Vulnerability and Climate Change
Hot Spots in Africa: Mapping based on Existing Knowledge

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Outline

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Introduction

- The warming of the climate system is unequivocal
- Climate change increases climate variability and threaten the attainment of MDGs
- A number of African countries experience extreme weather and climate e.g., the East African drought
- The rise of sea level of African coastal cities is eminent
- Vulnerability and Adaptation information needed to formulate policies that enable climate change to be mainstreamed into development at all levels
Temperature and Rainfall Trend and Projection

- Warming trend of 0.15 °C per decade
- Rainfall has decadal variability in Sahel and rainfall variability in East Africa associated with ENSO
- The temperature expected to further rise at the end of this century
- The rainfall will have an increasing trend in East Africa and in north and south Africa
Extreme Events

• Extreme events such as droughts, floods and storms are increasing with time
• Hydro-meteorological disaster increased from 7 events per year in 1980s to 10 events per year from 2000-2006 in East Africa
• The tropical cyclone in the southwestern Indian Ocean is uncertain (whether it is increasing or decreasing trend)
Vulnerability and Impact on Water Sector

- Climate change has no uniform impact in the continent
- Climate change will pose addition problem in semi-arid and arid parts of Africa
- The future projection indicated that 350-600 million peoples will be under water stress by 2050
- The impact of climate change in water is immense.
Vulnerability and Impact in Agricultural Sector

- The agricultural sector is the most sensitive sector to climate change because most of the economies of African countries depend on it.
- Most of sub-Saharan African Countries has low adaptive capacity
Vulnerability and Impact in Coastal Areas

- 40% of the population live in coastal cities of West Africa (under threat).
- The sea level is rising (0.17m 20\textsuperscript{th}C and .48m 21\textsuperscript{th}C).
- Coastal areas along river deltas are the most vulnerable as shown in the figure (Nile, Niger, etc.).
Vulnerability and impact in health Sector

• Extreme air temperature and air pollution are hazardous to health
• Floods, droughts and contaminated water can pose disease
• Climate change may exacerbate the epidemic of climate sensitive diseases such as malaria, cholera and meningitis
• The vulnerable hotspots are small island, urban areas, mountainous areas and children
• Adaptation strategies are proposed to cope with climate change (public health interventions, cut greenhouse gas emissions, …)
The Role ACPC

• ACPC, working with various institutions and stakeholders will play roles to enhance science, focus on adaptation actions to the vulnerable climate change hotspots by
  – Identifying relevant interventions
  – brokering knowledge
  – doing advocacy work
  – building capacity
  – mobilizing resources and
  – devising ways to formulate appropriate policies by African governments
Recommendations

• The identified hotspots for climate change require further refined work to come up with critical issues

• Practical actions must be developed for the climate change hotspots for various sectors so as to reduce the risk due to climate disaster

• Policy makers must be made aware of the risks associated with these hotspots

• The climate hotspots has to be funded for adaptation through various sources.
Thank you

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For further information