

## RESULTS ORIENTED MONITORING REPORT

Grant Contract Beneficiary: ***CIRPS Sapienza University of Rome***

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Partner in the Action: ***Ardhi University Dar es Salaam***

Associate in the Action: ***Dar City Council***

Project title: ***Adapting to Climate Change in Coastal Dar es Salaam***

Project acronym: ***ACC Dar***

Contract number: ***2010/254-773***

Project duration: ***01/02/2011 – 31/01/2014***

Reporting period: ***From 01/02/2011 to 31/12/2011***

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***Data contribution and reviews to the successful submission of this report have been provided by all the project team members***





Individual commitment identification number:	2010/254-773
Title of the Action:	Adapting to Climate Change in Coastal Dar es Salaam
Name of Beneficiary:	CIRPS _ Sapienza University of Rome
Name of Local Partner:	Ardhi University of Dar es Salaam (ARU)
Period Covered by this report	1st of February 2011 – 31st of December 2011

**CONTRACTUAL & FINANCIAL ISSUES:**

Expenditure ratio since start of the project:	25,43% in relation to the total cost of the action (as per art. 3.1 Grant Contract – BUDGET), all sources and contingencies included
Expenditure ratio since last payment (<, > 70%):	82,88% in relation to the first instalment of pre-financing
Planned date of submission of next payment request:	1st of February 2012
<i>Issues Arising/Corrective Measures: What constraints/problems are currently being faced? What action has been taken, and by whom, to address these? What further action is required to support effective implementation, by whom and when?</i>	
<p>A consortium agreement signed among the two partners regulates the sharing of funds and responsibilities.</p> <p>No relevant issues have arisen related to contractual and financial matters during the first year.</p> <p>Few changes need to be considered.</p> <p>Some efforts have been increased for ARU staff involvement due to some changes required in development of the activity 1.1 (as described in the next chapters).</p> <p>Some efforts will be moved to the second year budget due to the postponement of the first annual international workshop.</p>	

**EXECUTIVE SUMMARY:**

<p>This report covers the period from the beginning of the project (1<sup>st</sup> of February 2011) until the 31<sup>st</sup> of December 2011.</p> <p>The first phase was dedicated to the detailed planning of the activities, the financial</p>
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and the staff sources for the first project year, the management structure, the communication and internal monitoring tools, the rules for purchasing necessary equipments for the whole project period. All the decisions related to the above mentioned issues have been agreed by the two partners, CIRPS as project coordinator and Ardhi University as partner. At the beginning of the project a consortium agreement has been signed among the two partners to regulate sharing of finances and responsibilities, ownership and use of knowledge.

Relevance of the overall and specific objectives of the action remained the same as described in the EC Grant Contract and foreseen activities are running very well showing the first results and outputs. More in detail:

In the framework of the work package 1 “Improve Understanding in Adaptation”, two huge surveys have been conducted: first, a questionnaire has been administered to almost 6000 households in the target area (5% of the estimated population) to investigate the livelihoods of population dependent on natural resources and their concern for Climate Change (CC); second, Dar City Council (DCC) representatives and Dar’s municipalities services staff have been interviewed to investigate their current activities related to Urban Development and Environment Management (UDEM) and to CC adaptation, if any. The foreseen participatory activity will provide the added value of exploring local options of autonomous adaptation and to raise awareness on CC among inhabitants of the target area. The participatory methodology has been chosen and a feasibility study has been successfully concluded.

In the framework of the work package 2 “Develop Methodologies for Designing Adaptation Initiatives”, two research teams are working in parallel. One is centred on the development of methodologies to monitor spatial changes in Dar’s peri-urban settlements through Remote Sensing and GIS techniques. The other is focusing on the development of methodologies for exploring CC vulnerability scenarios and is investigating and modelling a specific environmental phenomena, the seawater intrusion, that is already contributing to the degradation of those natural resources on which a large part of peri-urban livelihoods depend.

Next year the two working groups will continue to work on the methodologies merging and integrating their data with findings from WP1 analysis, to assess CC vulnerability scenarios.

As regards the work package 3 “Build the Capacity of Dar’s Municipalities” in understanding CC issues, designing adaptation activities and integrating them in their UDEM strategies and plans, the assessment of the needs to be addressed in the training programme and the identification of the municipal officers and services who will be trained are already started. Other progress related to the WP 3 are expected during the second year and the first months of the third year. The better understanding of actual and practical ways of addressing CC adaptation in coastal areas of Dar es Salaam from the WP1 results and the methodologies from WP 2 for supporting inhabitants of coastal unplanned and underserved settlements in their efforts to adapt to CC will provide the basis for the capacity-building activity addressed to Dar’s municipalities and the tools for the design of adaptive measures.

