



The New CGIAR – Science for a Food Secure Future

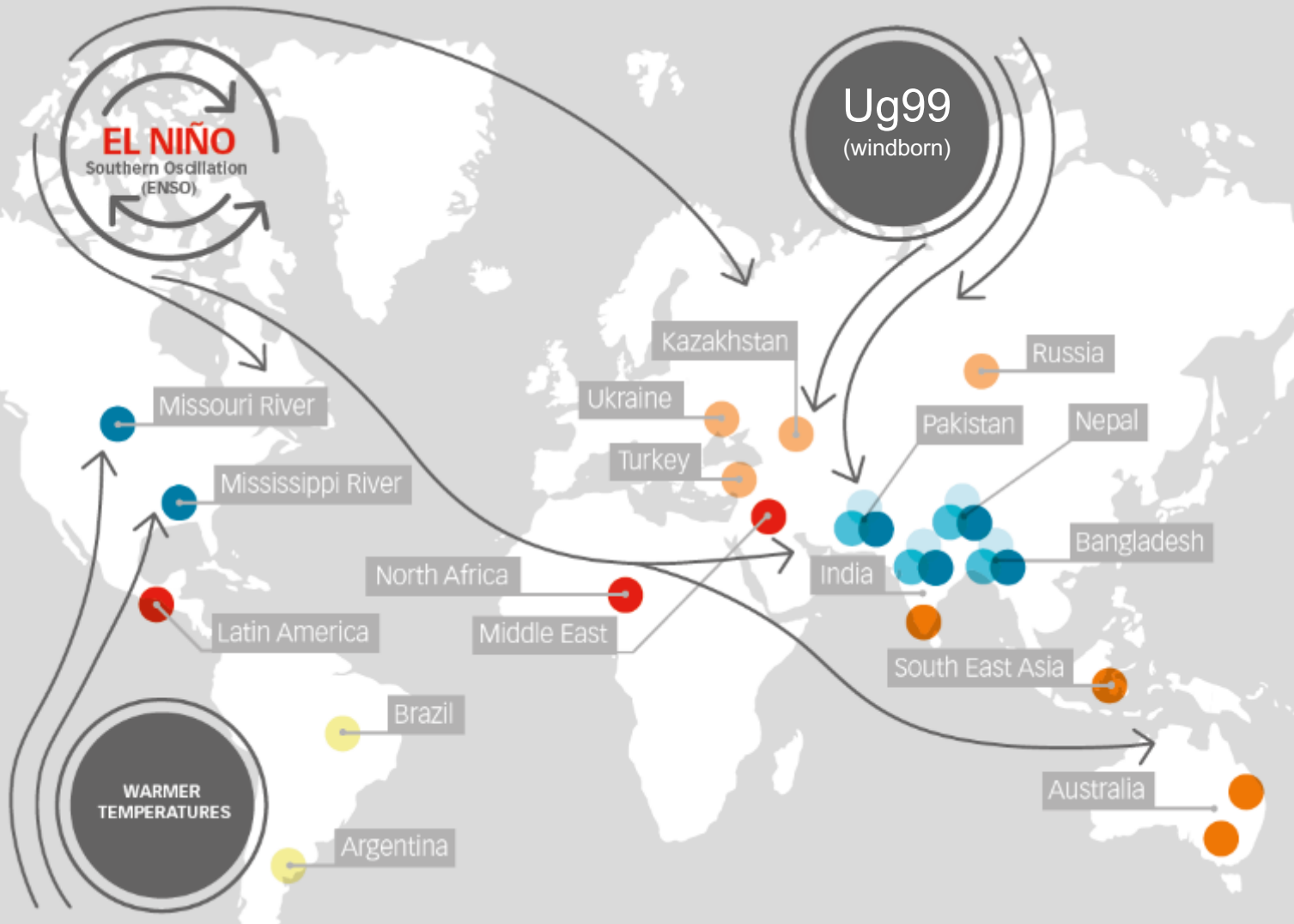
Martin Kropff
CIMMYT50, 28 September 2016

