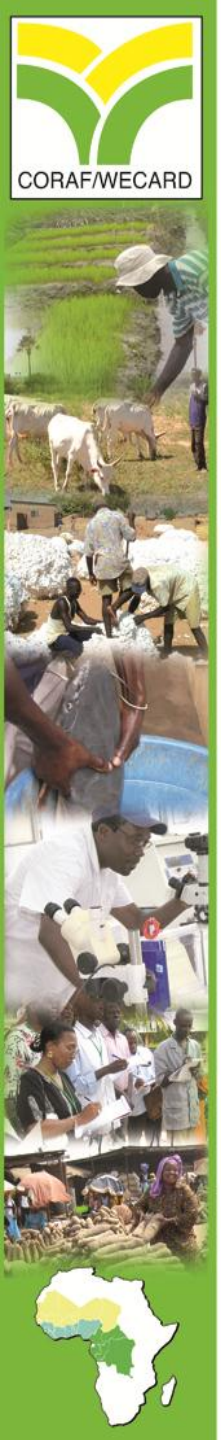


Sustainability of water resources in Agriculture

Discussion points on paper:

Modelling Steady-state Irrigation Production

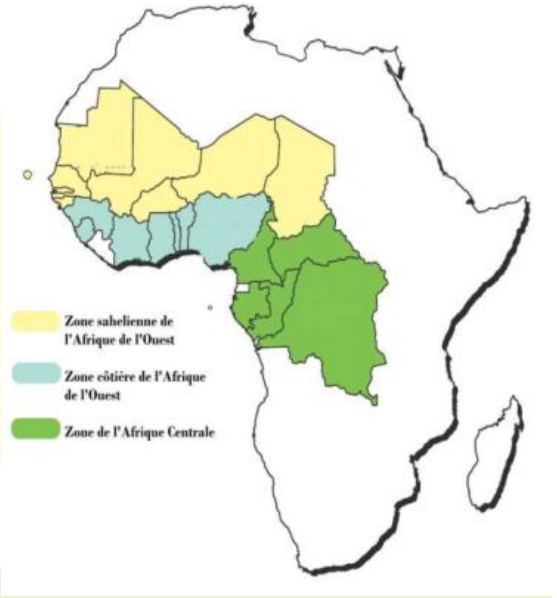
A. Jalloh

Manager, Natural Resources Management Programme

CORAF/WECARD

Dakar, SESEGAL

Overview of CORAF/WECARD



Promote sub-regional cooperation

Advocate for financial investments

Solve common agricultural research and development problems

Contribute to the transformation of agriculture in West and Central Africa

Key points of the paper

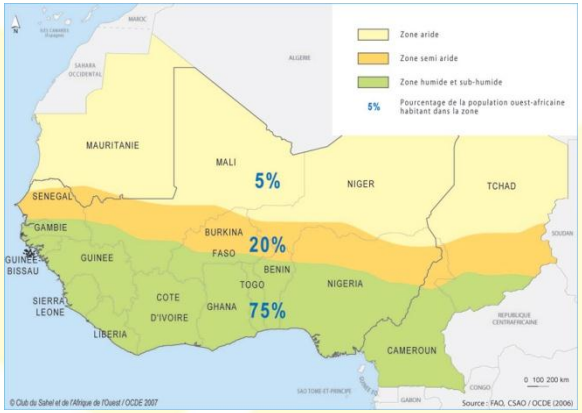
- It is our view that the question of sustainability rests on whether an equilibrium steady-state natural resource use and economic feasibility exists.

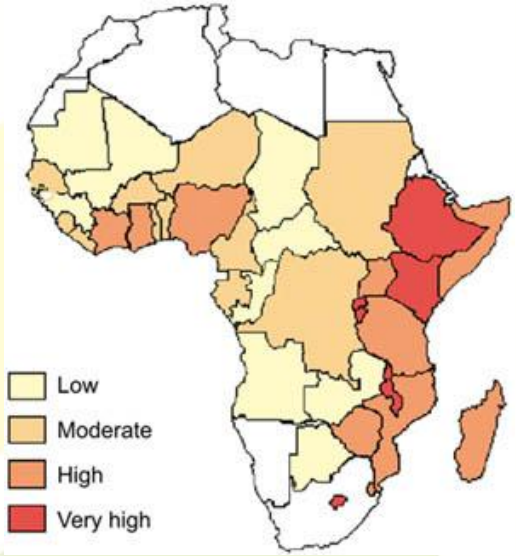
- Sustainable irrigation systems can only be achieved by substituting rotational fertility and pest controls for some of the current level of applied chemical technology.

- Encourage future research on what the process of achieving sustainable irrigated agriculture involves, and may show what technological shifts would be needed to achieve sustainability in both water quantity and quality while maintaining viable economic production.

Sustainability - Implication for West Africa

*Population in 2010 was about **290 million and its growth*** projected to increase by nearly 50 percent in 2050,





Over the last twenty area under cultivation in West Africa increased by **229%**

The West Africa region imports about **40 %** of its rice supply

*Sustainable intensification will take place under conditions of increasing **resource scarcity and climate change**.*

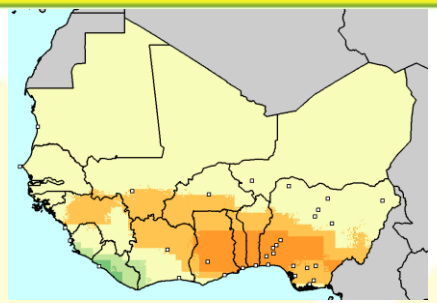
The issues of sustainability

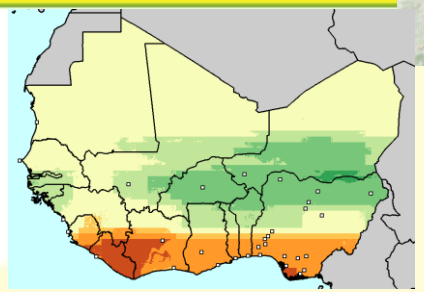
- Value systems and scale
- Current socio economic circumstances
  - Rotation
  - Mixed cropping
  - Current fertilization and irrigation levels
  - Shifting cultivation

Africa's carbon foot print

- While Africa accounts for only 4 percent of global carbon dioxide emission, more than 60 percent of the regions emissions are due to deforestation and land degradation.

Issues for consideration





- Climate change
- More appropriate technologies for efficient resources use
- Accounting for negative environmental externalities of practices
- Accounting for environmental services to benefit farmers
- Social considerations particularly gender

THANK YOU – MERCI

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