As regards the dissemination of the project activities and results and the project



management they run throughout the whole project.

Two factors play a crucial role for the successful development of the project: first, the strong collaboration between partners and among all personnel carrying on the activities; second, the strong commitment and availability of the local authorities at all institutional levels (DCC, Dar's municipalities, community leaders and street leaders) to collaborate in the project goals achievement.

### **CONTEXT (EXTERNAL FACTORS):**

*Summarise changes in the project operating environment/context (positive or negative) since the start of the project, which may impact on the project's relevance and/or feasibility, mentioning where relevant major developments since the last report. Reference should be made to assumptions/risks and to the quality of relations with implementing partners and local authorities highlighting any implications for modifications to project plans.*

The development of the action did not encounter any relevant constraint because there have not been changes in the project operating context since the start of the project. All the assumptions described in the logframe have been fulfilled. In particular the following considerations should be relevant:

- The institutional commitment.

DCC was involved by CIRPS and ARU since the beginning of the project participating in the project as associate. An official letter was sent at the beginning of March to the DCC to share the project aim.

During the kick off meeting in his opening remarks, the city Director underscored the link between the action proposed to be carried out and the reality on the ground in Dar es Salaam and some limitations encountered by the local authorities in addressing CC effects and impacts.

The strong commitment shown by the DCC and the three Dar's municipal councils is the *condicio sine qua non* for the project to reach positive effects and to make feasible and successful many of the activities planned.

This relation between project partners and local authorities is getting stronger more and more.

- Community involvement.

Willingness of inhabitants to participate in the project activities has been demonstrated by their strong collaboration during the administration of the questionnaire related to the activity 1.1. Almost 6000 households accepted to participate in the survey and answer the questionnaire.

Furthermore, in the pilot experience of "Participatory Theatre (PT)" held in Dar es Salaam during the feasibility study, people were very well disposed and curious to try PT, and very enthusiastic to be part of this process.

- International regulation.

Travel regulation and organization did not encounter any problem or visa restriction. Many travels have been organized to allow CIRPS personnel for participating in the project meetings, realizing the two short training courses and



carrying on the feasibility study for PT held in Dar es Salaam. As regards ARU personnel mobility, one internship of two month has been held in Rome. Two other internships are planned for next year in the framework of the WP2. Some not relevant delays have been caused by the internal universities regulations to purchase necessary technical instruments, specialized software and other scientific tools.

### **MANAGEMENT (INTERNAL FACTORS):**

*Summarise any changes to planned internal project management and coordination issues. Does the log-frame, particularly the specific objective and results, remain relevant? Are the indicators well defined, appropriate and practical, with cost effective means of verification? Is the project keeping to its work plan and have all planned milestones been achieved? Have particularly innovative activities been conducted? Have there been any significant changes to staff/project infrastructure?*

#### **Internal project management and coordination**

The project management and coordination structure was simplified with respect to the one proposed in the application form.

The Project Coordination Team is entitled for political and strategic orientation of the project; budget modification and detailed breakdown for each year; work plan adjustment; validation of the project deliverables; monitoring of the joint working group results.

It is composed by:

- CIRPS: Project coordinator + 1 other representative
- ARU: Local coordinator + 1 other representative

It is chaired by the Project Coordinator.

The Management Team is entitled for the executive management (organization and scheduling of activities, meetings, inputs and outputs; direct support to the PCT; communication with the EC for all management issues; project communication plan; internal project monitoring) and for the financial management (general administration; financial execution and financial reporting)

It is composed by:

- CIRPS: Project manager + 1 administrative staff
- ARU: 1 administrative staff

It is chaired by the Project Manager.

The Project Coordination Team has met twice so far in Dar es Salaam. The first was the kick off meeting on April 2011 and the second was the project meeting held on September 2011. All project meetings are organized to coincide with other project milestones. During the kick off meeting, a round table involving DCC and Dar's municipalities personnel has been organized in order to present the project, to create awareness about adaptation and CC issues and to start the negotiation about their involvement in future implementation of the action. The second meeting has been held in conjunction with the pilot exercise of the participatory methodology in order



to have it validated and agreed by the Project Coordination Team.

Two Joint Working Groups have been established to carry out the activities related to the WP1 and WP2. They are composed by ARU's and CIRPS' junior and senior researchers. They are headed by a member of the WP leader (ARU is leading WP1 and CIRPS is leading WP2). Their scientific results are evaluated jointly by the Project Coordinator and the Local Coordinator; their interim reporting and their missions in Rome and in Dar es Salaam are supported and monitored by the Project Manager. Next project meeting is planned for next February in conjunction with the first annual international workshop foreseen by the project.

