

# Tyndall Centre PhD Conference 2014

Climate Change Research in Practice: Addressing Speed, Scale and Scope

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## BACKCASTING FOR CLIMATE CHANGE ADAPTATION: DEVELOPING A PARTICIPATORY SCENARIO METHODOLOGY IN COASTAL DAR ES SALAAM

Giuseppe FALDI

DIAEE – SAPIENZA University of Rome

### BACKGROUND

**Planning for climate change (CC) adaptation** is a major urban challenge due to increasing levels of **future uncertainty** and complexity in socio-economic, environmental and climatic systems. This is even more pronounced in rapidly expanding **sub-Saharan cities**, which are particularly exposed to extreme climatic events, and highly dependent on the direct exploitation of natural resources. Among the different methodological tools applied to adaptation planning, **scenario analysis** is considered particularly useful in anticipating and shaping the future for highly uncertain and difficult to control situations.

### RESEARCH FRAMEWORK

#### Assumption

Firstly, adaptation planning should not be aimed exclusively at reducing the **potential impacts of CC**. It should also identify **transformative social projects oriented to sustainability**.

Secondly, the “classical” **forecasting** scenario approach is not completely able to recognize the contextual mechanisms that determine people’s **trajectories of vulnerability**, nor their legitimate **expectations for change**, as it is based on the exploration of dominant trends.

#### Overall Objective

The research aims to contribute to the advancement of **participatory scenario methods** for supporting local CC adaptation planning that take into account the **community’s development objectives** as well as **non-climatic factors** that influence their potential to reach such objectives.

