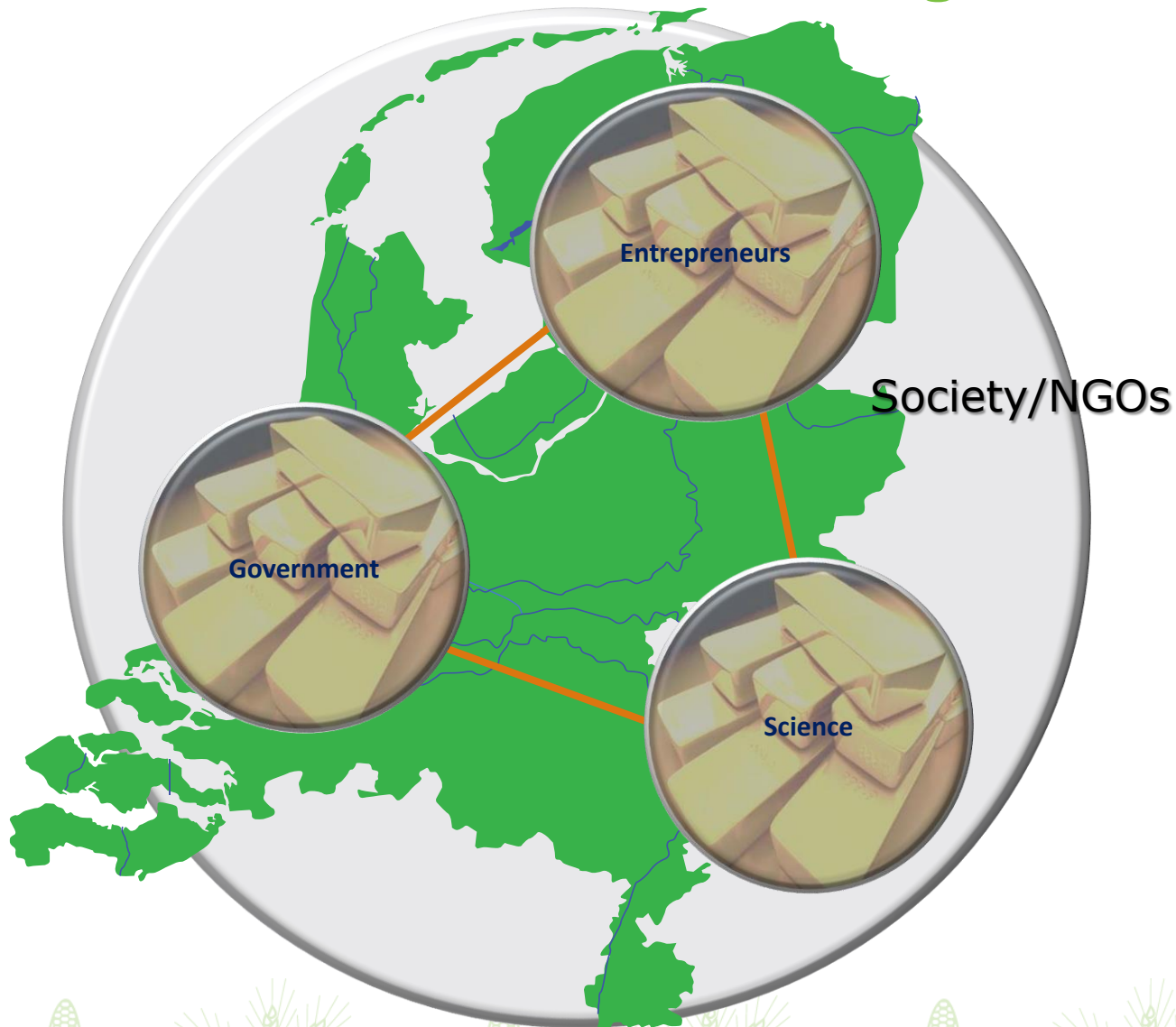
It has to be a joint effort



- Research and development
- CIMMYT (CGIAR), ARI's NARS, (N)GOs and Development organisations
- The need for a private sector to scale up (Africa) (Also SME!): PPPs
- Wageningen Experience; CGIAR Building experience
- Aid for Trade Model?



NL: The Golden Triangle/ Quadrangle



Top sector

AGRO & FOOD

The Dutch growth diamond

Our ambition

Agro & Food is a leading, sustainable international sector. It grows through innovation, knowledge and our entrepreneurial spirit. It is of vital importance to the Dutch economy, employment and health and contributes to global food security.

