



ACC DAR Adapting to Climate Change in Coastal Dar es Salaam

Workshop on Mainstreaming climate change adaptation into urban development and environmental management plans and programs



CAPACITY BUILDING FOR ADAPTATION AT LOCAL GOVERNMENT LEVEL



SAPIENZA
UNIVERSITÀ DI ROMA

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Laura FANTINI

Sapienza University of Rome

laura.fantini@uniroma1.it

Capacity-building in the ACC Dar framework

WP 1: Increased understanding on PU dwellers' livelihoods and CC concerns and their options of autonomous adaptation

WP2: Provided methodologies for monitoring changes in PU settlements, for exploring CC vulnerability scenarios in relation to the phenomena of urban sprawl and groundwater salinization, for designing and mainstreaming adaptation initiatives

WP 3: Strengthened LGAs' capacities in integrating CC adaptation into their sector plans and strategies concerning urban development and environmental sectors

→ Capacity Building

→ Designing adaptation initiatives



Goals and Scope of the Capacity Building

Overall goal

To improve the effectiveness of LGAs initiatives in Dar es Salaam to support the efforts of those coastal PU dwellers, partially or totally dependent on natural resources, to adapt to CC impacts.

Specific objectives

- to enable LGAs' officials in the city of Dar es Salaam to gain understanding and knowledge about CC and adaptation related issues;
- to develop a training methodology tailored for the specific context;
- to design adaptation proposals, one for each authority involved, mainly addressing water scarcity and groundwater salinization as one of the main factors of vulnerability relying a large part of Dar's PU areas.



CC adaptation and LGAs

Assumptions

- LGAs are a crucial actor in designing and implementing CC adaptation measures

“There is a significant increase in the number of planned adaptation responses at the local level in rural and urban communities .Climate adaptation is context dependent and it is uniquely linked to location, making it predominantly a local government and community level of action.” IPCC 2014

- *LGAs’ role depends on the governance structure of countries (from those with strong concentration of political and economic power to a very minor role in governance and decision-making)*

- Challenges at working at local government level

“Local councils and planners have to face with the complexity of adaptation without adequate access to guiding information or data on potential CC impacts and local vulnerabilities. Even when information is available, they are hindered in their efforts on planning and implementing adaptation measures by the absence of applicable guiding framework to adaptation decision making.” IPCC 2014

- In most of the Sub-Saharan huge cities LGAs have to face a lot of big challenges to comply with their mandates