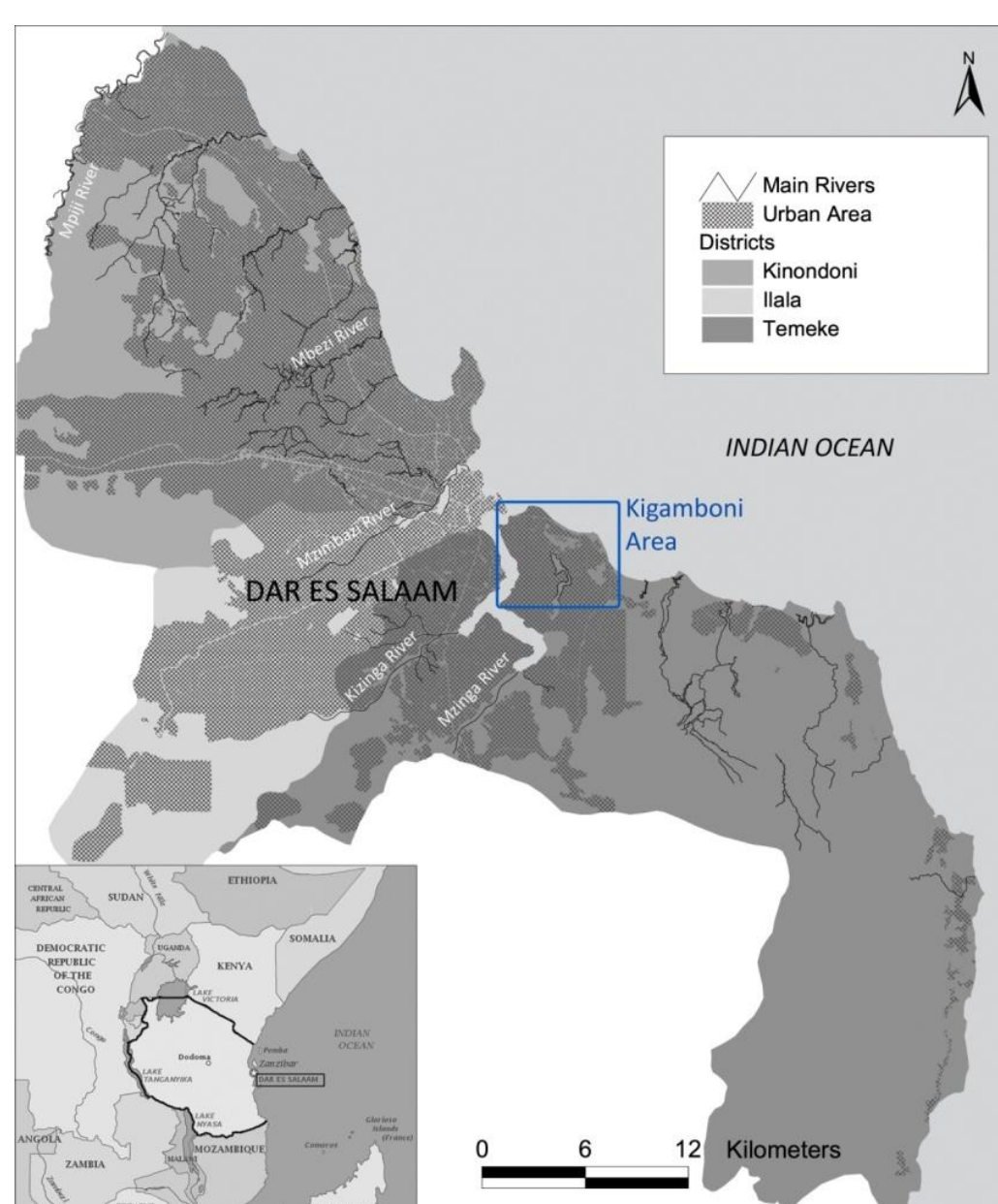
#### Hypothesis

**Participatory backcasting** can support communities and local authorities in the definition of socially shared adaptation objectives, alternative livelihoods, potential agents of change and possible systemic transformative actions.

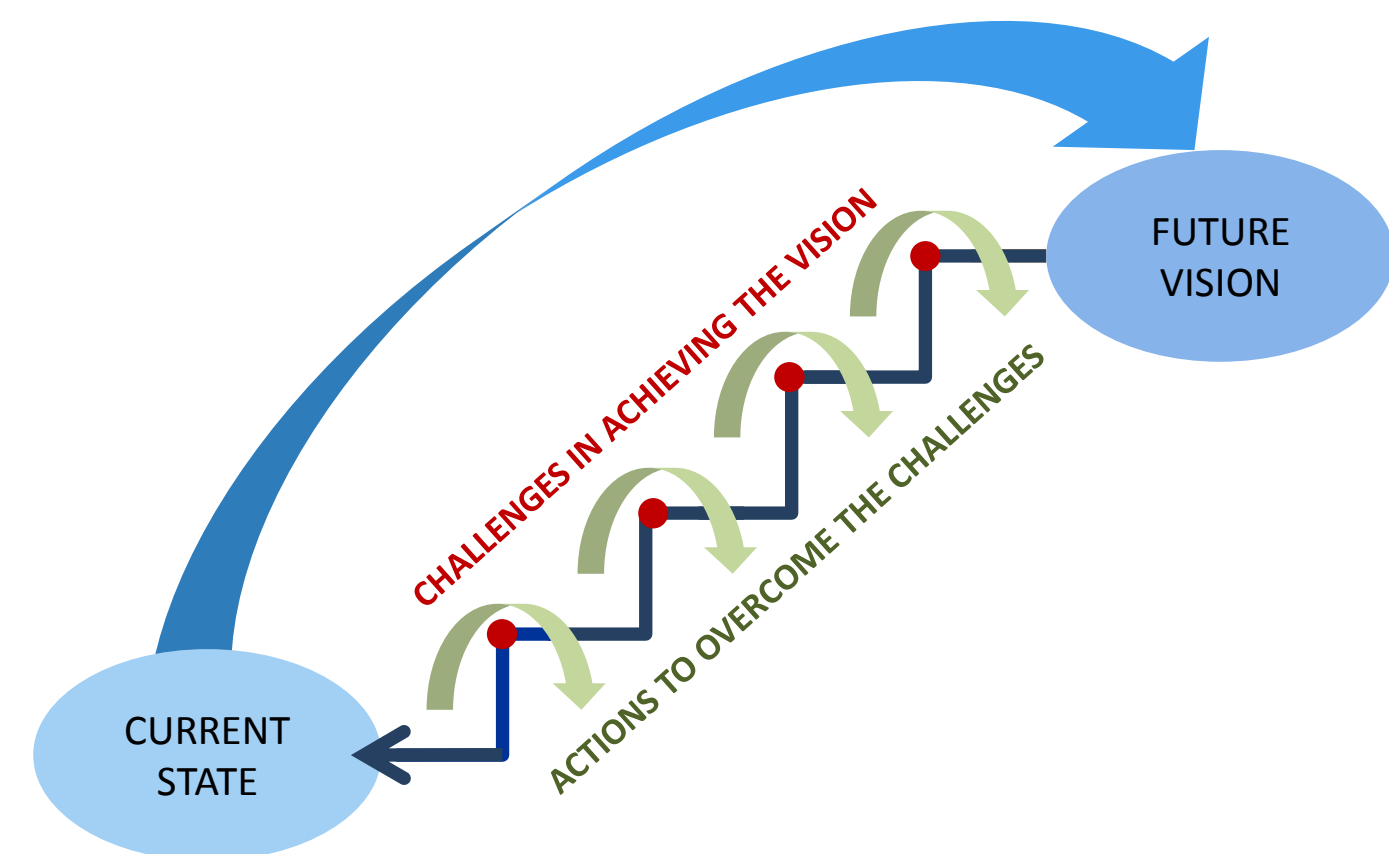
### CASE STUDY: ACCESS TO WATER IN DAR ES SALAAM (TANZANIA)

