



ClimDev-Africa

Climate change and agriculture in Africa – analysis of knowledge gaps and needs

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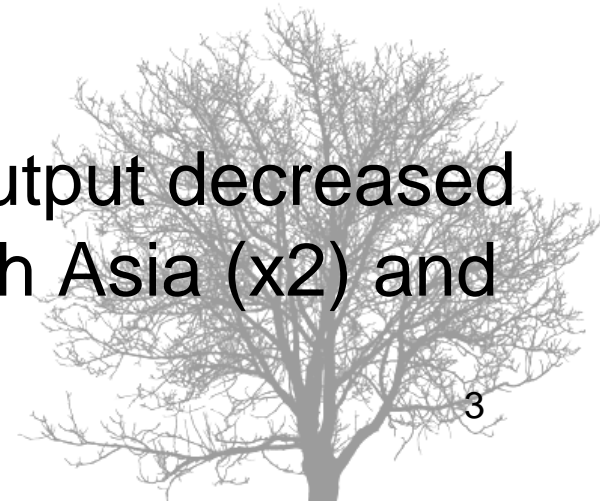
Outline

- Introduction
- Agriculture in Africa
- African Agriculture in International Agreements
- Knowledge Gaps and Needs
- Key recommendations



Introduction

- Average contribution to GDP – 15 %, up to 50 %;
- Persistently underperformed for much of the past half century;
- Between 1998 and 2008, number of hungry people increased by 20%;
- Yield decline: 1967 to 2007, farm output decreased in Africa (by ~30%), increased South Asia (x2) and in East Asia (x3);

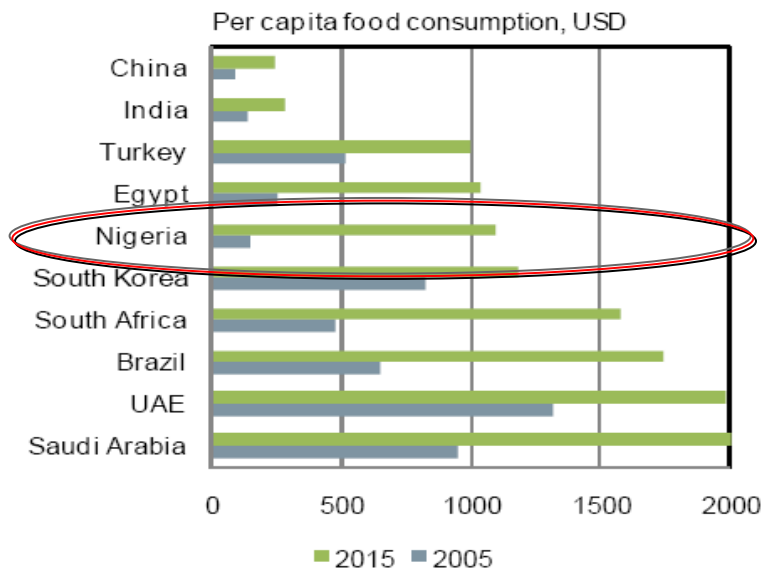


Why the poor performance?

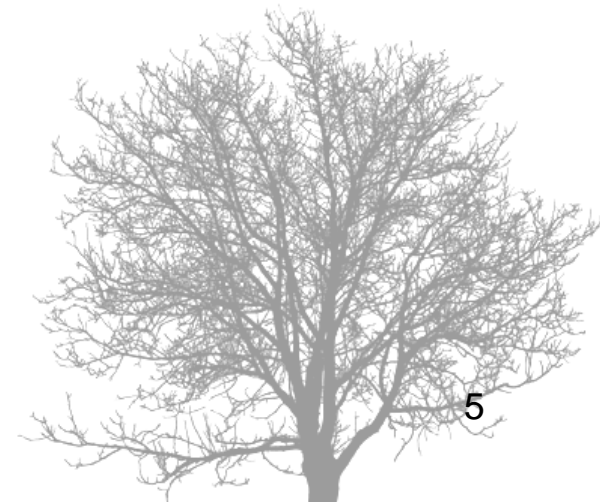
- Low investment by African governments:
 - Africa = 4% of budget; Asia = 14%
- Rain-fed: only 6.5% of African farmland irrigated; Asia = 40%
- Low use of fertilizers per ha = Africa 10 times (10 kg) less world average (110 kg), 20 times less than Europe
- Post harvest grain losses = USD 4 bn/yr (15% of output)
- Other challenges: natural resource degradation (land, soils and soil nutrients); lack of access to credit.

