



The Global Crop Diversity Trust and Climate Change

<http://croptrust.org>

What is the Trust?



- Established under international law in Oct. 2004
 - Public-private partnership
 - Joint initiative of FAO & Bioversity on behalf of CG Centres
- Endowment fund with target \$260 million, generating \$12 million/year, in perpetuity
 - Element of funding strategy of ITPGRFA
 - Technical framework provided by GPA
- Focus on *ex situ* conservation, Annex 1 crops

Trust's Goal



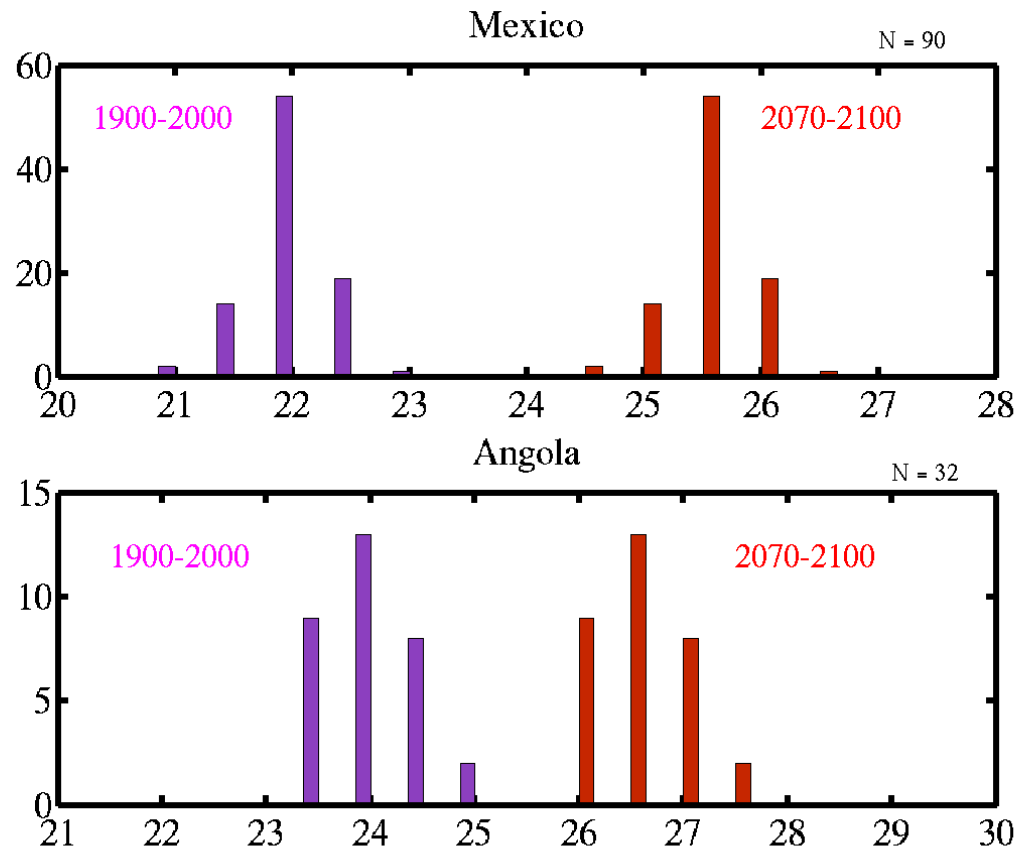
To help develop
**an effective, efficient
and sustainable global system**
to ensure the conservation and availability
of plant genetic resources for food and agriculture