The internal communication flow between the two partners and among the working group members has been on almost daily basis through internet tools and by phone. Exchange of documents took place mainly by email and uploading them in the reserved area of the project web site.

#### **Specific objective and results relevance and innovative activities**

Project specific objectives and results remained relevant. Many achievements have been reached as described in the next two chapters and some new indicators will be defined and proposed in the last table of this report.

Some innovative activities have been carried out.

First of all the pilot exercise of the participatory methodology (activity 1.3) deserves to be mentioned. The methodology used was the "Participatory Theatre (PT)" through the "Theatre of the Oppressed (TO)" tool. Even if there were relevant experiences of TO developed in Africa, this methodology is innovative for the project implementation for two reasons. First, seemingly TO tool has never be used to explore people's adaptation strategies to CC effects. Second, although there is a strong popular theatre tradition in Tanzania, no group has claimed to be involved in TO or registered on the yellow pages of the International TO organisations.

The relevant results obtained through the feasibility study and the pilot experience held in Dar es Salaam, in terms of involvement of Dar's community leaders and of people from the target area, convinced the project team to adopt this methodology for the participatory workshops foreseen under activity 1.3. Two cycles of PT workshops and public events have been planned for next year.

As regards the activity 1.1, some changes have been proposed and agreed by both partners. First, a preliminary survey has been conducted in order to estimate the population of the target area; data collected from ward officer shows that around 120,000 households live in Dar's coastal plain. As a consequence, the sample size for the household questionnaire survey has been increased from 500 to 6000 units (5% of the whole population). Second, to facilitate the data entry an informatics tool was created and uploaded on the reserved area of the project web site. It automatically eliminates inconsistent data and allows for the access to the data base in any time by any member of the work team. Third, a joint workshop has been held in Dar at the end of September 2011 to share the methodology to be used for statistical data analysis,



which is presently ongoing and will conclude by February 2012. During the workshop it was agreed to develop a semi-automatic procedure which will allow DCC for easily repeating the survey in the future. A toolkit will be developed in the next months to transfer the procedure to DCC officers involved in the capacity building activities under WP 3.

An analogous semi-automatic procedure and related toolkit is under development for land cover analysis. This is the main innovation for activity 2.1 and will allow DCC for easily updating land cover and land use maps in the future. It is worthy to be mentioned that the production of updated maps by the DCC GIS unit will not require additional costs for acquiring new satellite imageries as the procedure has been tailored to data provided by Landsat and SPOT for free or at very little expense. Also in this case, the developed toolkit will support the transfer of the procedure to DCC officers during the capacity building activities under WP 3.

### **Work plan**

As regards the project work plan some changes have to be highlighted. All of them have been already discussed and agreed among partners at the beginning of the project and during the project meetings:

- Kick off meeting has been postponed by two months due to organizational reasons (the kick off meeting involved not only the project partners but also DCC and Dar's municipal councils' representatives)
- Activity 1.1 has been extended until the end of the first project year due to the increasing of the sample size. This change also required an increase in ARU personnel time for questionnaire administration and data entry
- The starting point for the activities 1.2, 1.3 and 2.1 has been postponed by two months as result of the delay of the kick off meeting. In particular activity 1.3 and 2.1 has been extended in the second year of the project respectively because of the need to do the feasibility study and the need to go in parallel
- Activity 1.4 has been postponed by two months. It is the milestone foreseen for the whole WP1 results evaluation.

### **PROGRESS IN ACHIEVING OBJECTIVES:**

*Summarise state of progress since the start of the project towards achieving the project overall and specific objectives, mentioning where relevant major developments since the last report. Compare progress against plans, using log-frame indicators as appropriate. Focus on positive achievements, but also unexpected negative impacts. If it is too early to report on project impact, state so and estimate when one could expect impact at the level of specific objectives.*

Some progresses at the specific objectives level could be already mentioned.

- The activities foreseen within the WP1 of the project are all devoted to the purpose of increasing knowledge on autonomous adaptive capacity.





During the first eleven months project period two huge surveys have been conducted to achieve this aim. One is to investigate the livelihoods of population dependent on natural resources and their concerns for climate change. The other is to investigate CC awareness at Dar es Salaam City Council and municipal levels and to assess strengths, weaknesses, gaps and possibilities for improvement of ongoing UDEM strategies and plans relevant to CC adaptation.