Our position

Leading international position and motor of the Dutch economy

Gaining public support is a challenge

We plan to

Do more for less:
by developing sustainable, innovative food production systems

Add high value:
by focussing innovation on health, sustainability, taste and convenience

Develop a leading international position:
by exporting products and integrated system solutions

We accelerate by

Employing demand-driven research and innovation

Pro-active government role to strengthen global export position

More recruitment of highly-skilled labour

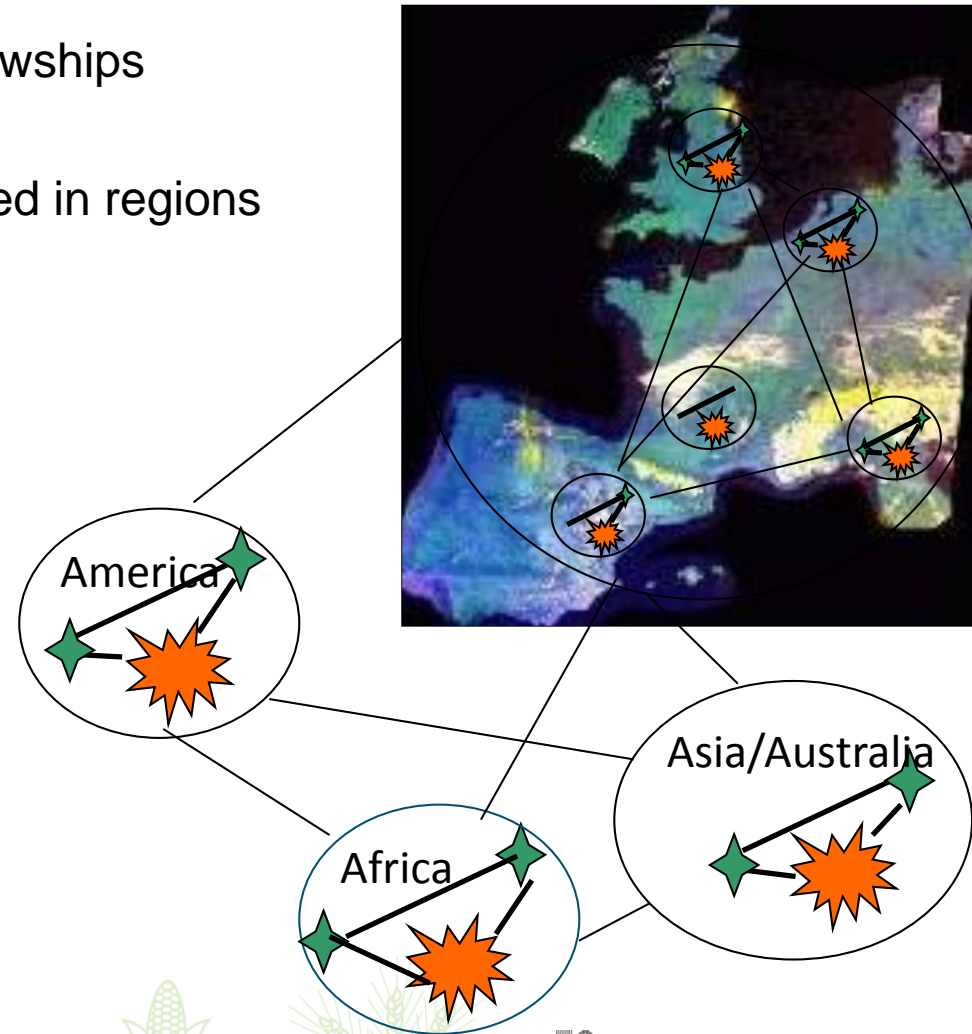
Strengthening of public support

Combined strength



Vision on global knowledge development

- World wide networks:
 - Education: tuning, exchange, fellowships
 - Research: joint programs
 - Innovation: international PPP based in regions
- Global partners
 - Research institutes
 - (regional) Governments
 - NGOs
 - Businesses



Example: Integrated Seed Sector Development

- High quality seed
- Integrating formal and informal sectors
- Continent-wide approach
- Booming in Africa
- Fits Seed2Feed strategy