Guiding the Trust's Investment

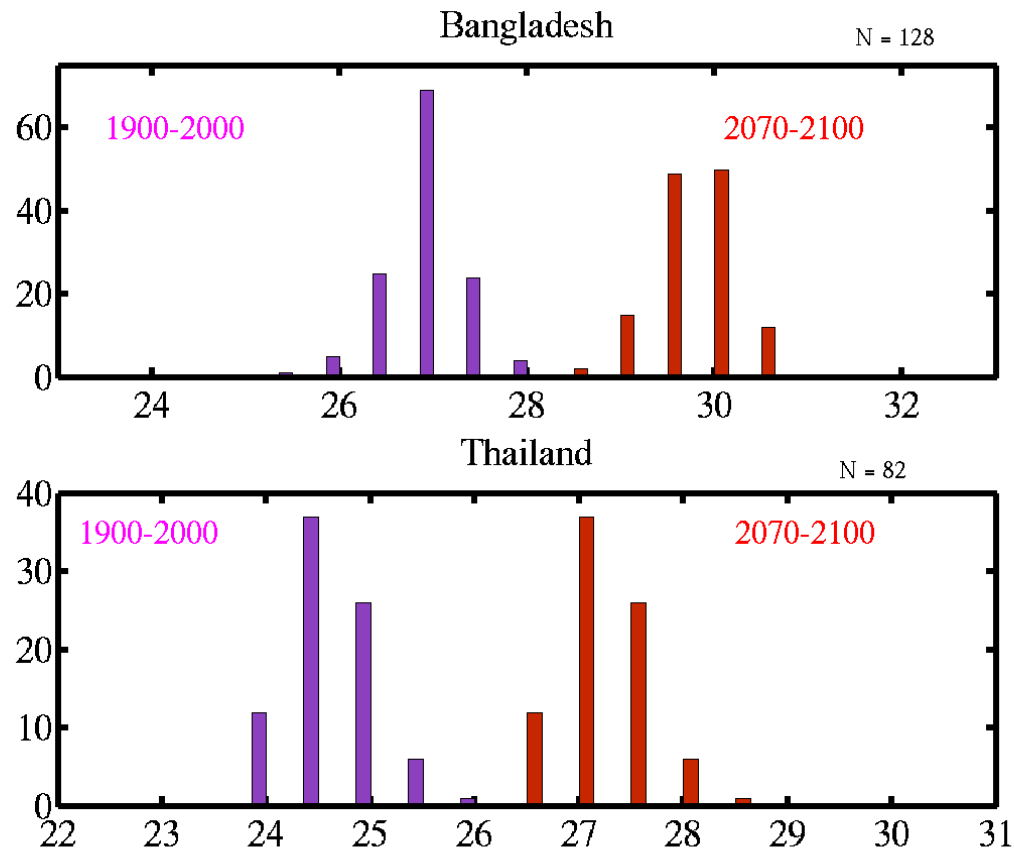


- Global crop strategies
- Regional strategies (PGR networks)
- Expert consultations
 - Bellagio meeting on CC (Stanford University) – Sept. 2007

