



International Workshop

TOWARDS SCENARIOS FOR URBAN ADAPTATION PLANNING

Assessing seawater intrusion under climate and land cover changes in Dar es Salaam, Tanzania

Rome, 20-22 April, 2013

Rationale

Adapting to Climate Change in Coastal Dar es Salaam (ACC DAR) is a three-year project co-funded by the European Commission and implemented by Sapienza University of Rome in partnership with ARDHI University of Dar es Salaam, Tanzania. The action aims at improving the effectiveness of Local Authorities in supporting peri-urban population in their efforts to adapt to climate change impacts, thus contributing to the implementation of the National Adaptation Programme of Action of the United Republic of Tanzania.

Surveys conducted under the ACC DAR project show that groundwater salinization is a major concern for households living in peri-urban neighbourhoods within the coastal plain. In fact, most of them depend heavily on boreholes for access to water for domestic and productive (mostly agriculture-related) purposes. Such dependence is absolute for households living in under-serviced areas that do not have access to alternative water sources (such as street vendors or natural streams), and all peri-urban households are affected to a certain extent, as piped water service is intermittent and water sold by private vendors is expensive. Notwithstanding the social importance of groundwater availability, the studies on seawater intrusion in the coastal shallow aquifer are scarce and none have developed future scenarios under climatic and non-climatic changes, to our knowledge.

The ACC DAR has hence taken on the duty of contributing to closing this knowledge gap and of bringing the seawater intrusion phenomenon to the attention of Local Authorities as a major issue for adaptation planning. Accordingly, the Project team has undertaken several research studies to assess changes in past recharge and pumping rates, develop a hydrogeological balance, downscale global climate change predictions to the regional level, and lastly to explore the complex interplay between urban sprawl and climate change adaptation, since land cover change might be the most important non-climatic factor that influences future groundwater availability.

The objectives of this workshop, organized by Sapienza University as part of the ACC DAR Project, are:

- 1) to draw together a small group of academics from Italy and Tanzania engaged in the development of scenarios of groundwater availability in coastal peri-urban areas under conditions of continuous urban sprawl and climate change. We will discuss and evaluate the results from the studies conducted in Dar es Salaam, Tanzania, as well as explore options for mainstreaming seawater intrusion concerns into existing local plans and programmes in the fields of urban development and environmental management.
- 2) to introduce the Project to a broader audience of academics and practitioners, thus raising awareness of urban issues related to local planning for climate change adaptation. The seawater intrusion phenomenon will provide insights into natural-human interplay in coastal areas, thus facilitating the understanding of land cover/use as a factor that will exacerbate climate change impacts, especially for people living in peri-urban fringes.



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The first objective will be addressed in the restricted session of the workshop, which will be held on the 20th of April, 2013. Only Project team members and 6 invitees will be admitted. The program will start with the presentation of 3 to 4 working papers previously sent to the participants. Two invitees in charge of preparing the evaluation reports will then expose their views and feedback on the Project results and discussion will be opened to the rest of the participants. A few leading questions will be identified, and 2 to 3 working groups will be formed in order to explore them in greater depth. Finally, working groups will report their results to the participants and a list of recommendations will be developed.

An open event on the 22nd of April, 2013, will focus on the second objective. This full day event will provide approximately 100 academics and practitioners with the opportunity to learn about a variety of approaches to urban planning for climate change adaptation. After an introduction to the ACC DAR Project, case studies from Sub-Saharan and Italian cities will be presented. The discussion will be oriented around two main topics: i) methods of scenario development; and ii) adaptation options for coastal peri-urban areas.

As a follow-up to the workshop, proceedings will be published on the Project web site - <http://www.planning4adaptation.eu/> - and the main outputs will be submitted to academic journals in order to achieve the widest possible dissemination to a professional audience and broader public.

The Program committee

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The Institute for Environmental Protection and Research (ISPRA) is co-organizing the event.*