

Achieving SDG in Africa

Scaling green-blue revolution

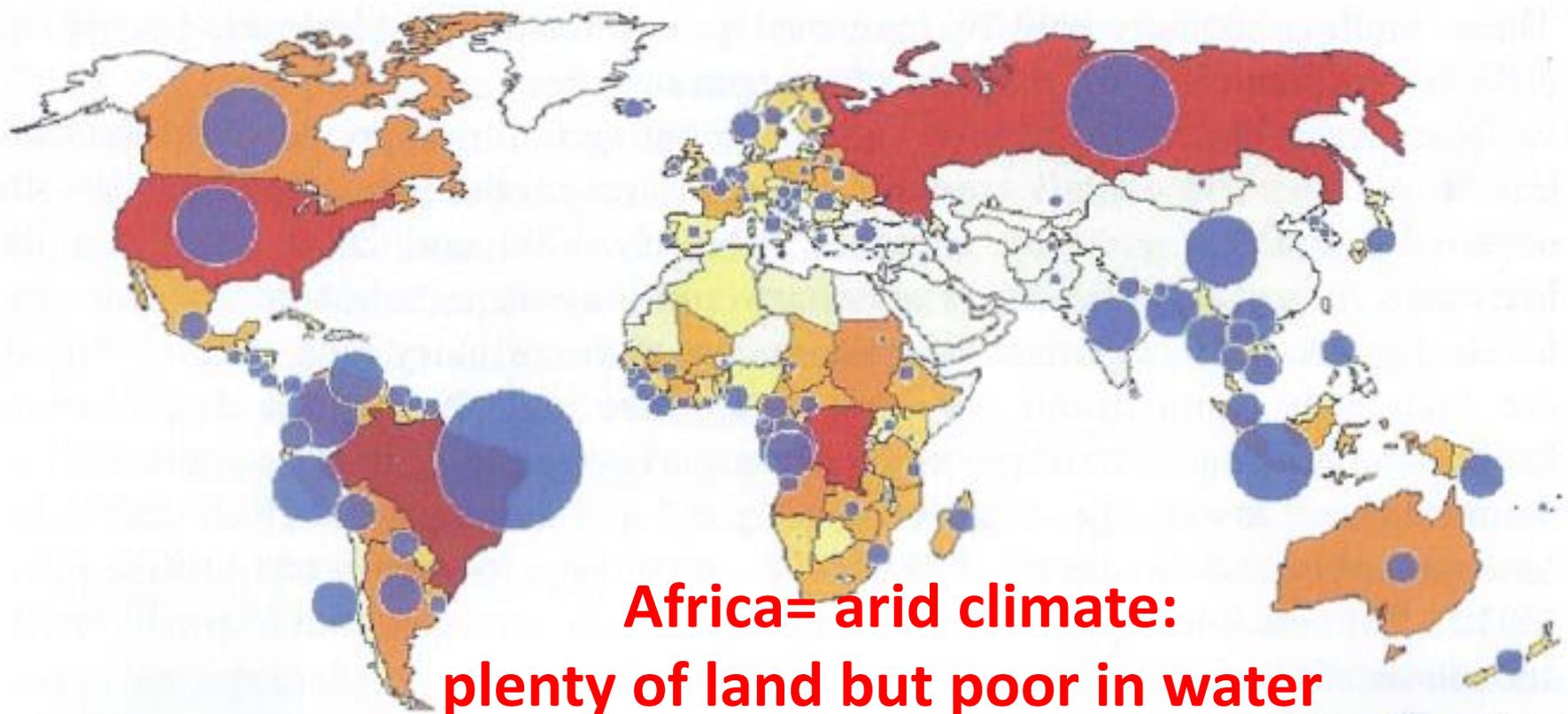
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Sustainability Science for Biosphere Stewardship



Africa is different

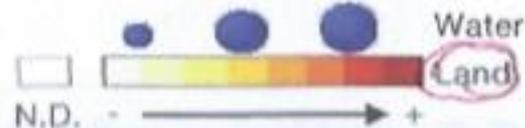
Available land and water for crop production