Opportunities for African agriculture

- Global population – 9 bn by 2050, food production needs to increase by 70% (USD 83 bn annually)
- Rising incomes and changing diets



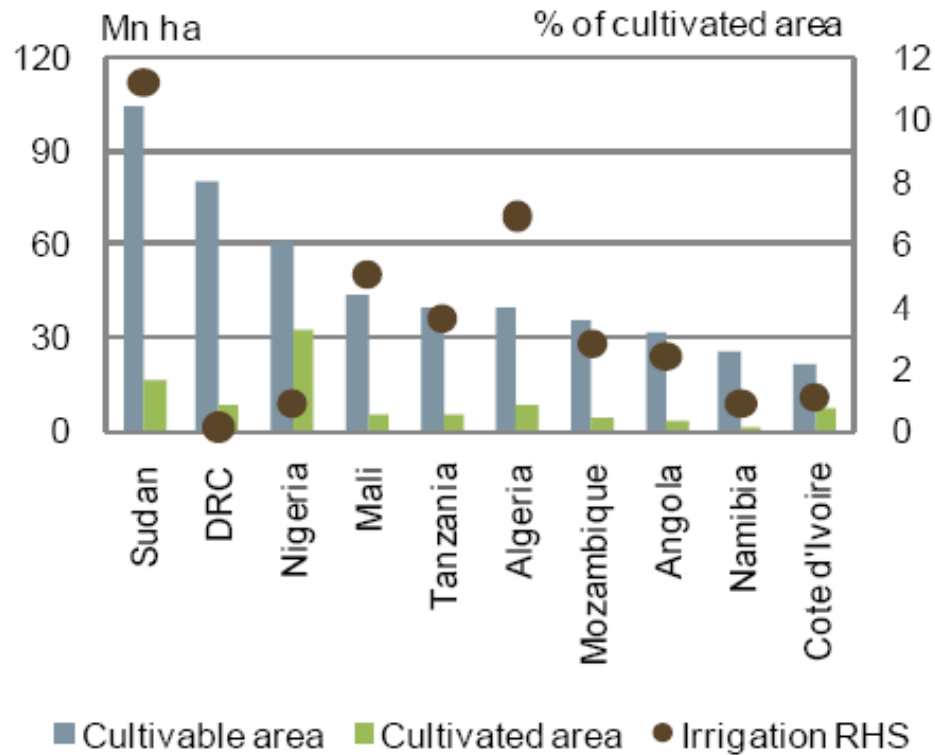
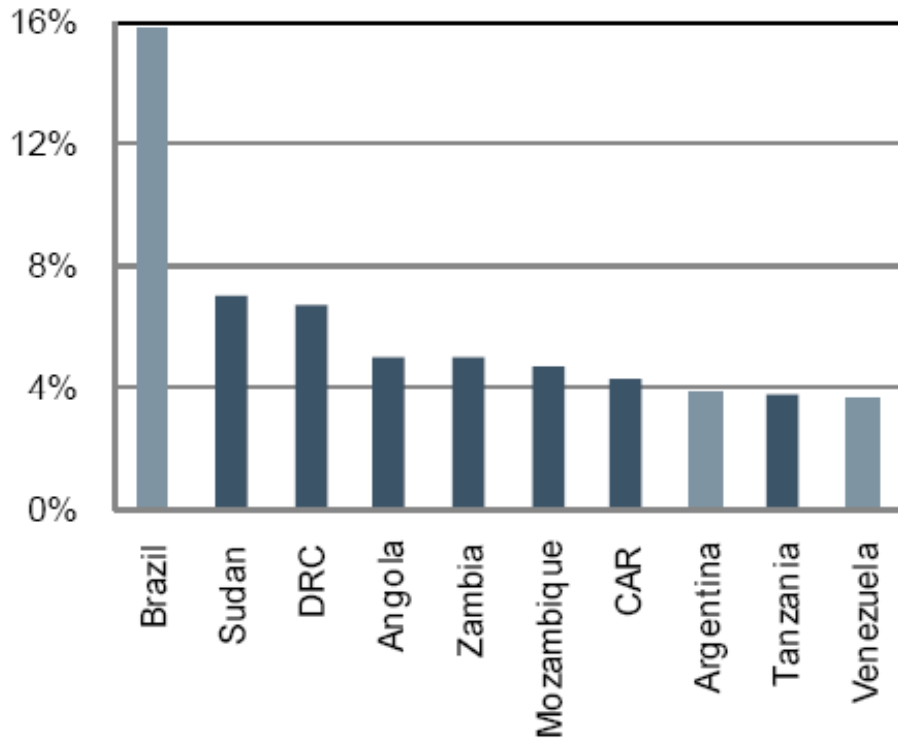
Sources: EIU, Standard Bank Research