The third activity included in the WP1 aims to explore local options of autonomous adaptation and to raise awareness on climate change. During the first year a participatory methodology to reach this aim has been studied and agreed among the partners and tested in Dar es Salaam through a pilot exercise. The main participatory activity has been planned for the second project year and a large impact on knowledge on autonomous adaptive capacity is expected from it.

The activities foreseen within the WP2 of the project are addressed to the specific objective of developing methodologies for integrating adaptation activities into strategies and plans for UDEM in coastal unplanned and underserviced settlements.

The progresses achieved up to date include two methodologies for the semi-automatic classification of land cover data from Landsat and SPOT imageries, and a series of land cover maps (years 2002, 2005, 2007, 2009, 2011 from Landsat imageries) of the whole DCC region. More detailed land cover maps for Dar's coastal plain will be produced by the end of the first project year by using SPOT data. Those methodologies aim at facilitating the monitoring of land cover and land use changes in Dar's peri-urban settlements. As those changes will combine with CC impacts on natural resources, better knowledge and understanding of peri-urban dynamics are crucial to improve the capacity of DCC offices in reorienting their UDEM strategies and plans to reduce future CC vulnerability of those living in coastal Dar.

Those results will be merged with those coming out from the monitoring of changes in groundwater condition to contribute in the development of the methodology for exploring CC vulnerability scenarios which is foreseen for next year. The impact of seawater intrusion on groundwater condition has been selected as a major issue for the target population's vulnerability. Progresses on this regard include a methodology for conducting a boreholes monitoring campaign in Dar's coastal plain and the design of a geo-referenced boreholes monitoring network, as a first stage towards a more complex methodology for modelling seawater intrusion.

The results of both WPs/groups of analysis are tailored to the objective of building the capacity of Dar's local authorities to launch community based adaptation initiatives as part of the implementation of the National Adaptation Plan of Action of the United Republic of Tanzania





### **PROGRESS IN ACHIEVING RESULTS:**

*Summarise state of progress since the start of the project towards delivering the action expected results, mentioning where relevant major developments since the last report. Compare progress against plans, using log-frame indicators as appropriate.*

The first result foreseen by the project is a better understanding of actual and practical ways of addressing CC adaptation in coastal areas of Dar es Salaam.

There are many achievements related this result since the start of the project here following summarized.

- A baseline survey has been conducted in order to provide an assessment of climate related concerns for the population living in Dar's coastal unplanned and underserviced neighbourhoods who are dependent on natural resources. More specifically, the survey focuses on:
  - what natural resources those people have access to;
  - how they use the natural resources at their disposal;
  - what changes in climate they have observed;
  - what strategies they have adopted to cope with those changes;
  - gender differences in the degree of dependence on natural resources.

The questionnaire has been designed in collaboration by CIRPS and ARU on the basis of a pilot experience held in Dar and involving 40 households from Kinondoni district. A preliminary survey was carried out by ARU staff between August and September 2011 in Dar es Salaam coastal wards for estimating the number of households living in the target area. They result to be around 120,000 and consequently the number of households to be interviewed was increased from 500 (as foreseen in the application form) to 6000. The Sampling Plan for questionnaire administration was designed in collaboration with CIRPS staff in charge of developing the methodologies for data analysis.

An online form has been created and published on the project web site reserved area to facilitate the input of the data collected by ARU interviewers and allow for remote access to the whole database .

A short training workshop on sampling technique and the use of statistical software for data collection and analysis has been delivered by CIRPS staff in Dar to 20 master students and young researchers from ARU.).

From November to December 2011 a process of data validation has been conducted by CIRPS. 5885 Household Questionnaires are validated for the data analysis.

The data analysis will be conducted in January 2012 by CIRPS and ARU by using three different methodologies: one for univariate analysis (frequencies), another for bivariate and trivariate analysis (two-way and three-way cross-tabulation) and the last one for multivariate analysis (cluster analysis, simple and multiple regression, path analysis).

- A baseline survey has been conducted in order to provide an assessment of DCC



and municipal councils' current activities to prevent, cope with or recover from climate effects. The study has been carried out at two main administrative levels: the Dar City Council level and the Municipal one whereby the issues of interest were separately addressed for each of the three municipalities of Dar es Salaam City.

The study was carried out primarily through a questionnaire survey augmented by follow up interviews with selected respondents. The questionnaire has been designed in collaboration by CIRPS and ARU on the basis of some joint research studies previously conducted in Dar. The questionnaires were administered to staff of the Dar es Salaam City Council, Ilala Municipal Council, Kinondoni Municipal Council, and Temeke Municipal Council. The target sources of data for this study were city and municipal council officials of services, departments, and sections already involved in climate change issues.

A draft report has been produced describing in details the survey findings and the most important conclusions that can be drawn from the information and data collected.

