

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

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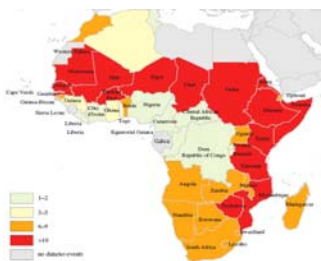
The Impact of Climate Change in Africa

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Introduction

- The surface temperature of Africa has started to rise since industrial revolution
- The frequency of extreme events such as droughts, floods and storms are expected to increase with time
- The sea levels are rising and coastal areas are under threat of inundation especially the coastal areas of West Africa where most of big cities are located.
- Malaria epidemic will affect the highland areas due to the rise of surface temperature

Drought events per country from 1970-2004



- Countries shaded with red colour had more frequent drought (more than 10 times within the period)
- Countries shaded with brown colour had drought events of 6-9
- Areas shaded in white colour are less vulnerable to drought.

Source: Adapted from Noojin, Leah 2006. Factors that influence Famine in Sub-Saharan African Countries

Floods



(www.dawn.com/2011/09/01/flooding-in-southwest-nigeria-kills-102-people)

2007 flood of Uganda

August 2011 flood of Nigeria

Current Drought in East Africa



- Cattle died as result of drought of 2011 in Ethiopia, Kenya and Somali
- The La Nina event in 2011 causes the main rain season (MAM) erratic and deficient for much of Kenya and Somali as well southern and southeastern parts of Ethiopia

(static.guim.co.uk/sys-image/guardian/pictures)

Droughts and Floods

- Floods and drought are becoming recurrent events of tropical Africa (this may associated with climate change)
- The two extreme events are killing millions of peoples and devastating properties
- The current drought of East Africa is extremely severe in Somali.



Mankonkoni Bridge on the Thuli River, Zimbabwe, destroyed by Cyclone Eline. It also caused huge devastation in life and properties

Tropical Cyclone Eline (reached category 4 in southwestern Indian Ocean in February 2000 (source http://en.wikipedia.org/wiki/Cyclone_Leon%E2%80%93Eline))

Climate change and Malaria



Distribution of the primary Malaria agent

- Current distribution
- Possible extended distribution by 2050 (suitable climate)
- Presently suitable, but unsuitable climate by 2050

Current distribution, represents maximum extent of the distribution of the *falciparum* Malaria parasite.

The scenario is based on the high scenario from the HadCM2 experiment. Source: Rogers & Randolph. *The Global Spread of Malaria in a Future, Warmer World*. Science (2000:1763-1766).

Source <http://maps.grida.no/go/graphic/climate-change-and-malaria-scenario-for-2050>

African Coastal Areas Under Future Inundation Threat