The implications of using participatory backcasting in local adaptation planning are explored through a **community scenario exercise**, carried out in a peri-urban settlement of Dar es Salaam (Tanzania), where a scenario-building methodology, based on the conceptual model of **participatory backcasting** (Robinson, 2003; Quist and Vergragt, 2006) and use of the **Theatre of the Oppressed** (Boal, 1995) as a participatory method, was developed and tested. The analysis focuses on **access to safe water**, an emerging problem for Dar es Salaam’s coastal communities that could be exacerbated by the effects of CC.

#### The Study Area: Kigamboni, Dar es Salaam



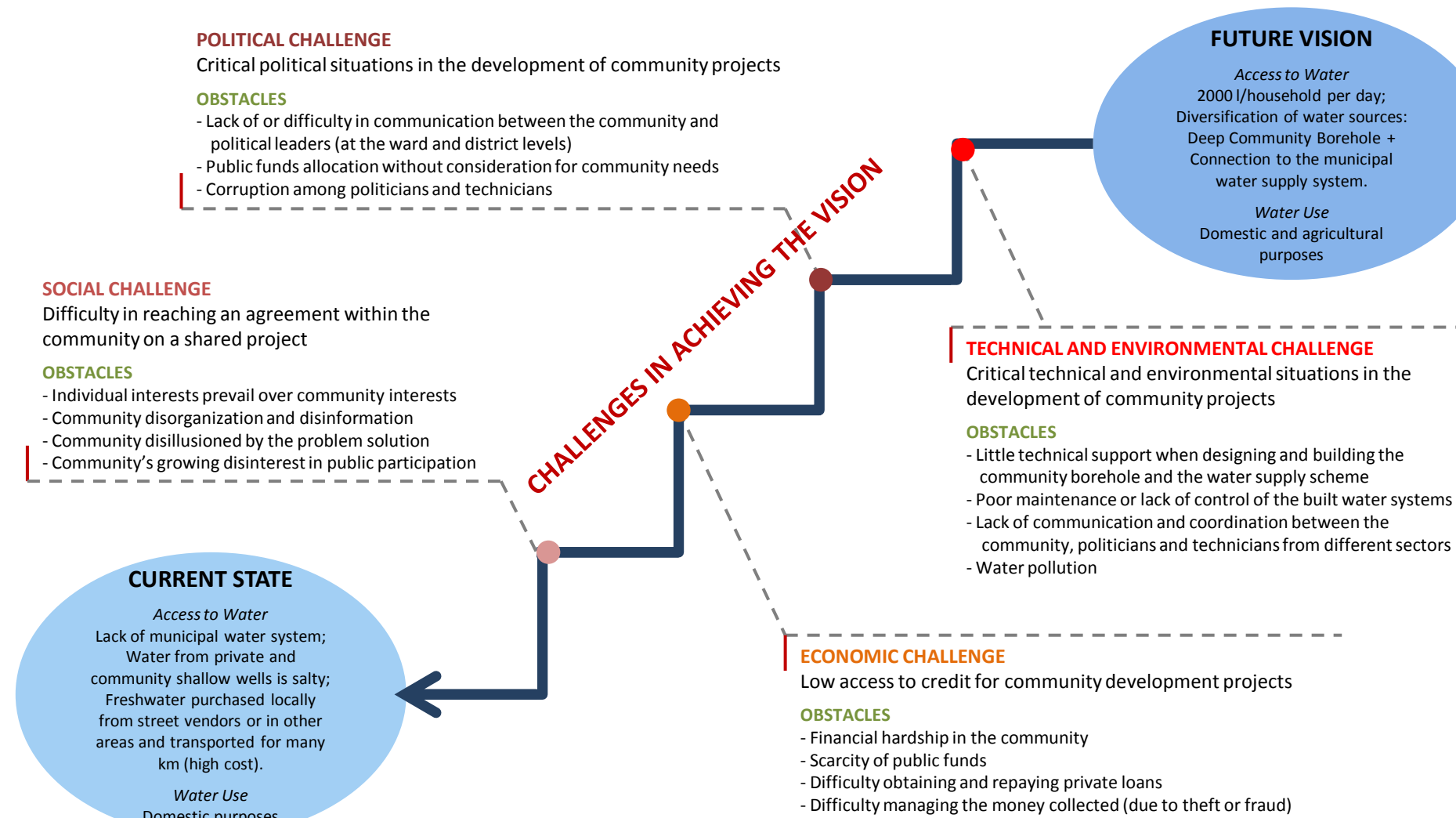
#### Conceptual Framework of the developed Scenario Methodology