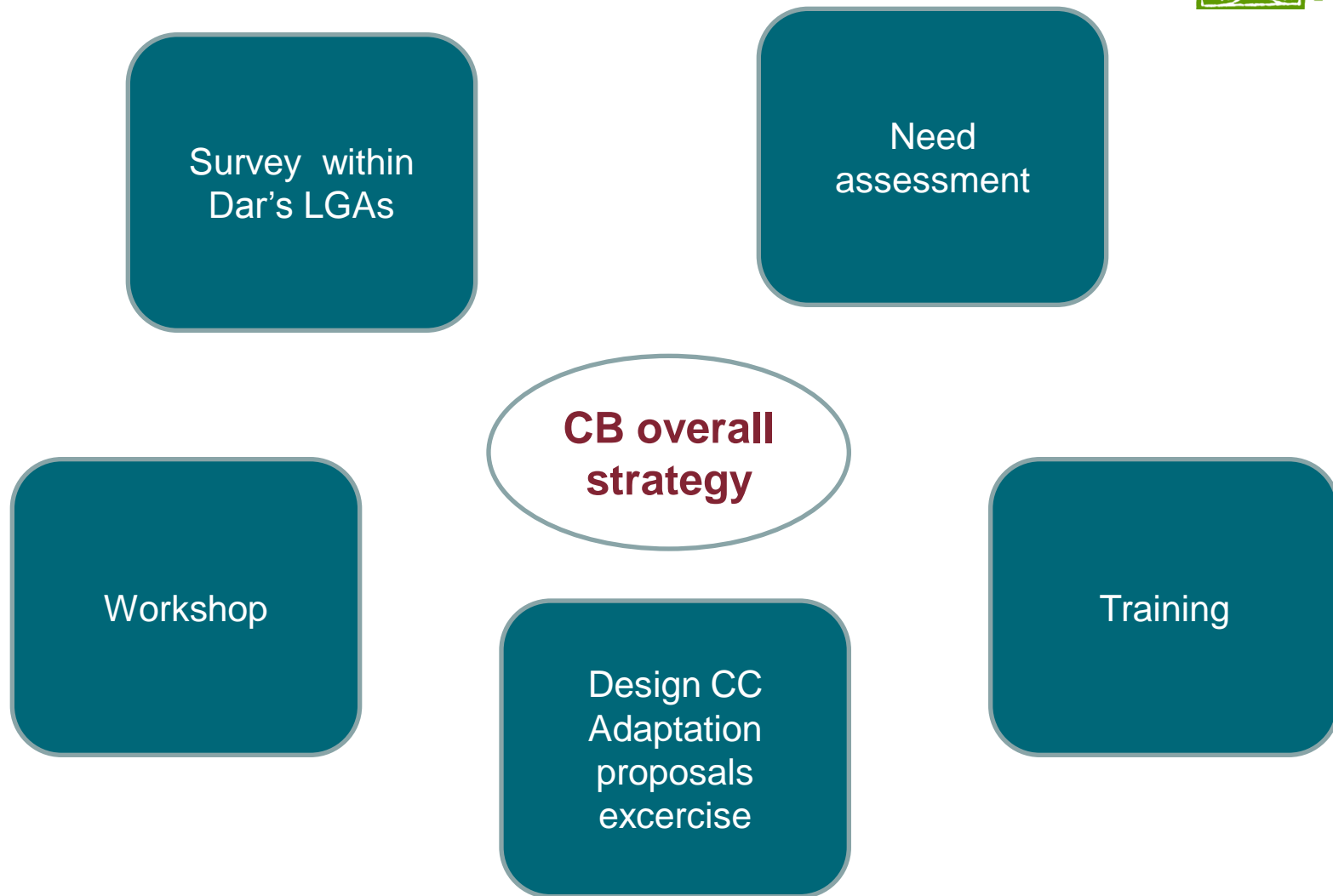
Working on CCA at local level presents a range of....