The report grouped the survey findings in the following main points:

- Staff responsibilities and working experience
  - Administration linkages between municipal and ward/mtaa
  - Policies, plans and strategies for peri-urban (PU) areas
  - Social services deliverance in PU areas
  - Development changes in PU areas in past years
  - Main linkages and interdependences PU areas - city centres and PU areas – rural areas
  - Groups of people, networks and organizations operating in PU areas
  - Changes in environmental conditions in the past years in PU areas
  - Impacts of environmental changes in PU areas
  - Strategies undertaken by the municipal council to cope with environmental changes and reducing people's vulnerability to impacts of environmental changes
  - Autonomous adaption activities to environmental changes in PU areas
  - Baseline study on PU environment, dwellers and livelihood
  - Reasons for environmental change
- Local options for autonomous adaptation to future CC effects will be explored through direct involvement in scenario exercises for groups of residents from the target area in the second project year.

A feasibility study has been already held in Dar Es Salam in order to determine the relevance and the effectiveness of the participatory approach called Participatory Theatre following Augusto Boal's teaching, to explore local options for autonomous adaptation.

The pilot experience involved CIRPS and ARU staff and it has been facilitated by the collaboration of the community leaders. The exercise involved in an early stage ARU students and in a second phase 35 people from Kunduchi ward.

More in detail the feasibility study answered to the following questions: is the



whole process possible? Do the community leaders collaborate easily? Could the students be involved in facilitate the participatory activity? Do target people agree in participating and are they ready to involve in a more demanding process? could the Participatory Theatre generate some interesting knowledge on CC related issues?

A working paper has been delivered at the end of the study, including some recommendations and the planning for the participatory activity that will be held in Dar es Salaam next year.

The second result foreseen by the project is the enhanced development of methodologies for supporting inhabitants of coastal unplanned and underserviced settlements in their efforts to adapt to CC

- The development of methodologies to monitor spatial changes in Dar's peri-urban settlements through Remote Sensing and GIS techniques obtained many achievements.

During the reporting period remote sensing has been used to monitor Dar changes through the years, acquiring multispectral images and analysing data with image processing software for Land Cover classification. LANDSAT and SPOT satellites have been chosen because of their spatial and spectral resolution, multitemporal images availability and in particular the very low (or free) data acquisition cost.

A workflow has been designed in order to perform the preprocessing and processing of LANDSAT data, correcting for atmospheric effects with a DOS (Dark Object Subtraction) model, masking clouds and their shadows in a semiautomatic way. Because of the high cloud-cover percentage there was the need of mosaic images acquired in different time in order to obtain the whole area. In order to assess urban sprawl trend through the years a set of Landscape Metrics Indices has been calculated for Land Cover classifications with statistical software.

Land Cover validation and investigation of Land Cover change correlation with CC will take place in next semester.

A training workshop on Remote Sensing and the developed methodologies to be held at ARU by CIRPS's senior researcher is planned in Dar es Salaam for next year.

Collaboration between CIRPS and ARU for sharing methodology started this year. CIRPS hosted a researcher from Ardhi University for a two-months internship. Main outcomes of the internship have been:

- training on using of remote sensing methodologies for semi-automatic Land Cover classification and image analysis, and image acquisition and data analysis for Land Cover classification and evaluation of urban sprawl;
- participation in the international conference on Urban impacts on climate change in Africa (Torino, November 2011) and presentation of a paper titled "Climate Change impacts and institutional response capacity in Dar es Salaam"



- Tanzania”
- first assessment about possible joint Ph.D. research between Sapienza University and Ardhi University.
- A technical team is developing a methodology for exploring CC vulnerability scenarios investigating and modelling a specific environmental phenomena, the seawater intrusion, that is already contributing – and will increasingly contribute as CC progresses – to the degradation of those natural resources on which a large part of peri-urban livelihoods depend.

The main steps achieved until now are described as following:

- The historical data collection has been carried out. Almost 280 Borehole Reports from Drilling and Dam Construction Agency (groundwater physical and chemical parameters; geological stratigraphy) have been collected and digitized. Precipitation and temperature data have been collected for three gauges with reference to the last 10 years.
- The design of the borehole monitoring network has been completed. Almost 133 boreholes have been localized on field and georeferenced by GPS coordinates; 90 boreholes have been selected for the monitoring network building based on a spatial distribution uniformity criteria: the network is made by 90 boreholes uniformly distributed with a frequency of about 1 boreholes per Square Mile.
- Different kind of monitoring campaigns have been designed in order to survey the marine intrusion phenomena (annual campaign, monthly campaign and weekly campaign).
- A specific relational database of the boreholes network storage has been built on MS Access environment.