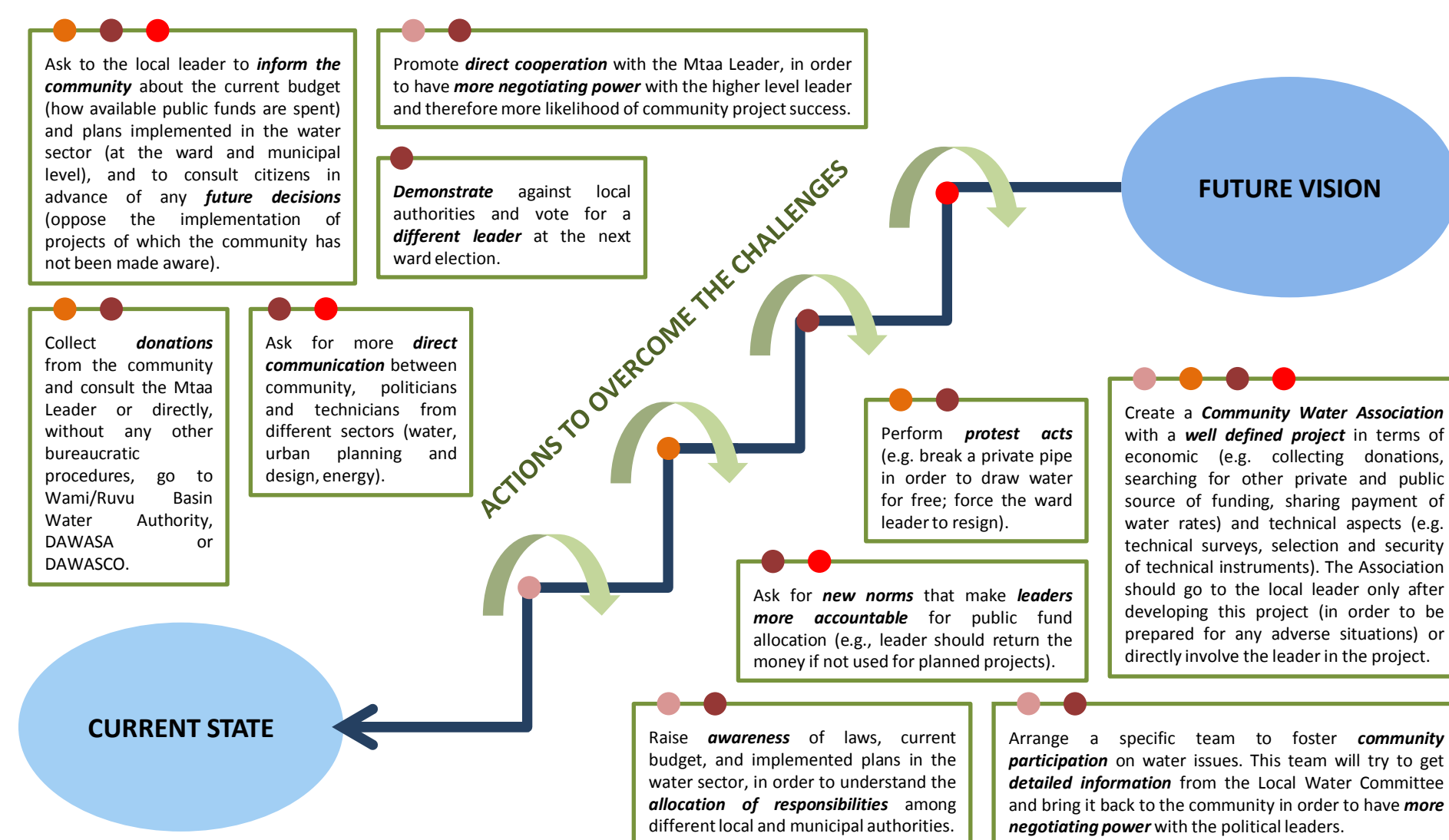
Scenario Exercise Phases	Steps of the Developed Scenario Methodology
Community Scenario Workshop	1. Development of a shared future vision about access to water 2. Identification of the challenges in achieving the vision
Forum Theatre Sessions	3. Preparation of a theatrical representation that stages the vision and the challenges emerged 4. Search for alternative actions and strategies to overcome challenges

### THE APPLICATION OF THE DEVELOPED METHODOLOGY IN KIGAMBONI WARD

#### Future Vision, Current State and Challenges in achieving the vision - Community Scenario Workshop



#### Actions to overcome the challenges - Forum Theatre sessions



#### The Theatrical Representation: staging the vision and the challenges



#### Assessment of the developed Scenario Methodology (based on observation of the process and semi-structured interviews)