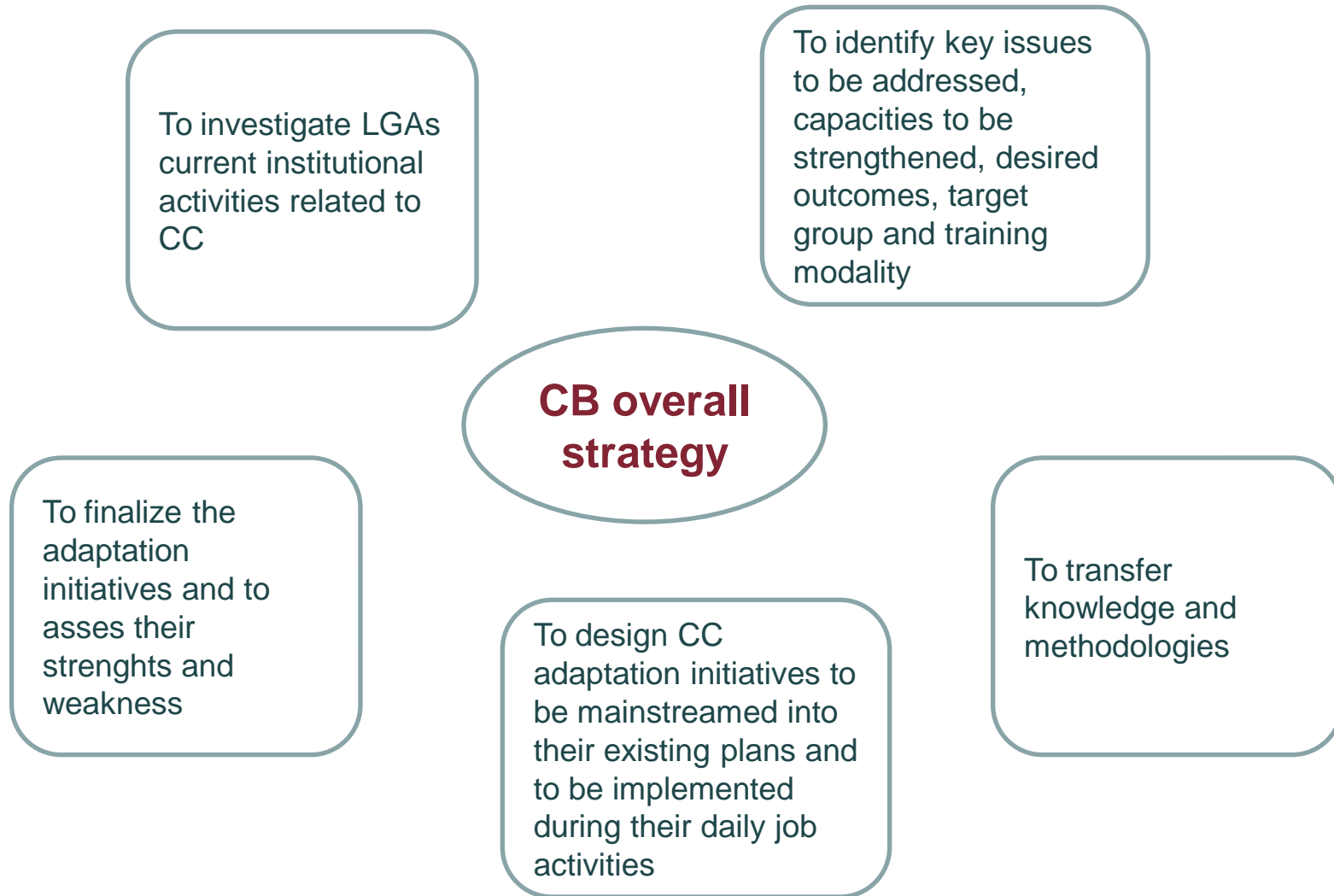
...obstacles

- Scarse financial capacities
- Difficult management of services and infrastructures in PU areas
- Overwhelmed by daily job
- Pressure to act to recover emergencies by extreme events
- Overlapping functions cause of mismanagements
- No clear mechanisms of coordination between LGAs and other agencies/authorities
- Discontinuity in planning: different solutions for similar and cross-cutting issues
- Subordinated and controlled directly to the central level
- High degree of uncertainty for climate future projections

...opportunities

- Level of the government closest to the citizens
- Capacity to collect priorities
- Capacity to identify community's adaptation priorities and solutions (widespread territorially-base)
- Capacity to mobilize local resources (financial and social capital) and knowledge at grass-root level
- Empirical experience
- Extensionist at mtaa level coping role
- Collaborative links with civil society, through the CBOs
- Capacity to integrate different sectors
- Enhanced autonomy in collecting residents' priorities, in preparing the strategic plan and in negotiating the annual financial plan directly with the sector ministry





Target group

Institution	Number of participants
Dar es salaam City Council	8
Temeke Municipality	8
Ilala Municipality	8
Kinondoni Municipality	8
Wami/Ruvu Basin Authority	3

Departaments/areas of specialization

- Agriculture and Livestock
- Natural Resources & Environmental
- Land & Urban planning
- Water & Sanitation
- Disaster Management
- Waste Management
- Health

38 officials dealing with issues pertinent to CC adaptation and environmental planning and management



Training implementation

- Residential modality (Morogoro)
 - to avoid turn-over and have the trainees available for the whole period
 - to allow participants to work jointly on the group assignments
- Two short courses (one week each)
- Full day – 4 sessions per day
- Delivery methods for each topic:
 - interactive lectures;
 - brainstorming;
 - group discussions
 - group works (5 groups basing on participants' working areas)

Training modules and topics (I training week)

	Modules	Topics
FIRST TRAINING WEEK	Climate Change and Adaptation Principles and Practices	<ul style="list-style-type: none"> • CC causes, Impacts and adaptation Principles • CC Impacts and adaptation in Tanzania • Vulnerability to CC & Sectoral analysis in Tanzania • Adaptation Needs and priorities in Tanzania • Policy, Legal and Institutional aspects of CC in Tanzania
	Adaptive capacity	<ul style="list-style-type: none"> • Introduction to adaptive Capacity • Introduction to Household Survey for Adaptive Capacity Analysis • Monitoring of Adaptive Capacity • Design of Household Questionnaire Survey • Data analysis and Interpretation
	Adaptation mainstreaming	<ul style="list-style-type: none"> • Introduction of mainstreaming Approach • CC Implications for Local Plans and Programmes • Analysis of CC Implications for specific Plans and Programmes



Training modules and topics (II training week)