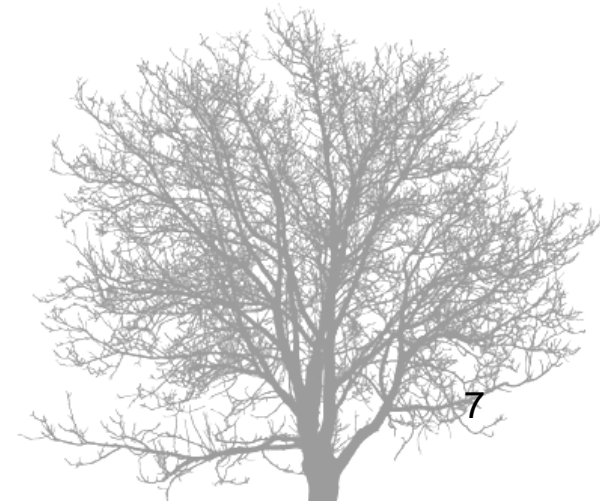
Opportunities for African agriculture

- Large untapped agricultural potential – over 60% of cultivable in Africa (31% in Latin America)

Percent of world total

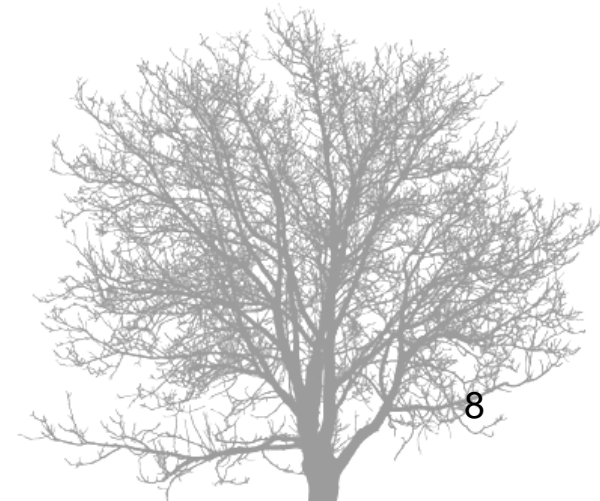


Climate change



Knowledge gaps for agricultural policies

- Uncertainty about impact of CC and CV on agroecosystem (pests, diseases and water)
- CC predications – downscaling from GCM to RCMs
- Impact on agricultural water supply
- cycles – time horizon mismatch
- Weak knowledge sharing systems



African Agriculture in International Agreements

- Needed – a common voice for African governments and negotiators – experts in agriculture and other sectors (it is not an academic exercise);
- African negotiators need to: underscore the role of agriculture in Africa; the impact of CC (short term and long term) amidst other factors like population growth, economic growth and poverty; determine cost of improving yields; costs of adaptation;
- Negotiators need to be better aware of differences of requirements and contributions of African Agriculture to climate change versus other continents.



Knowledge for international negotiations

- In spite of present uncertainties of impacts of climate change on agriculture there are very robust *no regret* recommendations which should be highlighted for action oriented results .
- Increasing land use efficiency (cf presentation 12)
- Increasing input (mineral, water, seeds) to achieve higher land use efficiencies. Knowledge is sufficiently established.
- Asking for international funding to increase land use efficiency – experiences from African counties



Policy recommendations

- International negotiations: close engagement of experts (scientists, economists, technicians) to **determine cost and benefits of CC adaptation** in Agriculture for sustainable food production.
- Need to improve methodologies for quantifying the GHG emissions avoided by increased land use efficiency in Africa (improved irrigation) – promote no regret options.
- Investment in irrigation and management of regional water resources and river basins (role of RECs).
- Technology adaptation in agricultural production.

Thank you

ACPC