The Big Challenges



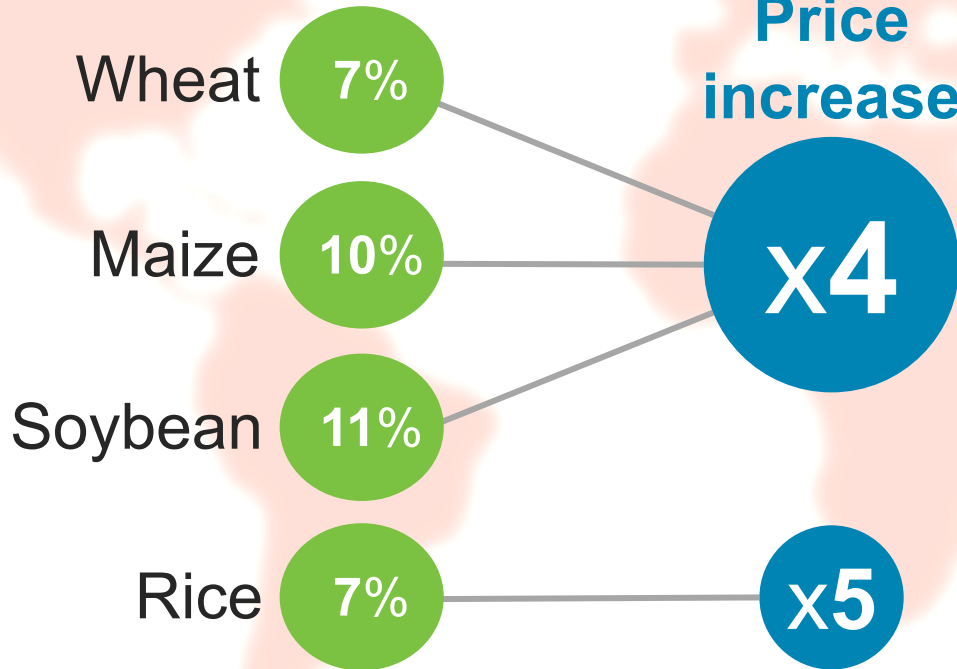
The scenario

Key	
Flooding	● (Dark Blue)
Food Riots	● (Red)
Crop Epidemic	● (Yellow)
Farms Suffer	● (Orange)
Torrential Rainfall	● (Light Blue)
Landslides	● (Light Blue)
Severe Drought	● (Orange)



Impacts

Global production losses



Human cost

+ Humanitarian crisis

★ Food riots

↓ Stock market losses

10% in EU
5% in US

El Nino 2016/2016



Zimbabwe, 2016

The last El Nino caused **\$35 billion** in global economic losses.

So far....

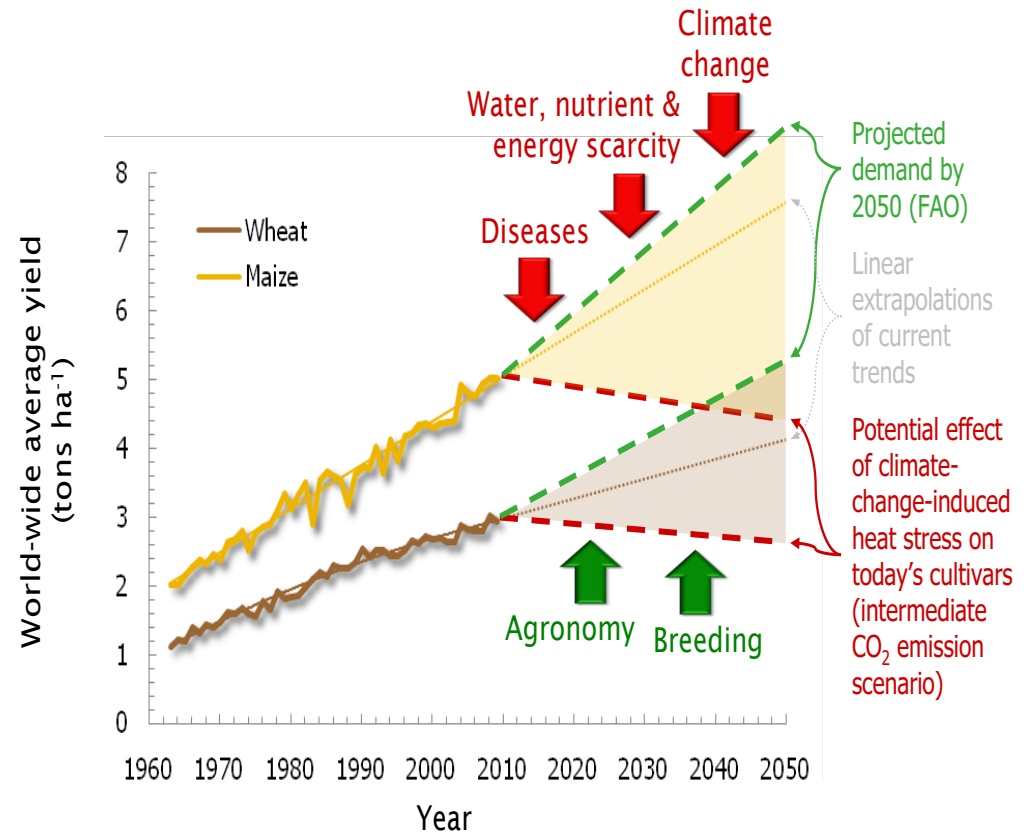
- 40 million in need of emergency assistance
- Severe drought in southern Africa, Ethiopia, Caribbean, Central America,