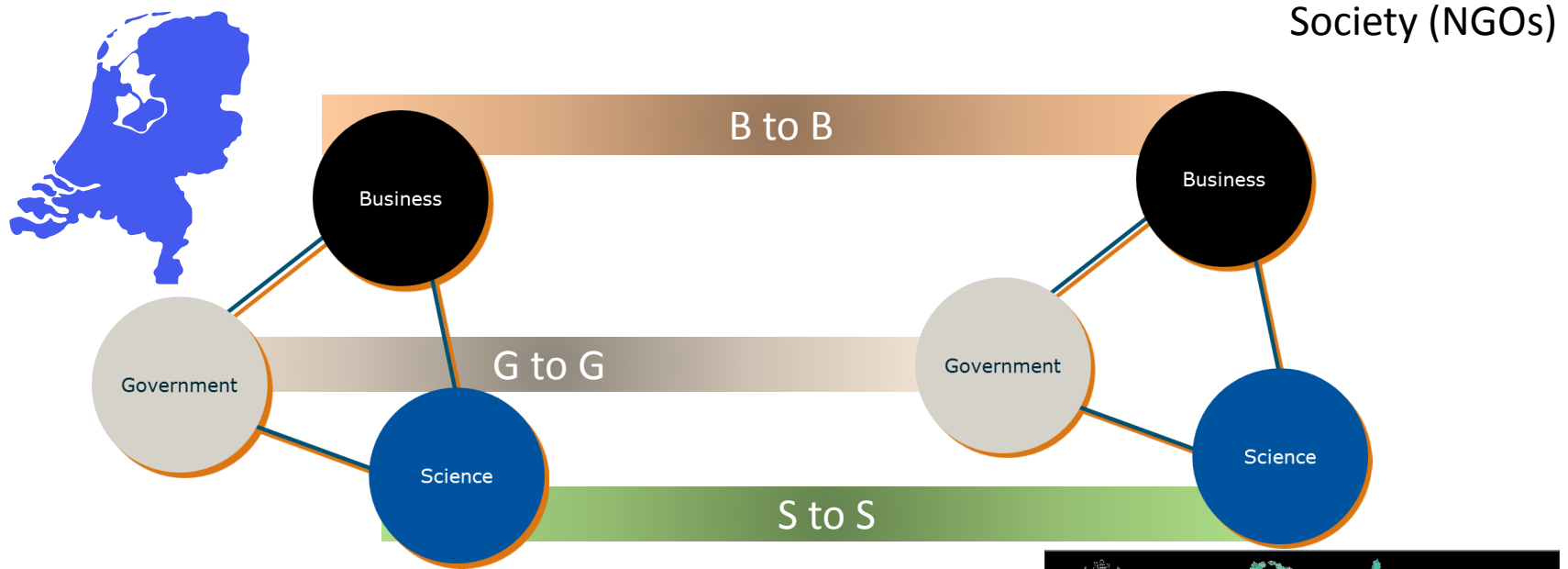
...Stimulating business...



The screenshot displays the ISSD Ethiopia website. At the top right, it reads "Integrated Seed Sector Development Ethiopia Programme". The navigation menu includes: HOME, ABOUT, REGIONAL OFFICES, COMPONENTS, GALLERY, RESOURCES, NEWS, VACANCY / GRANTS, and CONTACT. The main banner features a photograph of a lush green seed field with the text: "STRENGTHENING THE DEVELOPMENT OF A VIBRANT, COMMERCIAL AND PLURALISTIC SEED SECTOR IN ETHIOPIA". Below the banner is a "LOCAL BASED" section with the subtext "seed production by Local Seed Business." and navigation arrows. The footer contains four columns: "LOCAL SEED BUSINESS" (gear icon), "IMPLEMENTING PARTNERS" (globe icon), "FUNDING" (sun icon), and "OPPORTUNITIES" (globe icon). Each column contains a brief description of the program's goals and partners.