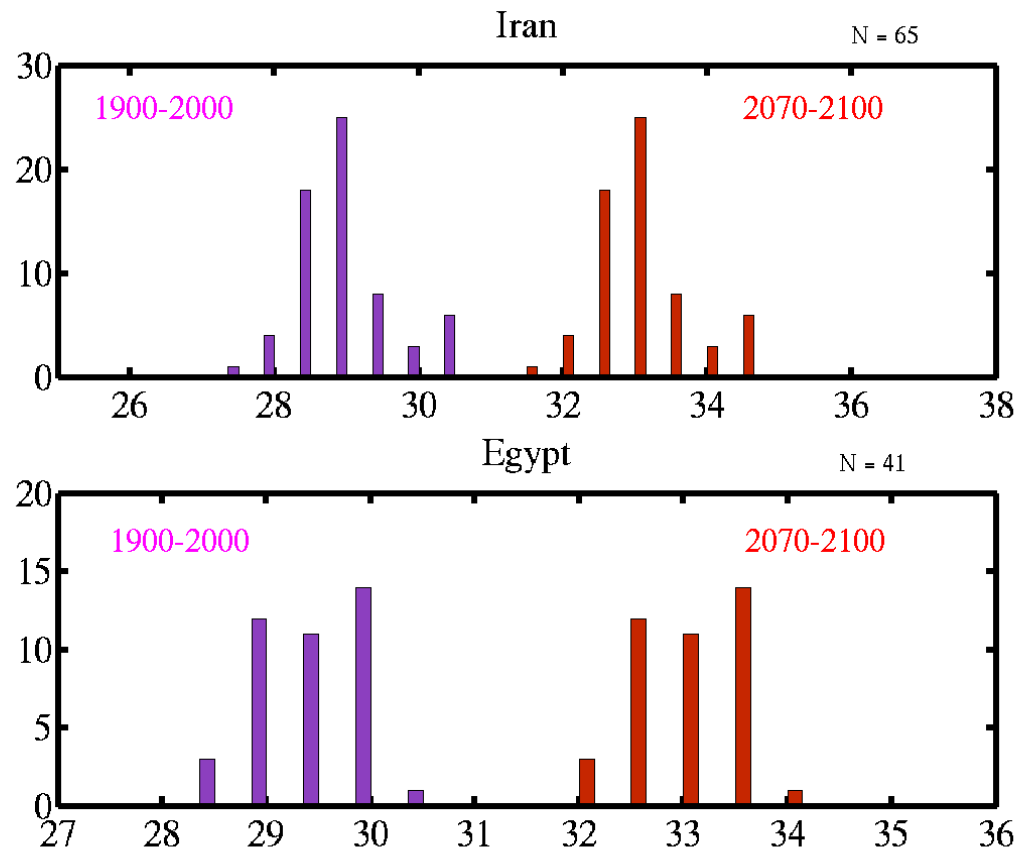
Magnitude of Climate Change



Magnitude of Climate Change



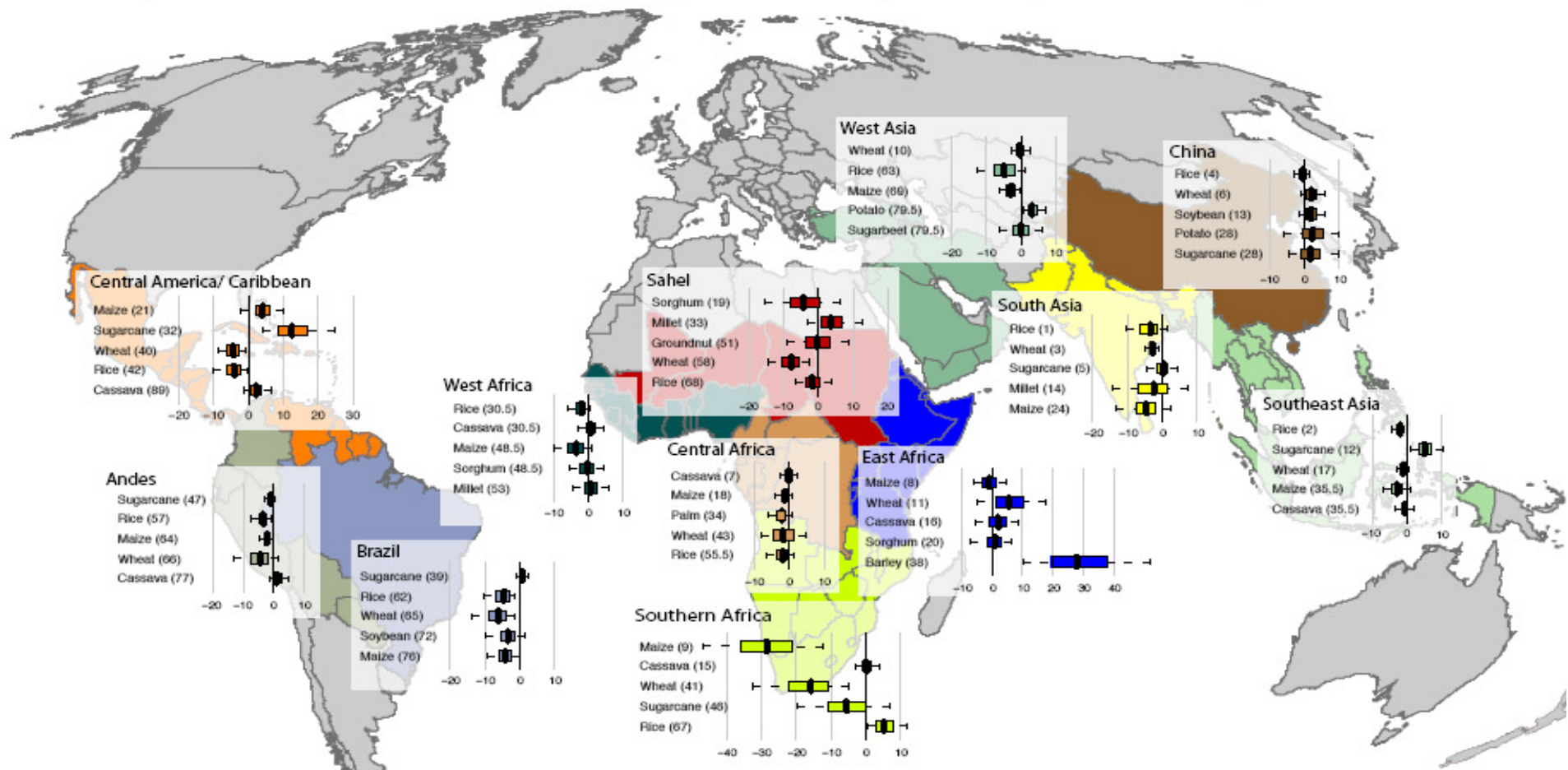
Magnitude of Climate Change

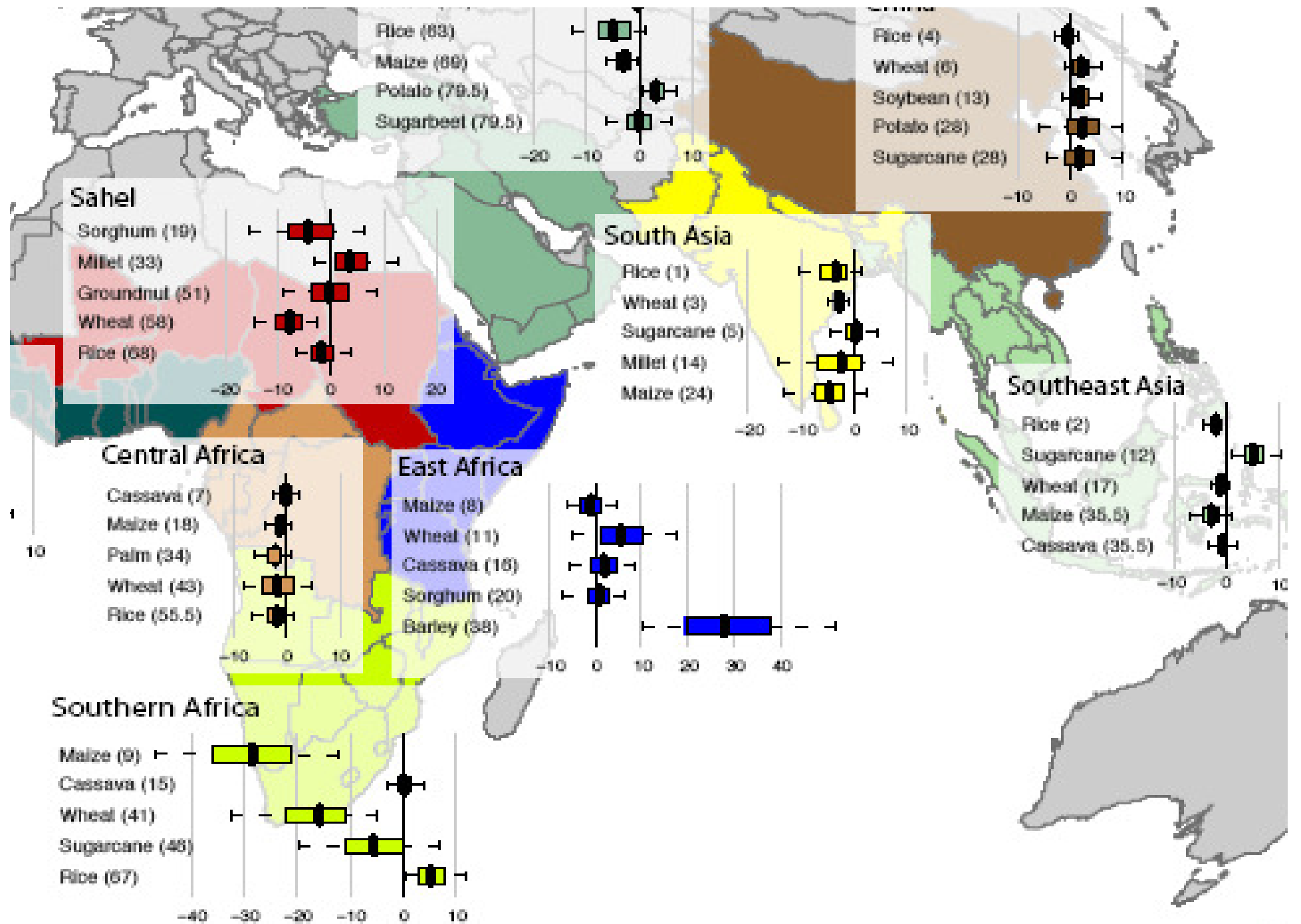


Impact of Climate Change: Crops



Projected impacts of climate change by 2030, for top 5 most important crops in each region
 Boxes represent 25th-75th percentile of model projections, whiskers 5th-95th, and dark line the median projection.
 Number in parentheses is the overall rank of the crop/region in terms of importance to global food security.





Impact of Climate Change: Wild relatives



<i>Arachis</i> species	Change in area of distribution (%)	Predicted state in 2055
<i>batizocoi</i>	-100	Extinct
<i>cardenasii</i>	-100	Extinct
<i>correntina</i>	-100	Extinct
<i>decora</i>	-100	Extinct
<i>diogoi</i>	-100	Extinct
<i>duranensis</i>	-91	Threatened
<i>glandulifera</i>	-17	Stable
<i>helodes</i>	-100	Extinct
<i>hoehnii</i>	-100	Extinct
<i>kempff-mercadoi</i>	-69	Near-Threatened
<i>kuhlmannii</i>	-100	Extinct
<i>magna</i>	-100	Extinct
<i>microsperma</i>	-100	Extinct
<i>palustris</i>	-100	Extinct
<i>praecox</i>	-100	Extinct
<i>stenosperma</i>	-86	Threatened
<i>villosa</i>	-51	Near-Threatened