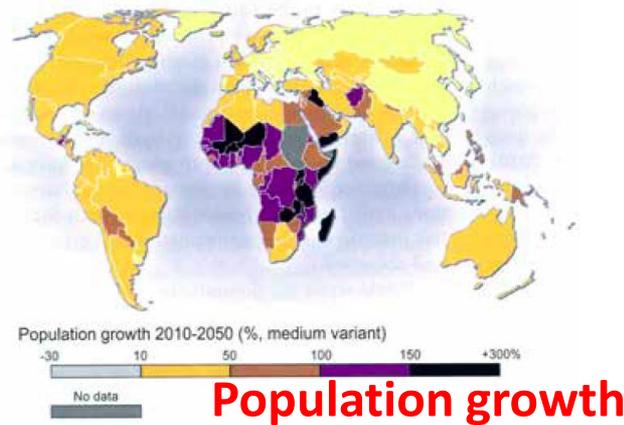
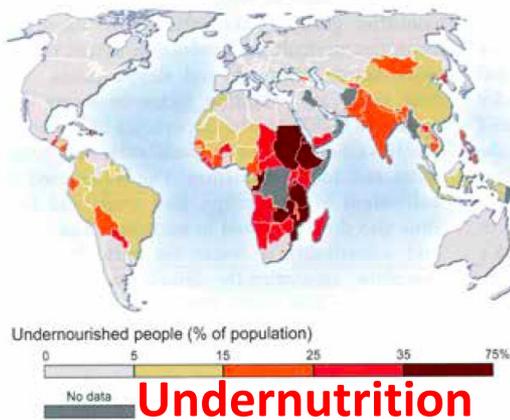
**Africa = arid climate:
plenty of land but poor in water**

Source: FAO 2007

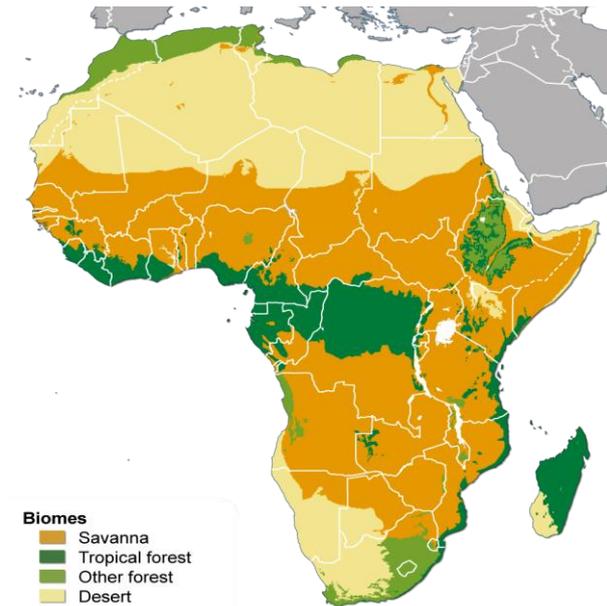
Note: Area harvested in 2004. Arable land in equivalent potential.
Source: FAO, Land Resource Potential and Constraints at Regional and Country Level (2000); FAO (2007). Elaboration: ICONE. Map generated by Philcarto, available at: <http://www.philcarto.com/>