International collaboration

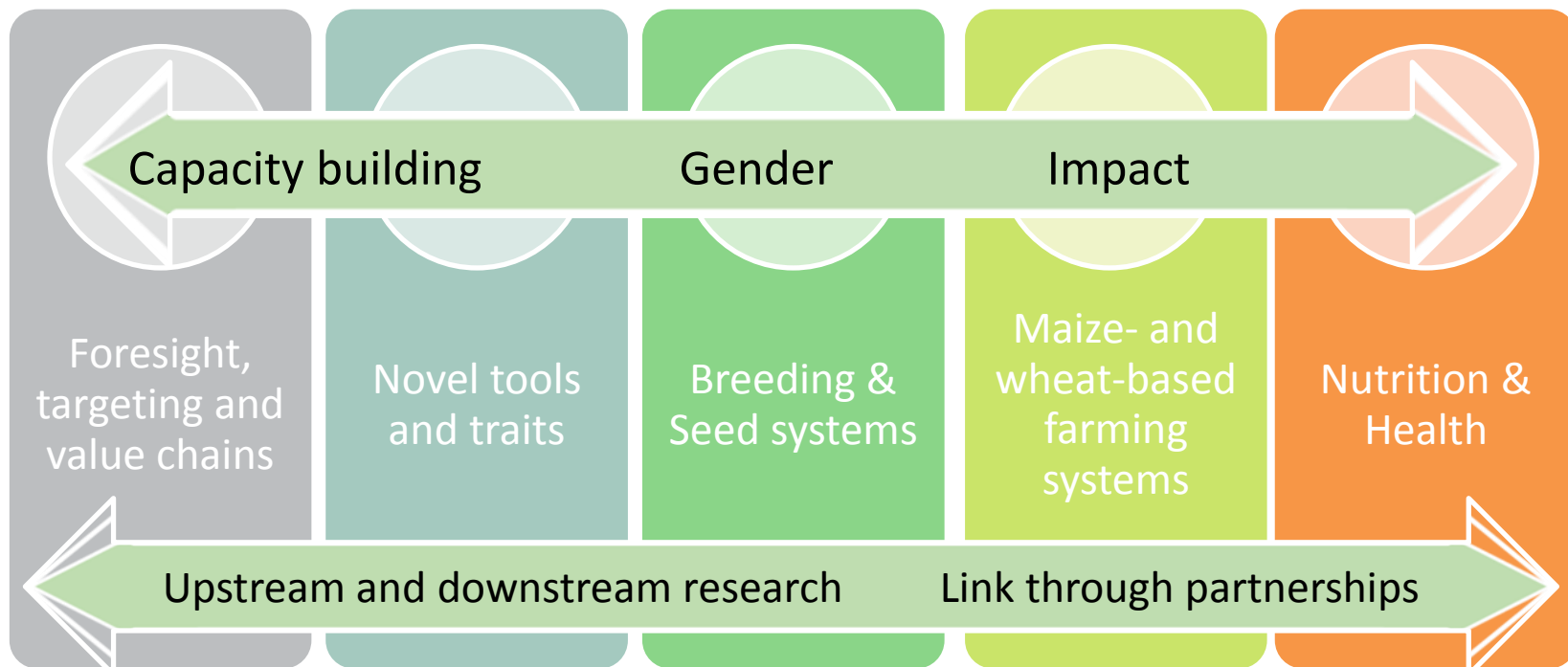


Society (NGOs)



CIMMYT 2015-2020: Where Are We Heading?