Climate Change and Food Prices

For food prices to remain constant, annual yield gains would have to increase:

- from **1.2% - 1.7%** for maize
- from **1.1% - 1.7%** for wheat



Disease Epidemics: Potential Threat to Production



Maize Lethal Necrosis

2 viruses affect Kenya, Uganda, Tanzania, Rwanda, D.R. Congo, South Sudan, and Ethiopia



Tar Spot Complex

Mexico, Colombia, El Salvador, Guatemala, Nicaragua



Wheat blast

Argentina, Brazil, Bolivia, Paraguay, South Asia



Stem Rust

Most feared!
Global



Fusarium Head Blight

China, Caspian and Black Sea, Cona Sur, North America, Western Central and Eastern Europe



Septoria

North Africa, Ethiopia, Latin America, Southern and Central Europe, Iran, Kazakhstan and Siberia



The way forward for the CGIAR



What is CGIAR?

CGIAR is the only worldwide research partnership addressing agricultural research for development, whose work contributes to the global efforts to tackle poverty, food and nutrition insecurity, and environmental degradation.



CGIAR Research Centers

CGIAR research is carried out by the 15 Centers, members of the CGIAR Consortium, in close collaboration with hundreds of partners, including national and regional research institutes, civil society organizations, academia, development organizations and the private sector.



CENTERS

- 1 AfricaRice
- 2 Bioversity International
- 3 Center for International Forestry Research (CIFOR)
- 4 International Center for Agricultural Research in the Dry Areas (ICARDA)
- 5 International Center for Tropical Agriculture (CIAT)
- 6 International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)
- 7 International Food Policy Research Institute (IFPRI)
- 8 International Institute of Tropical Agriculture (IITA)
- 9 International Livestock Research Institute (ILRI)
- 10 International Maize and Wheat Improvement Center (CIMMYT)
- 11 International Potato Center (CIP)
- 12 International Rice Research Institute (IRRI)
- 13 International Water Management Institute (IWMI)
- 14 World Agroforestry Centre (ICRAF)
- 15 WorldFish



The “second generation” CGIAR Strategy 2016–2030:

- Guides the development and implementation of an ambitious portfolio of “second-generation” CGIAR Research Programs ([CRPs](#))
- Focuses on selected grand challenges, and is articulated in 3 strategic goals, or System Level Outcomes (SLOs), which by 2030 will contribute significantly to the achievement of key Sustainable Development Goals ([SDGs](#))
- Highlights a return on investment evaluated at US\$17 for every US\$1 put into CGIAR over its lifetime



System Level Outcome (SLO) 1:

Reduced Poverty



2030 Targets

- 350 million more farm households have adopted improved varieties, breeds or trees, and/or improved management practices
- 100 million people, of which 50% are women, assisted to exit poverty

This outcome contributes directly to the achievement of the following United Nations Sustainable Development Goals



1 NO POVERTY



2 ZERO HUNGER



3 GOOD HEALTH AND WELL-BEING



5 GENDER EQUALITY



8 DECENT WORK AND ECONOMIC GROWTH



10 REDUCED INEQUALITIES



17 PARTNERSHIPS FOR THE GOALS



System Level Outcome (SLO) 2

Improved Food & Nutrition Security for Health



2030 Targets

- Increase the yield increase rate of major food staples from current <math><2.0</math> to 2.5%/yr.
- 150 million more people, of which 50% are women, meeting minimum dietary energy requirements
- 500 million more people, of which 50% are women, without deficiencies of one or more of the following essential micronutrients
- 33% reduction in women of reproductive age who are consuming less than the adequate number of food groups

This outcome contributes directly to the achievement of the following United Nations Sustainable Development Goals



