



ACC DAR Adapting to Climate Change in Coastal Dar es Salaam



Climate Change Adaptation in Dar es Salaam: Local Government Opinions on Possible Interventions

*Urban Impact of Climate Change in Africa: Planning with Scant
Information*

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Outline

- Climate change and development – Tanzanian context
- Implications of climate change to the economy
- Local Government Opinions on Possible Interventions
- What needs to be done as a way forward

Climate change and development – Tanzanian context

- In Tanzania, climate change has and is directly affecting national development in different ways that include:
 - *drought, which reduces commercial agricultural outputs and hydropower generation, and*
 - *floods, causing economic damage*
- Extreme weather events such as droughts and floods has negative impact in various sectors and hence the national economy of the country

Location of Tanzania and Dar es Salaam in Africa



Examples of Climate change induced impacts in Dar es Salaam



Implications of climate change to the national economy

➤ **Hydropower:**

- supplies 55% of Tanzania's electricity, and is highly dependent on hydrological flows at any point in time.
- In this way, drought events have reportedly cut economic growth by more than 1% (World Bank).
- It is estimated that increased temperatures will also reduce the efficiency of thermal generation, leading to costs of about \$10 million by 2030 (GCAP *et al.* 2011).

➤ **Agriculture**

- if rainfall decreases by 15% as predicted by some models for some areas by 2030, then production could be expected to decrease in those areas by up to 16% (1 million tonnes/year)

Implications of climate change to the national economy

➤ **Tourism financial loss: :**

- *About 20% of Tanzania's area is protected, and **tourism generates significant income to the country.***
- *Payet & Obura, 2004, IPCC, 2007 report that in the Mombasa – Zanzibar areas, a 30% loss of corals resulted in tourism losses of the order of US\$12-18 million.*

➤ **Impacts of CC on human health:**

- *Climate change will lead to an expansion in suitable range for malaria as a result of increasing temperature, and reduced stream flows.*
- *It has been estimated that the increased disease burden in Tanzania could cost the state some \$20 – 100 million per year by 2030, and \$36 – 150 million by 2050, (GCAP et al. 2011).*
- *This estimate does not take into account the potential loss in human productivity as a result of high temperatures.*

Overall impacts of CC on economic output

- Aggregate models suggest that climate change will lead to losses of 1.5 – 2% of annual GDP by 2030 (GCAP *et al.* 2011).
- This implies economic losses of at least \$1.5 billion per year by 2030 (in 2006 prices).
- The cumulative effect of these losses is likely to reduce Tanzania's chances of achieving key economic and development targets, and to delay its plans for achieving middle income status (GCAP *et al.* 2011).

Potential approaches for addressing climate change induced impacts

- *Ensure that climate change adaptation activities are mainstreamed into plans and programmes*
- *Ensure that climate change adaptation activities are included in the municipal and LGA budget*
- *Ensure that multi-stakeholders are involved in the implementation of adaptation activities*
- *Ensure that climate change adaptation is mainstreamed in the decision making processes*
- *Ensure that municipal councils have the ability to attract climate change adaptation funds from various sources*

Local Government Proposals for Possible Interventions

- *ACC – Dar Project developed capacity to local government experts on climate change adaptation*
- *One of the main areas for capacity building was on mainstreaming climate change adaptation to the local government plans and programmes*
- *The DCC and the three municipalities (Kinondoni, Temeke and Ilala) were needed to develop proposals on interventions/activities that are needed in the municipalities to address impacts of climate change*
- *Four proposals were developed*
- *Various issues of interest from the proposals need to be implemented*

Major issues proposed for implementation

- Awareness creation on the climate change induced impacts to the communities (DCC)
- Rain water harvesting as a climate change adaptation strategy for reducing seawater intrusion in coastal area of Dar es Salaam (Kinondoni and Ilala)
- Conservation of water resources along the coastal belt as a strategy towards minimising salt water intrusion (Temeke)

Local Government Proposals for Possible Interventions

Dar es Salaam City Council

- **To empower Dar Es Salaam Community on adaptation to Climate Change through:**
 - **Capacity building and climate change awareness through:**
 - identifying flood prone areas in Dar Es Salaam
 - conducting awareness sessions through trainings and meetings on flood impacts and community adaptation measures to selected areas

Local Government Proposals for Possible Interventions

Kinondoni Municipal Council

- **Rain Water Harvesting as a Climate Change Adaptation Strategy for Reducing Seawater Intrusion in Coastal Area of Dar es Salaam**
 - Developing capacity by training primary school teachers on rain water harvesting.
 - Establishing rain water harvesting system/infrastructure in primary schools.
 - Improving health and water use behavior to the community.

Local Government Proposals for Possible Interventions

Ilala Municipal Council

- **Rainwater harvesting in schools to demonstrate adaptation to climate change in peri-urban areas of Ilala municipality**
 - Raise community awareness on CC Adaptation and rainwater harvesting in Primary school of Peri-Urban areas of the municipality
 - Install rainwater harnessing units in peri-urban primary schools in the Municipality.
 - Educate school children on rainwater harvesting and management.

Local Government Proposals for Possible Interventions

TEMEKE Municipality

- Conservation of water resources along the coastal belt of Temeke as a strategy towards minimising salt water intrusion
 - *Minimize saltwater intrusion into ground water conservation of water resources along the coastal belt of Temeke Municipality*
 - *To create awareness to the community on conservation of water resources*
 - *To reduce sea shore erosion along coastal belt*
 - *To provide sustainable sources of fresh water to the communities in the area*
 - *To provide alternative economic activities to the communities residing along the coastal belt to reduce dependence on mangrove resources*

How can these be implemented?

- *Developing joint project and programme proposals as a way to implement on the ground some of these activities;*
- *Ensuring that these proposals are integrated into the local government plans and budgets;*
- *Awareness creation to the local government staff working on the planning and budgeting on climate change issues especially adaptation to ensure that the climate change adaptation issues are financed by the local budget;*
- *Provide scientific evidence that climate change adaptation is/not funded fully by assessing the inclusion of climate change in Medium Term Expenditure Frameworks of the local government so as to advised them based on scientific evidence*



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THANK YOU

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