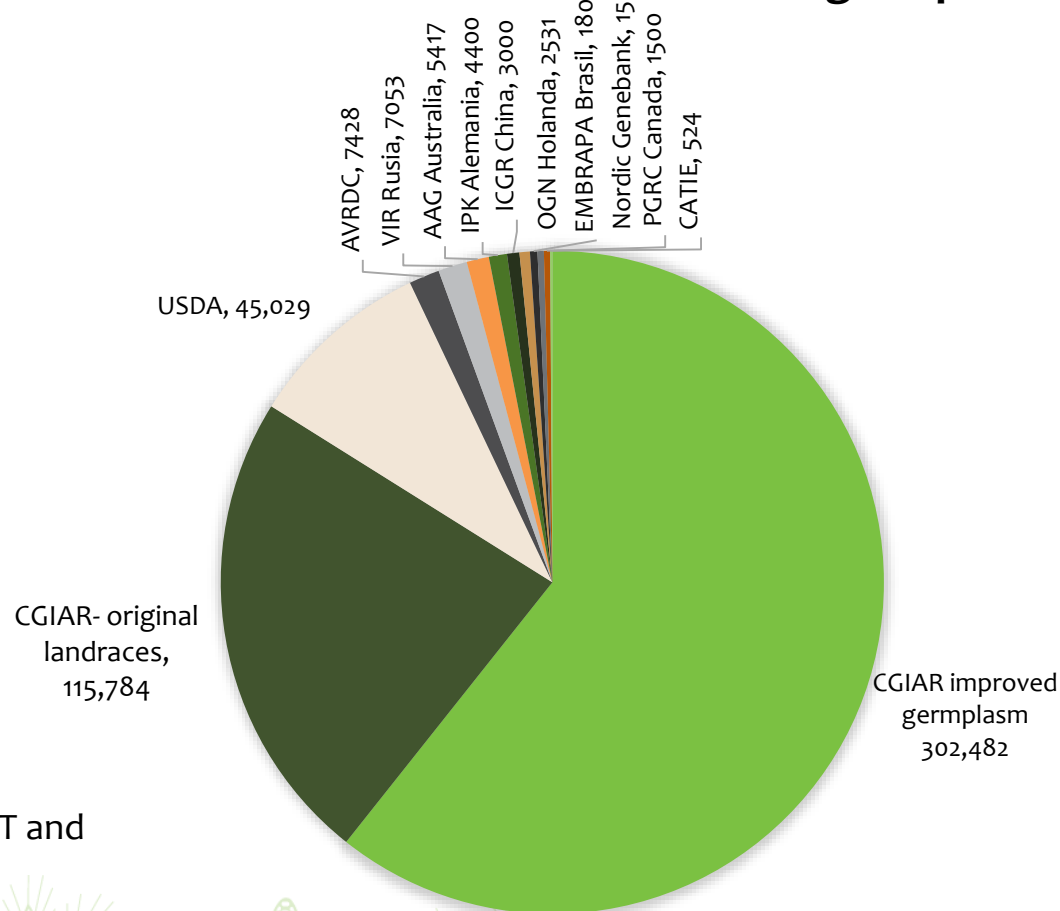


1. Investment in the Distribution and Development of germplasm

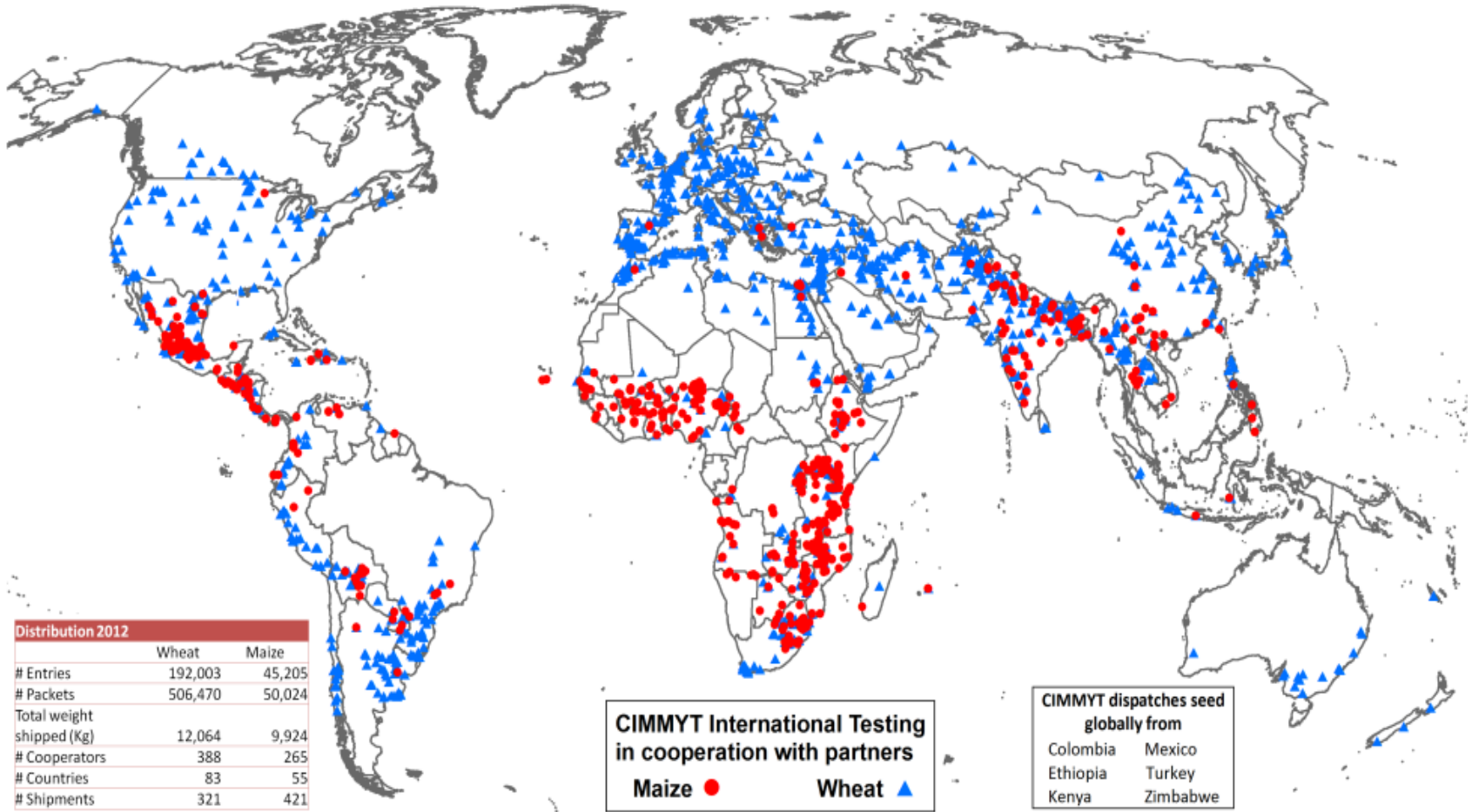
The CGIAR is the top global provider of germplasm, of which the majority is improved

