



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

## Programme – 20 April

### 9.30 Welcome and presentation of the workshop objectives

Silvia MACCHI *Project coordinator, Sapienza University*

Gabriel KASSENGA *Local Coordinator, Ardhi University*

### 10.00 Session 1. Presentation of results from the Activity 2.2 (Exploring Climate Change vulnerability scenarios to seawater intrusion)

Chair: Elifuraha MTALO, *Bagamoyo University*

ANALYSIS OF THE SENSITIVITY TO SEAWATER INTRUSION OF DAR ES SALAAM'S COASTAL AQUIFER WITH REGARD TO CLIMATE CHANGE

Authors: MARIA TERESA COVIELLO, GIUSEPPE FALDI, MATTEO ROSSI, GIUSEPPE SAPPÀ, ANTONIO TROTTA, STEFANIA VITALE

Speaker: GIUSEPPE SAPPÀ, *Sapienza University* (20 minutes)

MONITORING SEAWATER INTRUSION IN THE COASTAL AQUIFER OF DAR ES SALAAM

Authors: Gabriel KASSENGA, Stephen MBULIGWE

Speaker: Gabriel KASSENGA, *Ardhi University* (20 minutes)

Discussant: Maria Dolores FIDELIBUS, *Bari Polytechnic* (20 minutes)

Questions (20 minutes)

### 11.20 Coffee Break

### 11.50 Session 2. Presentation of results from the Activity 2.1 (Monitoring Land Cover changes in peri-urban settlements)

Chair: Rachel KADUMA, *Dar City Council*

INVESTIGATING THE RELATIONSHIP BETWEEN LAND COVER AND VULNERABILITY TO CLIMATE CHANGE IN DAR ES SALAAM

Authors: Luca CONGEDO, Michele MUNAFO', Silvia MACCHI

Speaker: Luca CONGEDO, *Sapienza University* (20 minutes)

Discussant: Elifuraha MTALO, *Bagamoyo University* (10 minutes)

Questions (10 minutes)

### 12.30 Session 3. Presentation of a methodology for the regional downscaling of Climate Change global predictions.

Chair: Giuseppe SAPPÀ, *Sapienza University*

STOCHASTIC DOWNSCALING OF DAILY RAINFALL: HOMOGENEOUS & NONHOMOGENEOUS HIDDEN MARKOV MODEL FOR PROJECTING HYDRO-CLIMATE CHANGES IN TANZANIA

Authors: Francesco CIOFFI, Alessandro MONTI

Speaker: Francesco CIOFFI, *Sapienza University* (20 minutes)

Questions (10 minutes)

### 13.00 Lunch

### 14.30 Working groups and development of a list of recommendations

WORKING METHOD, FORMATION OF GROUPS AND IDENTIFICATION OF RAPPORTEURS  
Liana Ricci, *Sapienza University* (20 minutes)

WORKING GROUP SESSIONS (90 minutes)

### 16.20 Coffee Break

### 16.50 PRESENTATION OF RESULTS FROM WORKING GROUPS by the Rapporteurs (60 minutes)

DISCUSSION AND ADOPTION OF RECOMMENDATIONS  
Silvia MACCHI, *Sapienza University* (30 minutes)

**VENUE:** Faculty of Civil and Industrial Engineering, Sapienza University of Rome  
Via Eudossiana 18, Roma – Cloister small Hall



This project is co-funded  
by the European Union



**ISPRA**

Istituto Superiore per la Protezione  
e la Ricerca Ambientale



DIPARTIMENTO DI INGEGNERIA  
CIVILE EDILE E AMBIENTALE



**SAPIENZA**  
UNIVERSITÀ DI ROMA

Project coordinator:  
Prof. Silvia Macchi  
(+39) 06 4458 5917  
(+39) 342 6919101  
silvia.macchi@uniroma1.it

Project manager:  
Laura Fantini  
laura.fantini@uniroma1.it

Project web site:  
www.planning4adaptation.eu

Postal address:  
DICEA/Sapienza University  
Via Eudossiana, 18  
00184 Roma (Italy)



## **LIST OF PARTICIPANTS**

### **Invitees:**

Ibrahimu C. MJEMAH, Sokoine University of Agriculture, Tanzania  
Elifuraha MTALO, Bagamoyo University, Tanzania  
Maria Dolores FIDELIBUS, Bari Polytechnic, Italy  
Enrico FONTANARI, IUAV, Italy  
Maurizio TIEPOLO, Turin Polytechnic, Italy  
Sarah BRACCIO, Turin Polytechnic, Italy  
Madhav GIRI, Turin Polytechnic, Italy

### **SAPIENZA University team:**

Silvia MACCHI, project coordinator  
Laura FANTINI, project manager  
Liana RICCI, junior researcher  
Giuseppe SAPPA, senior researcher  
Maria Teresa COVIELLO, junior researcher  
Giuseppe FALDI, PhD student  
Antonio TROTTA, junior researcher  
Stefania VITALE, junior researcher  
Michele MUNAFO', senior researcher (ISPRA)  
Luca CONGEDO, junior researcher  
Francesco CIOFFI, senior researcher  
Alessandro MONTI, junior researcher

### **ARDHI University team:**

Gabriel KASSENGA, local coordinator  
Steve MBULIGWE, senior researcher  
Jonas G. BALENGAYABO, junior researcher  
Fredrick A. LIGATE, junior researcher  
Edward F. RUHINDA, junior researcher

### **Dar City Council:**

Rachel KADUMA, GIS unit