

Analysis of the Sensitivity to Seawater Intrusion of Dar es Salaam's Coastal Aquifer  
with Regard to Climate Change  
Giuseppe Sappa, DICEA – Sapienza University of Rome

This paper presents the results of a study carried out within the framework of the project “Adapting to Climate Change in Coastal Dar es Salaam” (ACC Dar project, <http://www.planning4adaptation.eu>), which aims to support the Local Government Authorities of Dar es Salaam (Tanzania) in preparing long-term Climate Change (CC) adaptation strategies, by providing a series of enhanced methodologies for improving municipal activities related to CC issues in the water management sector.

The groundwater monitoring activity was performed from June 2012 to January 2013. The study area, in which the borehole monitoring network was designed according to the morphological and geological characteristics of the Dar es Salaam Region and it has a surface of approximately 260 km<sup>2</sup>, including the Kinondoni, Ilala and Temeke districts.

The monitoring network consists of 79 boreholes, uniformly distributed with a frequency of about 1 borehole per 3 km<sup>2</sup>, selected from a 400 georeferenced boreholes database, with consideration for uniformity of spatial distribution.

The monitoring procedures consisted in a variety of survey activities depending on temporal scale (long-term and monthly surveys) and the type of data to be collected (in situ and laboratory measures). Here, they are presented results of this monitoring investigation and some consequence on groundwater resources availability in the area.