Our conclusions



- Collecting
- Evaluation and use
- Availability
- Information



Thank you

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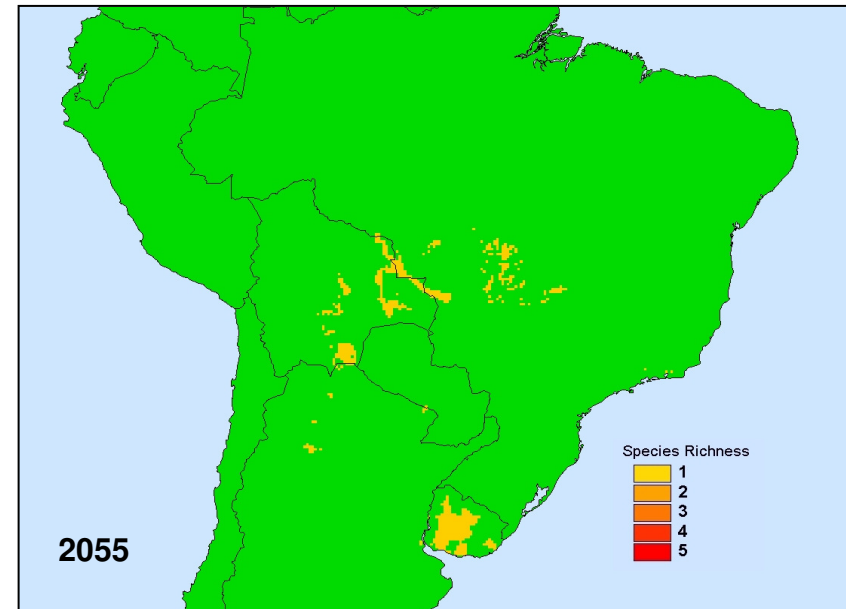
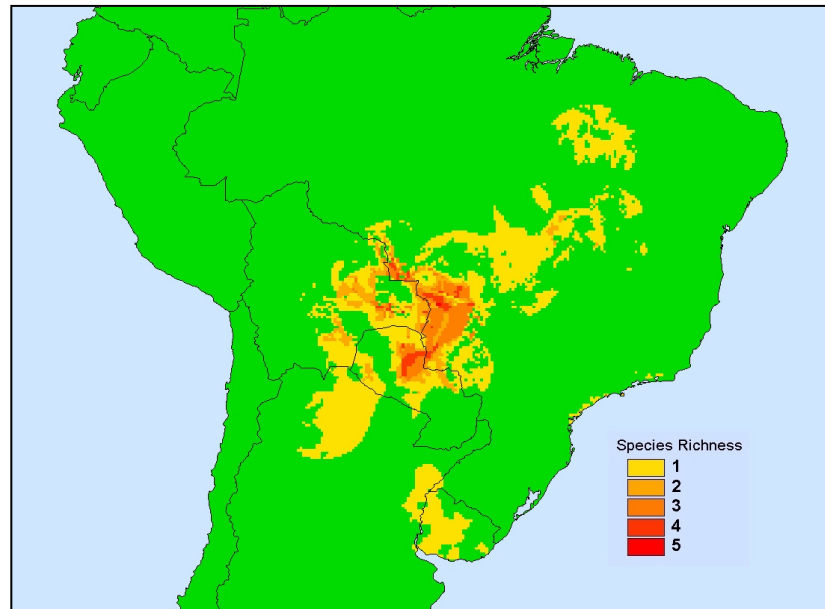
Gaps in *ex situ* collections



Percentage of genepool remaining to be collected

Crop	Estimated mid-1980s percentage	Estimated 1986 percentage	Estimated mid-1990s percentage
Wheat	10	5	5
Rice	8-15	30	5
Maize	2	10	5
Sorghum	25	20	20
Pearl Millet	<30	-	20
Potato	10-20	5	5
Sweet potato	>50	40	50
Cassava	25-33	-	65
Soybean	30	-	40
Common bean	<50	50	35