One training workshop developed by a CIRPS’ researcher has been held at Ardhi University in November 2011 addressed to 7 master students. The main topics were climate change and groundwater, seawater intrusion theory and modelling, GIS theory and practise, data management and basic of MS Access, groundwater measures instruments theory and practise.

Progresses related to the third project result “Enhanced capacities of Dar's municipalities in understanding CC issues, designing adaptation activities and integrating them in their Udem strategies and plans” are expected during the second semester of the second year and the third year. The better understanding of actual and practical ways of addressing CC adaptation in coastal areas of Dar es Salaam and the enhanced development of methodologies for supporting inhabitants of coastal unplanned and underserviced settlements in their efforts to adapt to CC are the basis for the capacity-building activity addressed to Dar’s municipalities and for the development of the tools for the participatory design of community based adaptive measures.

At the state of the art DCC and Dar’s municipalities need assessment is ongoing.

Since the start of the project the dissemination of the activities and of its results has



been taken in great consideration in order to spread information about the ongoing activities, to enlarge networking and involve new stakeholders interested, to share knowledge about the scientific findings.

- The project logo and the project web site have been designed and validated during the kick off meeting with ARU, EC Delegation representative and Dar's municipalities and Dar City Council representatives invited.

The project logo has been used for headed paper, minutes, reporting and working paper template, for the web site and for the newsletter and for all the future project visibility and dissemination tools.

The project web site is online at the following address: <http://www.planning4adaptation.eu> A reserved area is available for the project team to exchange reports, minutes of meeting, documents, maps, etc. in order to be updated and to share information in a quick and easy way. Some existing parts and some still under construction will be in development and updating during the whole duration of the project.

- A newsletter was designed and sent to the project mailing list for the first time at the beginning of November in order to disseminate information. The newsletter will be sent each three months and the mailing list is growing
- The project activities and the first results have been disseminated by the team of researchers participating in some national and international events:
  - Seminar within the university master course on "International Cooperation Aid and Project Design", CIRPS Sapienza University of Rome, Rome, February 2011;
  - Workshop on "Climate Change in Coastal Dar es Salaam", ACC Dar Kick off meeting, Dar es Salaam, April 2011
  - International Ph.D. Workshop in Sustainable Development, Columbia University, New York City, May 2011;
  - International Conference on "Urban Impact of Climate Change in Africa", Polytechnic of Turin, Turin, November 2011
- Scientific papers related to the activities 1.1, 1.2, 2.1 and 2.2 are under elaboration by the working groups' members. Some working papers have been already drafted.

EU visibility has been ensured for each of the above mentioned dissemination activities following the rules of the "Communication and Visibility Manual for European Union External Actions" (Europeaid, 2010)

### **PROGRESS IN CROSS-CUTTING ISSUES:**

*What progress is being made in achieving cross-cutting objectives in relation to concerns as gender equality, rights of indigenous groups, rights of people living with HIV/AIDS and/or with disabilities, environmental protection and good governance?*



The action pays special attention mainly to three cross-cutting objectives: promotion of gender equality and equal opportunities, environmental protection and good governance.

- Women's concern on both CC impacts and planned adaptation initiatives have been taken into account as a fundamental piece of knowledge. Gender equality has been assured during the administration of the household questionnaire devoted to assess CC impacts on the livelihood of the target population and to increase knowledge on their autonomous adaptive capacities. Data analysis including this balance is still under elaboration.

Also during the survey addressed to DCC and Dar's municipalities gender distribution of respondents has been considered and taken into account in the data analysis phase.

As for the pilot exercise conducted for assessing the participatory methodology nearly half of the people taking part in the workshop were women. The exercise shows that the chosen methodology is suitable to highlight gender issues.

Women hold prominent positions in the action management (i.e. Project Coordinator, Project Manager, research staff member of the working groups).

- As regards the environmental issues, the whole action is based on the purpose of ensuring the environmental sustainability of adaptive measures and strategies. The target groups of the action are those population living in coastal unplanned and underserviced settlements where their livelihood is strictly depending on natural resources. By drawing on the daily experience of those people, the action ends up in indentifying those environmental processes that are in a critical condition and in valuing good practices of natural resources management. Furthermore the protection of natural resources is one of core elements of the "vulnerability" concept. These premises are mainstreamed into all the ongoing analysis and methodologies in development..

- The processes of decision-making and the process by which decisions are implemented have been agreed step by step between the project partners and the Dar City Council. DCC involvement to the project is crucial to ensure its success in order to facilitate the communication between the project staff, Dar's municipal services and the people living in the targeted areas, and to ensure the action to be consistent with DCC's strategies for UDEM.