1 NO POVERTY



2 ZERO HUNGER



3 GOOD HEALTH AND WELL-BEING



5 GENDER EQUALITY



6 CLEAN WATER AND SANITATION



10 REDUCED INEQUALITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



17 PARTNERSHIPS FOR THE GOALS



System Level Outcome (SLO) 3

Improved Natural Resource Systems & Ecosystem Services



2030 Targets

- 20% increase in water and nutrient (inorganic, biological) use efficiency in agro-ecosystems, including through recycling and reuse
- Reduce agriculturally-related greenhouse gas emissions by 0.8 Gt CO₂-e yr⁻¹ (15%) compared with a business as usual scenario in 2030
- 190 million hectares (ha) degraded land restored
- 7.5 million ha of forest saved from deforestation

This outcome contributes directly to the achievement of the following United Nations Sustainable Development Goals



2 ZERO HUNGER



5 GENDER EQUALITY



6 CLEAN WATER AND SANITATION



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



15 LIFE ON LAND

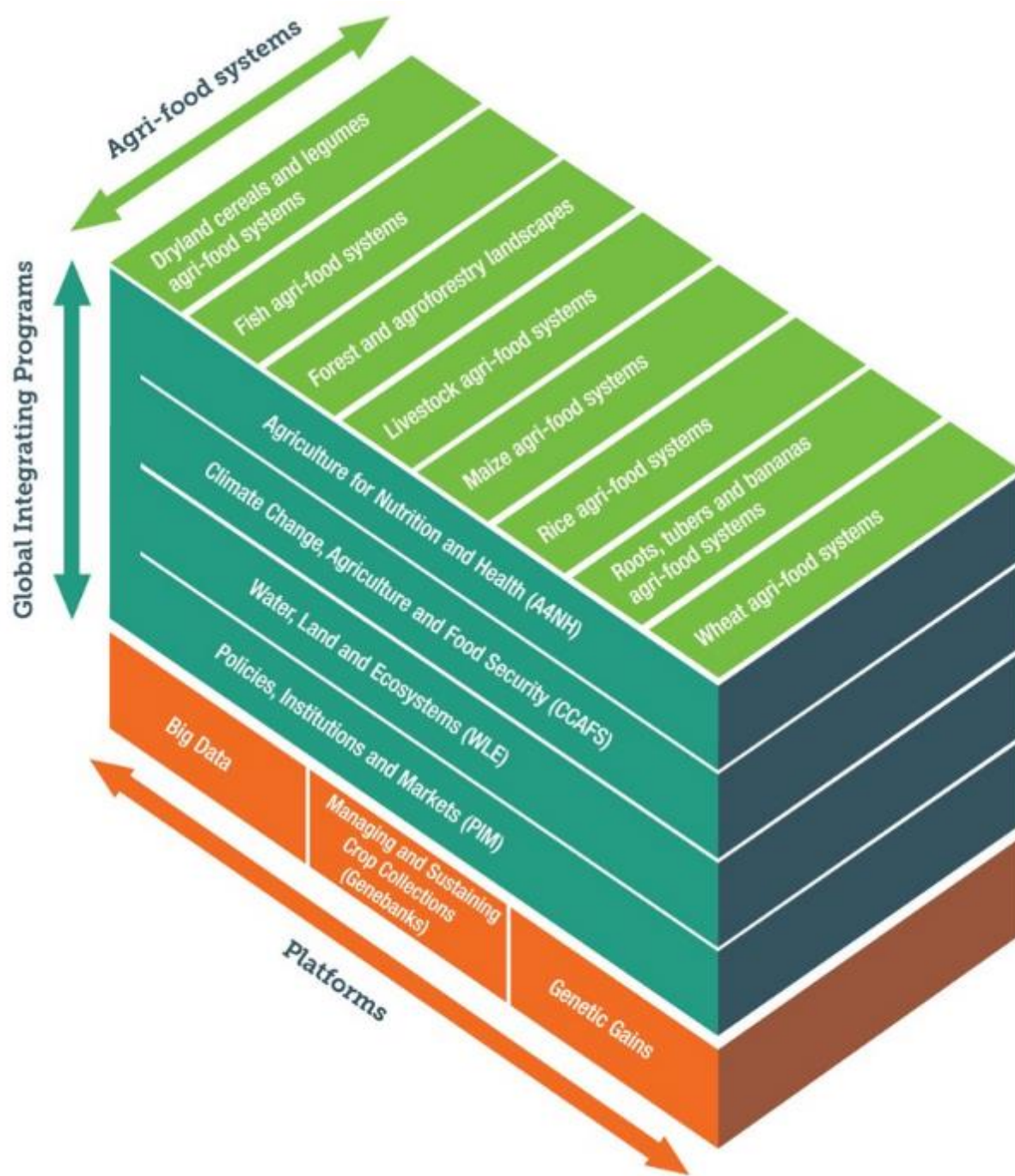


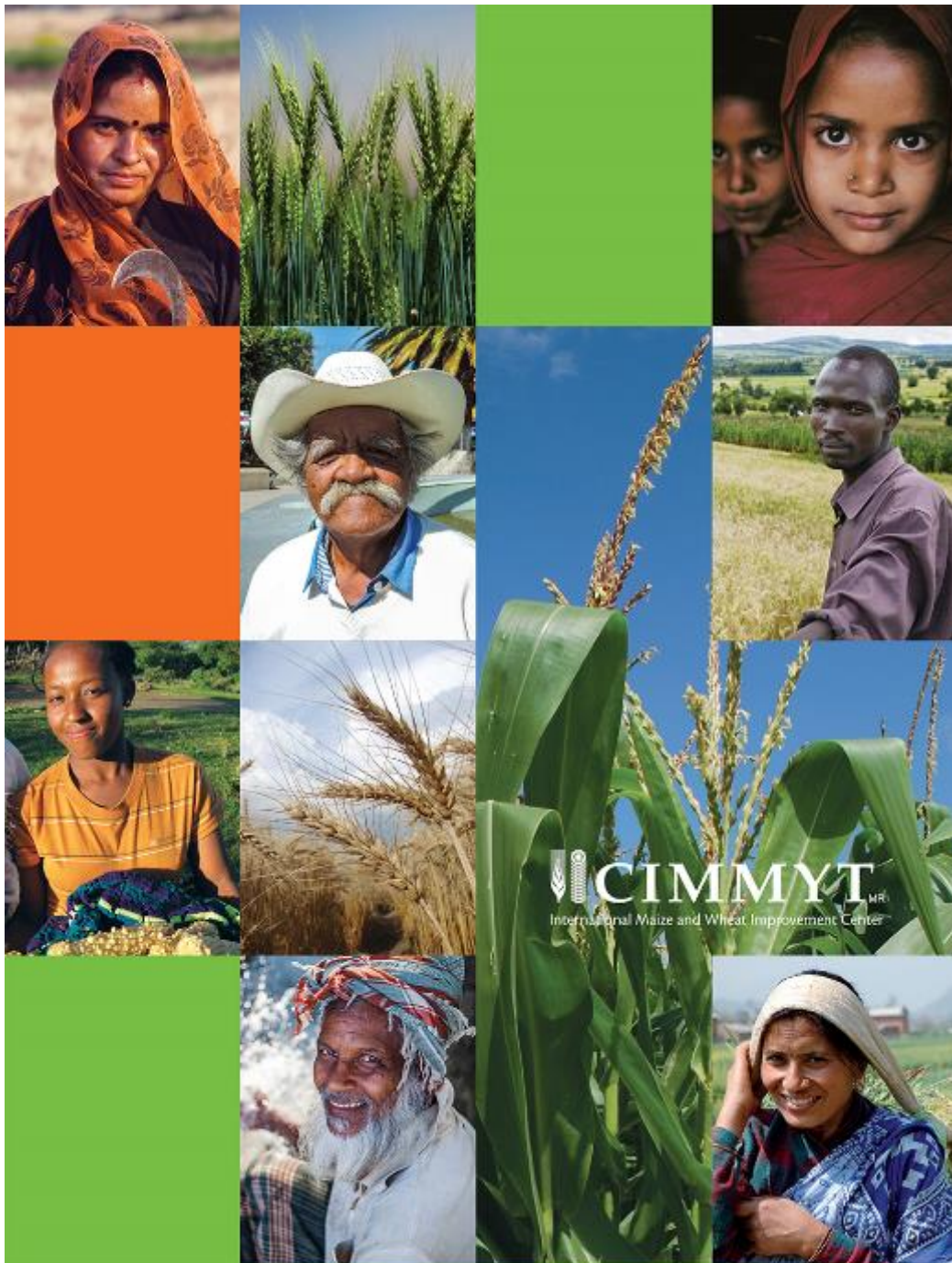
16 PEACE, JUSTICE AND STRONG INSTITUTIONS



17 PARTNERSHIPS FOR THE GOALS







**Thank you
for your
interest!**