Source: GCDT; online database collections, publications and communications between GCDT and responsible banks, 2008-2010

Annual distribution of germplasm



CIMMYT Varieties are Grown ALL Over the World



PPP: Overlapping Interests

Public

- Caters to end-users with limited purchasing power or market access.
- Requires longer time horizons to yield results
 - Focuses on non-excludability and non-rivalry

Serving emerging markets and finding new applications for research

Private

- Engages in research that will result in products
- Produces products that will appeal to paying customers
- Focuses on exclusivity of results
- Caters to paying customers



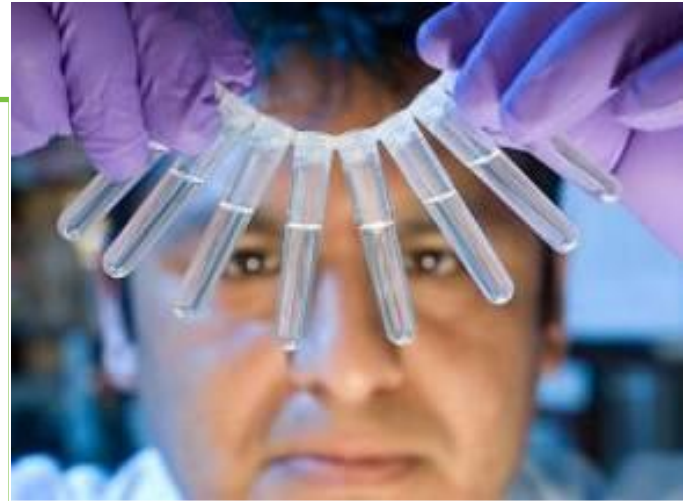
Benefits to Private Organizations

- Access to farmers in emerging markets
- Chances to wield constructive influence in the development of legal and regulatory regimes
- Opportunities to participate in forums on pro-poor research
- Access Public Sector Technology and knowledge
- Improve corporate profiles and reputations