DCC and Dar municipal councils' representatives have been involved since the beginning of the project. The kick off meeting has provided an opportunity to exchange ideas about the project purposes and to do first assessment about the awareness of municipal officers on CC issues and the need to support people living in peri-urban Dar in their efforts to adapt.

DCC has also been a useful provider of documents and data and has given constant support to the project working teams by ensuring the collaboration of its officers at district, ward and sub-ward levels. The community leaders have been a strong point of reference to facilitate the organization of the pilot participatory exercise. The availability of Dar's municipal services have been crucial for the





surveys conducted during this year. This should be considered one of the more relevant achievements of the first project year because it is the premise to the next activities of capacity-building and to the final one to design adaptive strategic measure. It is the main assumption to assure the future impact and sustainability of the action.

**ISSUES FACED/CORRECTIVE MEASURES:**

*What constraints/problems are currently being faced? What action has been taken, and by whom, to address these? What further action is required to support effective implementation, by whom and when?*

All the assumptions described in the logframe have been fulfilled. They can be summarized in three main ones: the institutional involvement and willingness of local authorities to collaborate in the project, the community involvement and the international travel regulation and organization. The development of the action did not did not encounter any problem.

Some few adjustments have been required in carrying out the activities 1.1 and 1.3 In particular as regards the activity 1.1 the first sample size planned by the working group was rearranged. A first pilot survey was carried out with the aim to redefine the sample size to be relevant for the data analysis methodologies chosen.

As regard the participatory activity (activity 1.3) the final decision about the most effective methodology to be used for the purposes of the action has been taken only after a feasibility study and a pilot exercise taking place in Dar es Salaam. The study verified how the methodology could function in the specific context and allowed for a detailed estimation of timing, costs and organizational requirements for main participatory activity foreseen on February/March 2012.

**VALID COMMUNICATION PLAN:** YES  NO

**ANNEX: RESULTS TRACKING TABLE**

### RESULTS-TRACKING TABLE

*Summarise state of progress since the start of the project towards delivering the action expected results.*

*Compare progress against plans, using log-frame indicators as appropriate.*

*State whether original OVI's are not applicable any longer and suggest most appropriate SMART indicators.*

Result Description	Result Indicator (OVI)	Target	Performance Rating (Red, Yellow, Green)	Progress/Arising Issues	Action Required by the which implementing partner/s
1.1 Livelihoods of population dependent on natural resources and their concern for CC investigated	N. households questionnaire administered/ Households questionnaire validated in the data entry	6000/5885	Traffic Light		
	N. people involved in the Data Analysis training course	26	Traffic Light		
	N. Data Analysis Methodologies implemented	3	Traffic Light	The whole Data Analysis procedure has not been finalized yet	CIRPS
1.2 Dar's institutional activities related to CC investigated	N. officers participating in the kick off meeting	10	Traffic Light		



	N. officers interviewed	48	Traffic Light		
1.3 Local options of autonomous adaptation and raise awareness on CC explored	N. people involved in the feasibility study	28	Traffic Light		
	Participatory cycles realized	2	Traffic Light		CIRPS & ARU
	N. people involved in the participatory cycles	At least 100 people for each cycle	Traffic Light		CIRPS & ARU
1.4 1st International Workshop organized	N. Background papers	2	Traffic Light		CIRPS & ARU

	N. papers presented	4	Traffic Light	Working papers are now under development	CIRPS & ARU
	N. people attending the workshop	10 researchers from universities of each partner country (Tanzania and Italy); 3 seniors from EU universities; and 3 seniors from EAC/SADC universities	Traffic Light		CIRPS & ARU
2.1 Methodologies for monitoring changes in peri-urban settlements developed	N. methodologies developed for monitoring Land Cover changes	1	Traffic Light	2 (two similar methodologies, respectively for LANDSAT images and SPOT images)	CIRPS
	N. LANDSAT images acquired/ N. LANDSAT classifications/ N. LANDSAT images processed	5 images acquired / 5 classifications/ 5 images processed (period 2002-2010)	Traffic Light		CIRPS
	N. Landscape Metrics Indices calculated for Land Cover change analysis	8	Traffic Light		CIRPS