Undernutrition, rapid population growth, dominating savanna



Dryland landscape dominates

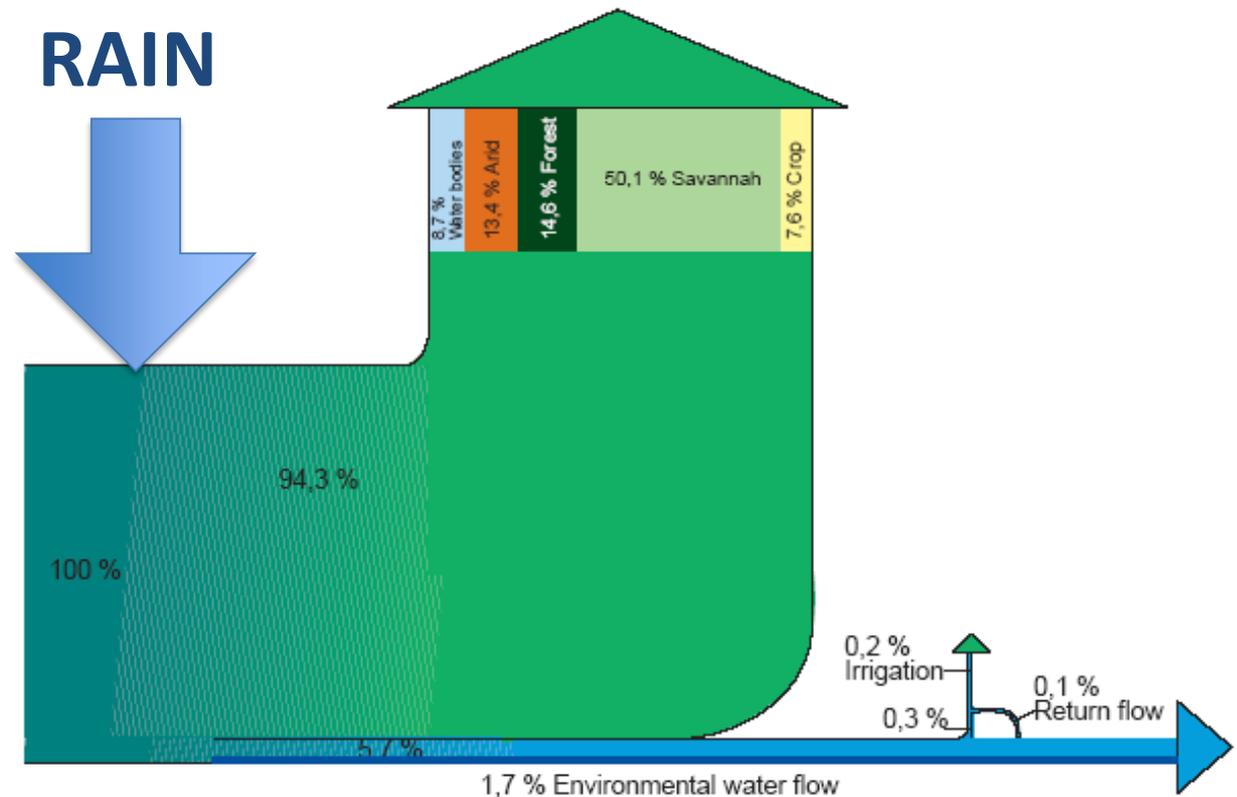


Except for mountains most rain evaporates on its way to the river

Result Kenya:

* only limited runoff

* most water is green



Only 13 years lead time till 2030

SDG hunger allev. goal needs rapid action

◦ **Kofi Annan**

”time for African farmers to wage a uniquely African Green Revolution”