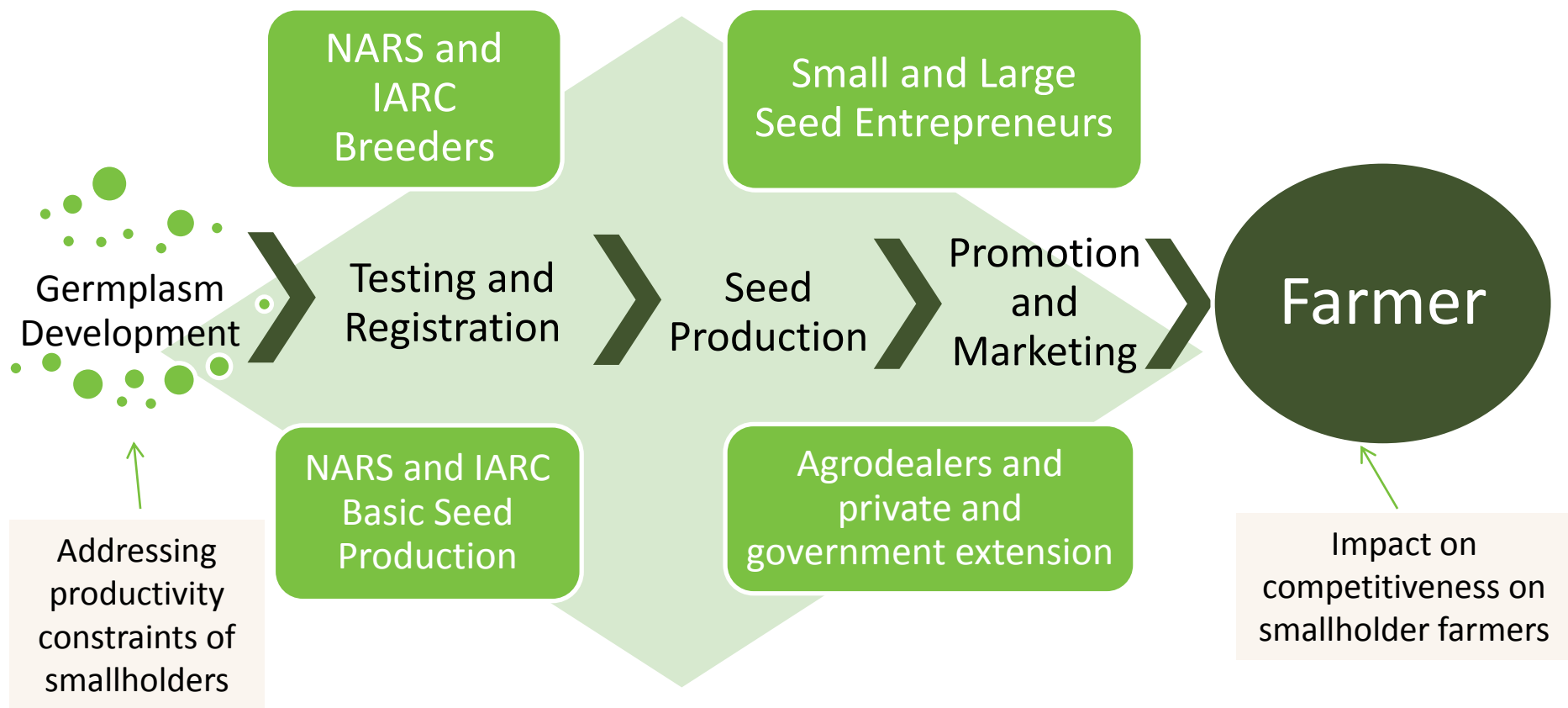


Benefits to Public Organizations

- Access to new cutting-edge scientific expertise, knowledge, and technologies
- Mechanisms for developing, marketing, and distributing final products
- Financial resources

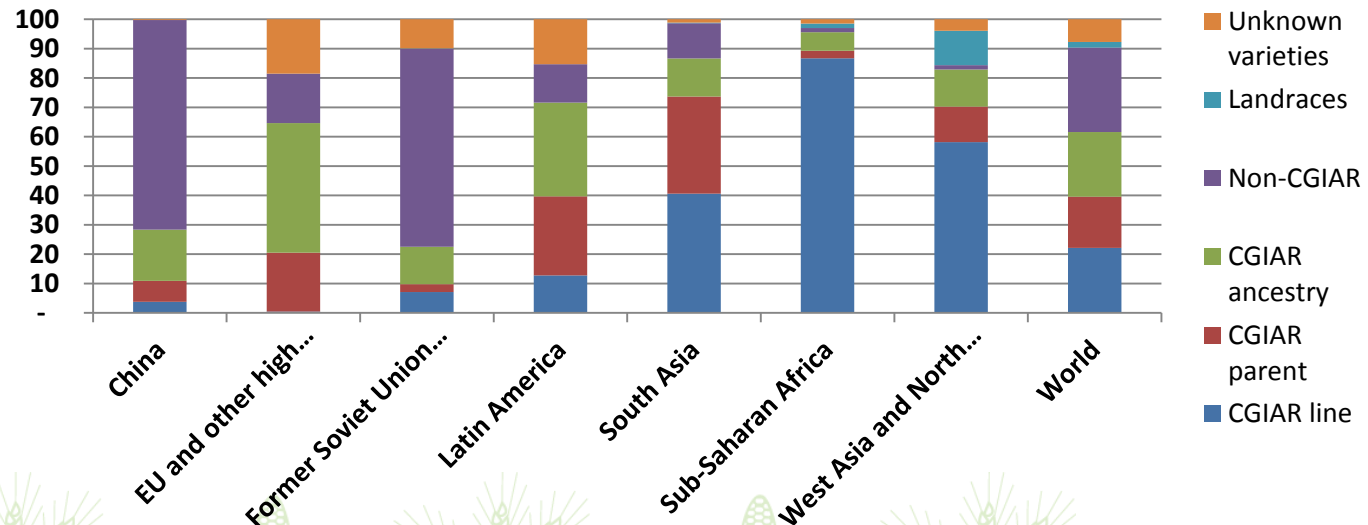


The Impact of CIMMYT's Germplasm is Enhanced through the Private Sector



CIMMYT: impact vs. investment in spending: Michael Baum et al., 2015

- Investment in CG Wheat research 30 m per year
- Total benefits attributable to the CGIAR wheat improvement research range from US\$ 2.1 billion to US\$ 5.7 billion annually (2010 US\$)