	Modules	Topics
SECOND TRAINING WEEK	Urban sprawl and CC	<ul style="list-style-type: none"> • Introduction to urban sprawl and CC • Land cover and land cover change in DSM • Land cover change and observed CC impacts in DSM
	Sea water intrusion	<ul style="list-style-type: none"> • Understanding Sea water intrusion • Borehole monitoring campaign • Assessing Current vulnerability to seawater intrusion Phenomenon • Sea water intrusion- current situation in DSM • Assessing Future vulnerability to seawater intrusion Phenomenon
	Institutional adaptation strategies	<ul style="list-style-type: none"> • Introduction to Institutional adaptation strategies to Urban sprawl and sea water intrusion • Group works on designing adaptation initiatives • Finalize institutional adaptation strategy



Temeke Municipal Council

Conservation of water resources along the coastal belt of Temeke as a strategy minimising salt water intrusion in 10 wards

Rationale

Water supply is mainly through boreholes (to supply 90% of the population - 1000 units estimated).
Fast growing destruction of mangrove forest for wood fuel and income generation

Objectives

- To create awareness on conservation of water resources
- To reduce sea shore erosion 70Km along coastal belt
- To provide sustainable sources of fresh water
- To provide alternative income-generating activities



Dar City Council

Empowering of Dar es Salaam Community on adaptation to CC

Rationale

Poor planning: About 70 % of settlements are not planned.
Poverty: Encroachment of hazardous lands is caused by lack of cash to access land in planned areas.
Lack of infrastructure: The existing infrastructure such as storm water drainage system is not proportional to the population size.
Corruption: Development in areas which have been identified as hazardous lands such as storm water channels.

Objectives

Building capacities and creating awareness on flood impacts and community adaptation measures to Dar es Salaam residents living in or near flood prone areas

Kinondoni Municipal Council

Rain Water Harvesting as a Climate Change Adaptation Strategy for Reducing Seawater Intrusion to the ground water resource and for improving health of Goba Ward community

Rationale

Goba Ward is a peri-urban area characterized by high levels of urban sprawl. People extract groundwater as an alternative way of acquiring water for human consumption. Fast increasing of boreholes leads to over pumping of groundwater increasing salinity level

Objectives

Developing capacity by training 20 primary school teachers from 4 primary schools on rain water harvesting

Establishing rooftop rain water harvesting system / infrastructure in 4 primary schools

Improving health and water use behavior to the community



Ilala Municipal Council

Rainwater Harvesting in Schools to demonstrate adaptation to CC in peri-urban areas of Ilala municipality

<u>Rationale</u>	<p><u>Water scarcity</u>: Inadequate water supply network, boreholes and wells (76% pop. depends on deep/shallow wells)</p> <p><u>Water salinity</u>: i) Mismanagement of NRs: over pumping of water through boreholes, ii) Deforestation and encroachment of catchment areas like Kazimzumbwi reserve forest.</p> <p><u>High water demand</u>: i) Escalating population and urban sprawl, ii) Increased economic and social development</p>
<u>Objectives</u>	Raising awareness to 2,500 community leaders of Ilala Municipality on CC impacts and adaptation methods
	<p>Installing 100,000 rainwater harvesting units in 50 peri-urban primary schools.</p> <p>Educating 15,000 schools on rainwater harvesting and management</p>



Wami Ruvu Basin Authority

Development of an adaptive mechanism to reduce salt water intrusion in coastal aquifers specifically Temeke Municipal

Rationale

Infrastructure development of water supply from Ruvu River in Temeke is very slow compared to rate of population growth. A lot of boreholes have drilled and the pumping rate has increased tremendously increasing consequently the saltwater intrusion in many coastal areas. Saltwater intrusion is expected to become a more serious issue due to CC impacts

Objectives

- Capacitating the community
- Conducting boreholes inventory
- Establishing groundwater monitoring network to determine the groundwater status (water level, EC, pH and trace elements) in each borehole.
- Assessing current and future water demand

Results

- Participants were able to identify key areas in which adaptation to CC goes hand-in hand with other development priorities and building resilience in natural and human systems.
- They were also able to identify and develop basic elements for designing CC adaptation proposal design
- Training provided an opportunity of cross-sectoral exchange among the departments within the same administration and among the different authorities involved
- Besides improved knowledge and competences, the CB had as **unexpected result** the enhancement of conceptualization on CC adaptation related issues.

This means that the existing local solutions in PU areas to respond to the environmental changes supported and implemented by the LGAs in their day to day activities without conceptualizing them as CC adaptation measures.