• **different water availability situations: S Asia vs Africa**

-S Asia: plenty of blue water running down from Himalaya

-Africa: no Himalaya, only local water towers

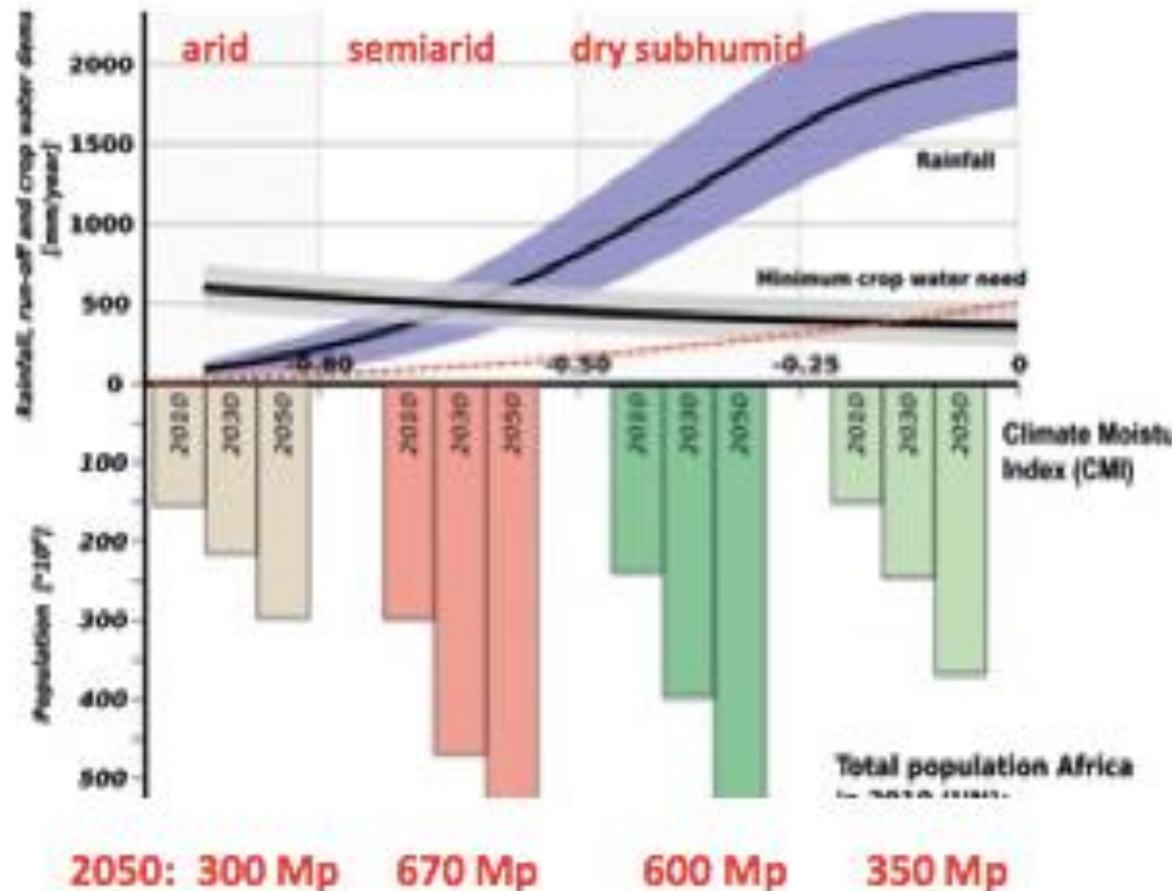
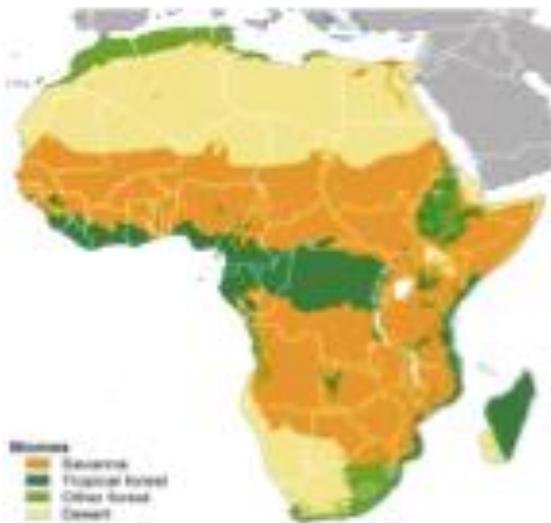
◦ **World Water Week 2016:**

-Call for an African Green Water Revolution

Savanna water availability situation

supplementary irrigation needed in subsistence farming

7/23



Large parallel water requirements

- **socioecon developm:** water supply urban-industr-energy
- **generating purchasing power :** pay future food import
- **food security:** supplem irrigation during dryspells

→ wise water policy:

- blue water for socioeconomic component
- rain water storage for subsistence agriculture
- national water resources planning
- involve policy makers+business sector

2016 Call for an African Water Revolution

MESSAGES

1. water scarcity

- stumbling block for socio-economic development

2. water key to attain SDGs:

- including Goal 2 on food prod and hunger alleviation

3. shift in thinking essential:

- blue water needed for socio-economic
development

→ green water = logic way to deliver Goal 2

Basic message

- **Savanna region except close to large river corridors**
 - blue water generation low
 - most rivers ephemeral
 - massive water requirements for econ devel
 - extreme population growth
 - only 13 years till 2030
- benefit from rainwater harvesting for supplement irrigation in subsist agriculture

This Symposium

- **critical action for implementation of
African green water revolution**
 - **doability, possible pathways**
 - **African ownership**