Economic Commission for Africa
ACPC African Climate Policy Centre

First Annual Conference on Climate Change and Development in Africa (CCDA-I)

United Nations Conference Centre, Addis Ababa, Ethiopia, 17-19 October 2011

Blue, Green and Grey Water Footprint to Turnover Climate-induced Challenges into Development Opportunity in Africa

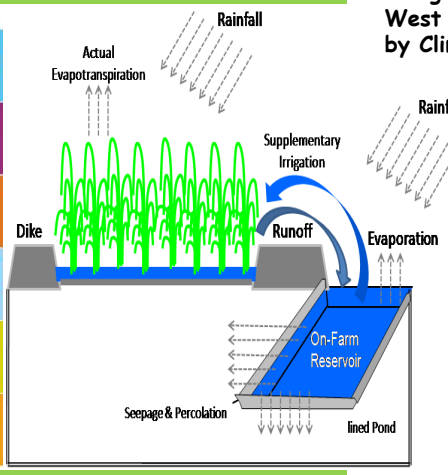
Seydou Traore[1] & Seleshi B. Awulachew [2]

[12]African Climate Policy Center (ACPC/FSSD)- United Nations Economic Commission for Africa (UNECA)

Introduction

▪ …. Water is an essential and central resource in Africa, and it is an increasingly hot topic as global fresh water shortages are expected to increase with climate change. Water is a crucial enabler and constraint for agricultural production and productivity alongside seed, fertilizers, agronomic practices, and pest and diseases control. Water footprint management is an entry point to reduce pressure on water resources, since it aims to minimize the indirect and direct use of water in the production and supply chain that may require water management in agriculture, livestock and industry. Green, blue and grey water footprint management paths in the face of climate change may turnover climate-induced water challenges into development opportunity in Africa.

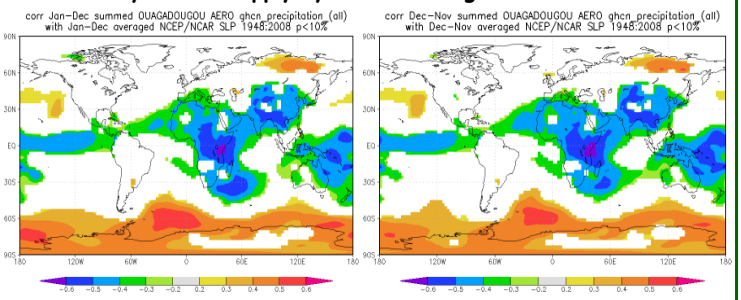
Water Footprint Examples, and On-farm Reservoir for Optimizing Rainwater Usage



Water footprint and climate: Challenges and Opportunities

▪ …. Water is a significant contributor to agriculture, but also a victim of climate change. Blue water (surface and ground waters i.e. rivers and lakes); Green water (natural rainfall essential for vegetation); and Grey water (volume of water polluted as a result of the production process) are affected by climate. Water, agriculture, and climate change are inextricably linked, they are pieces of the same puzzle and therefore it is not practical to look at them in isolation, and they are interconnected with other issues, such as societal values, ecosystems and livelihoods. Therefore, water resources should not be treated as a single issue, but as a comprehensive component in relation with the ecosystem, land, economy, social, security, and policy for coping with climate change in Africa.

water footprint under climate change consideration in Africa are the supply utilities; inadequacy of water storage irrigation systems, weak supply network, inappropriate technologies, increased evaporation, weak adaptability of crop to water stress; weak adaptive capacity and response; and high vulnerability of the supply system to drought; etc…

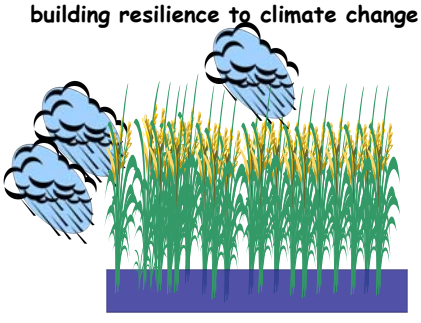


Source : http://climexp.knmi.nl/start.cgi?someone@somewhere

The above figure shows that, statistically there is a significant connection between precipitation fluctuation and rising sea level for the station of Ouagadougou, Burkina Faso, West Africa region, showing the threatened water resources by Climate Change.

Key Messages

▪ … As way forward, we call for: *Reduce water footprint while increasing productivity such as through irrigation efficiency; *Promote a Green Revolution in water sector (land, water-energy-water, social, security and ecological systems leading to human development in Africa); *Develop and apply the Water Footprint concept to support the transition to sustainable and equitable water use and management; *Protect and optimize the usage of all types of water in the production chain; *Adopt innovative water control and management system such as rainwater harvesting and other mechanisms involving storage continuum *Scaling-up and applying best knowledge and practices for sustainable water resources management for building resilience to climate change.



High Evapotranspiration Loss Increase Water Footprint

References

Gppn (2009) Water and Climate Change Adaptation: Key Message for the 15th Conference of Parties (COP-15)