Impact of Climate Change: Wild relatives



Arachis



Promoting use



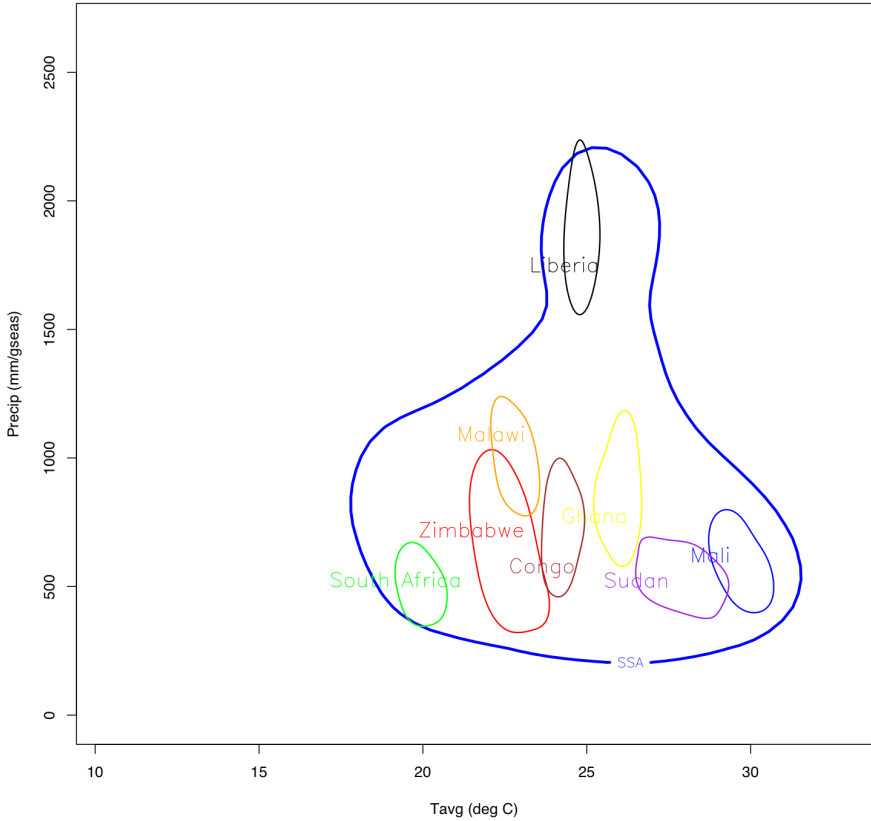
- Competitive grant scheme for evaluation
- Partnership with FAO for Global Initiative on Plant Breeding



Interdependence



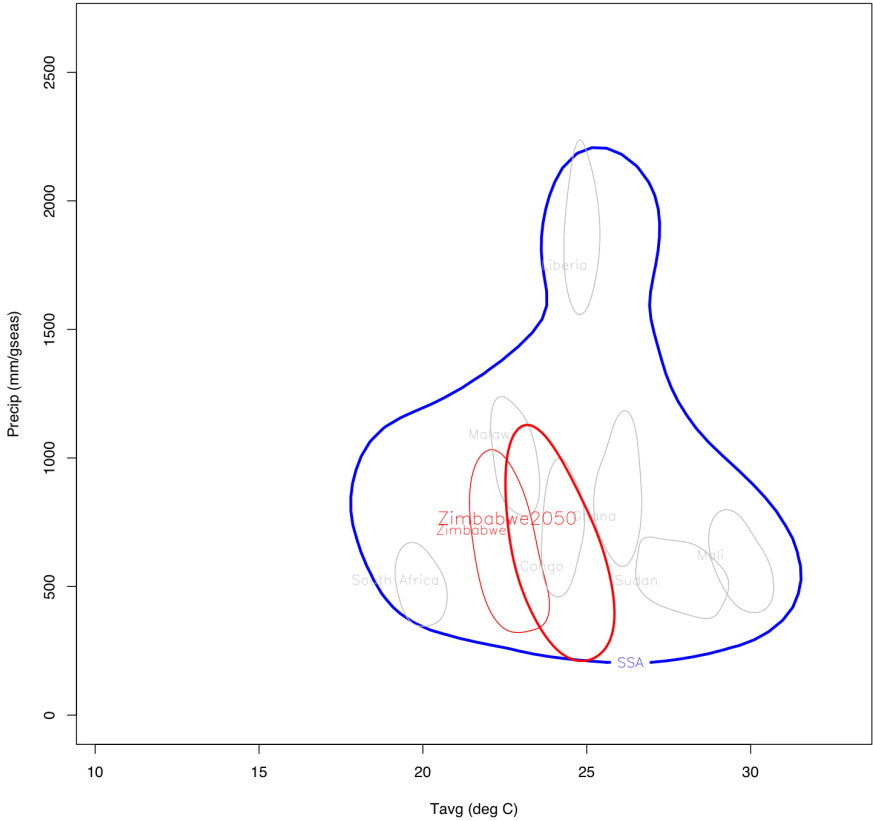
SSA 1961–2002 gseas countrywide avgs, with selected countries



Interdependence



SSA 1961–2002 gseas countrywide avgs, with 2050 zimbabwe data



Information



- Data management system for genebanks
- Searchable, global accession-level PGRFA information system