CIMMYT's Contribution to Australian Wheat Farming

Area sown to CIMMYT-derived wheat varieties

- 1980s – 80% in NSW, Queensland and Victoria
- 1997 – 90% in Western Australia
- 2001 – 98% nationwide

Hartog (Pavon 76)

- A CIMMYT introduction was grown on more than 60% of Australia's wheat paddocks in the late 80s/early 90s

Yield gains

- In 2001 average 4.6% from CIMMYT varieties and derived varieties
- Queensland (10.5%), NSW (7.9%) and Victoria (7.4%)

Total economic gain estimated:

Increased the value of outputs from the Australian wheat industry by at least **\$750 million**

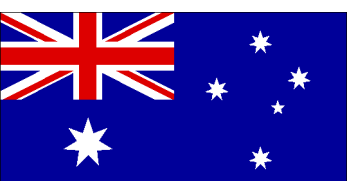
(>30 m / yr)

Source: Brennan and Quade, 2004 & DFAT, 2012



Agriculture and economic development

- Agri-Food sector as starter for economic development
- Triple win e.g. (Wheat):
 - Meeting growing demand for food
 - Helping lift people out of poverty and hunger: societal stability
 - Profitable agri-food enterprises in DC and in Australia!
- Innovation challenge at relevant scale
- New ideas/technologies>
- Putting solutions into practice at scale

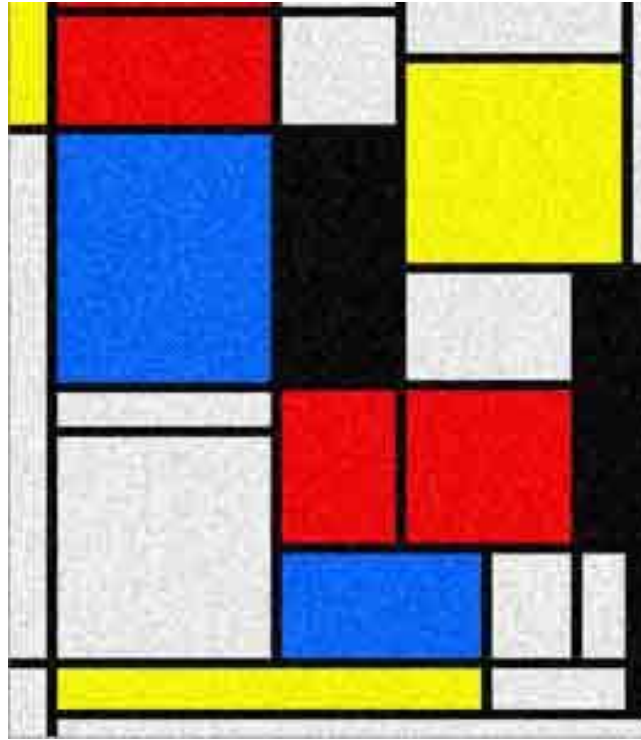
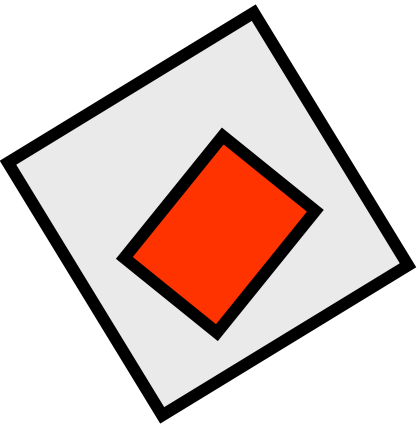


Triple win: innovation

- It requires collaboration: golden quadrangle
 - Private sector cannot do all (food safety): PPP needed
 - Common language, interdisciplinarity
 - Feedback, networking, reflect, dream
-
- Link Agri and Food and make it a topsector: Aid for Trade
 - Great: Agriculture Fish and Water are priorities for Aid program



Interdisciplinarity for impact





Thank you!