	N. people involved in the training short course on land cover classification and landscape metrics analysis	20	Traffic Light	It will be provided in the 3rd semester	CIRPS
	N. methodologies developed for Land Cover validation	1	Traffic Light	Validation activity will start in 2012	CIRPS & ARU
	N. methodologies for investigating Land Cover Change correlation with Climate Change	1	Traffic Light	The scenarios will be built once the survey activity has finished	CIRPS & ARU
2.2 Methodologies for exploring CC vulnerability scenarios, as regards seawater intrusion phenomenon, developed	N. methodologies for conducting groundwater monitoring campaigns in Dar's coastal plain/ N. georeferenced boreholes / N. boreholes selected for the monitoring network	1 methodology/  133 georeferenced boreholes/  90 boreholes selected for the monitoring network	Traffic Light		CIRPS
	N. groundwater monitoring campaign conducted	1 (consisting of 2 annual and 12 monthly surveys)	Traffic Light	The preparation phase is concluded and the survey activity will start in January 2012	CIRPS leader of the activity  Ardhi responsible for monitoring

	N. methodologies for the analysis of seawater intrusion / N. maps produced	1 methodology / 9 maps (SWL maps, EC maps, Seawater intrusion maps for 1997, 2002, 2012)	Traffic Light	The seawater intrusion analysis will start after the monitoring campaign beginning	CIRPS
	N. methodologies for exploring vulnerability scenarios under climate change / Number of scenarios explored	1 methodology / 3 scenarios explored	Traffic Light	The scenarios will be built once the survey activity has finished	CIRPS & Ardhi
2.3 Methodology for designing community based adaptation initiatives developed	Toolkit for the design methodology	200 copies	Traffic Light	The toolkit will collect the methodologies from 2.1 and 2.2	CIRPS & ARU
2.4 2nd International Workshop organized	N. Background papers	2	Traffic Light		CIRPS & ARU
	N. papers presented	4	Traffic Light	Working papers are now under development	CIRPS & ARU
	N. people attending the workshop	10 researchers from universities of each partner country (Tanzania and Italy); 3 seniors from EU universities; and 3 seniors from EAC/SADC universities	Traffic Light		CIRPS & ARU



3.1 Capacity building strategy prepared	N. Need assessment report of the training needs of municipal staff	1 need assessment for each municipality (Kinondoni, Ilala, and Temeke)	Traffic Light	The need assessment is ongoing	ARU
	N. Officers involved in the need assessment	At least 40	Traffic Light		ARU & CIRPS
	N. capacity-building action plan	1	Traffic Light		ARU & CIRPS
3.2 Training programme developed and implemented	N. learning curricula / N. evaluation procedures	2 learning curricula / 1 evaluation procedure	Traffic Light		ARU & CIRPS
	N. Training resource book	1	Traffic Light		ARU & CIRPS
	N. Officers involved in the training	20	Traffic Light		ARU & CIRPS
3.3 Mid term International Conference organized	N. submitted papers	12	Traffic Light		ARU & CIRPS
	N. People attending the Conference	100	Traffic Light		ARU & CIRPS
	N. Press release	At least 2	Traffic Light		ARU & CIRPS

3.4 Dar's municipalities supported in designing adaptation initiatives	N. Adaptation initiatives designed	At least 4	Traffic Light		ARU & CIRPS
3.5 3rd International Workshop organized	N. Background papers	2	Traffic Light		CIRPS & ARU
	N. papers presented	4	Traffic Light		CIRPS & ARU
	N. people attending the workshop	10 researchers from universities of each partner country (Tanzania and Italy); 3 seniors from EU universities; and 3 seniors from EAC/SADC universities	Traffic Light		CIRPS & ARU
Dissemination results	N. scientific papers submitted to academic journals	At least 2 related to the result 1.1;  At least 1 related to the result 1.2;  At least 3 related to the result 2.1;  At least 3 related to the result 2.2	Traffic Light	Draft working papers are ready;  Draft working papers are ready;  Some draft are under development  It will start in the 5th semester	CIRPS & ARU
	N. evaluation reports	6 (2 evaluation reports for each international workshop)	Traffic Light		CIRPS & ARU



# ACC DAR Adapting to Climate Change in Coastal Dar es Salaam

	N. Proceedings (international workshop and conference)	4 proceedings (1 for each international workshop and 1 for the international conference)	Traffic Light		CIRPS & ARU
	N. Booklets reporting on designed adaptation initiatives	500 copies	Traffic Light		CIRPS & ARU
	N. Posters on the identified adaptation initiative	100 copies	Traffic Light		CIRPS & ARU
	N. Web sites	1 web site with a public and a reserved area	Traffic Light	Updating of the contents during the whole project	CIRPS
	N. Newsletters	10 (three-monthly based)	Traffic Light	Newsletter will be sent during the whole project	CIRPS
	N. Promotional material kit	1 brochure + 1 bag + 1 CD Rom	Traffic Light	Design of the promotional material is at the moment under development	ARU