



ACC DAR Adapting to Climate Change in Coastal Dar es Salaam

International Workshop

TOWARDS SCENARIOS FOR URBAN ADAPTATION PLANNING

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



The BLUE AP project: an Adaptation Plan for the City of Bologna

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SAPIENZA
UNIVERSITÀ DI ROMA



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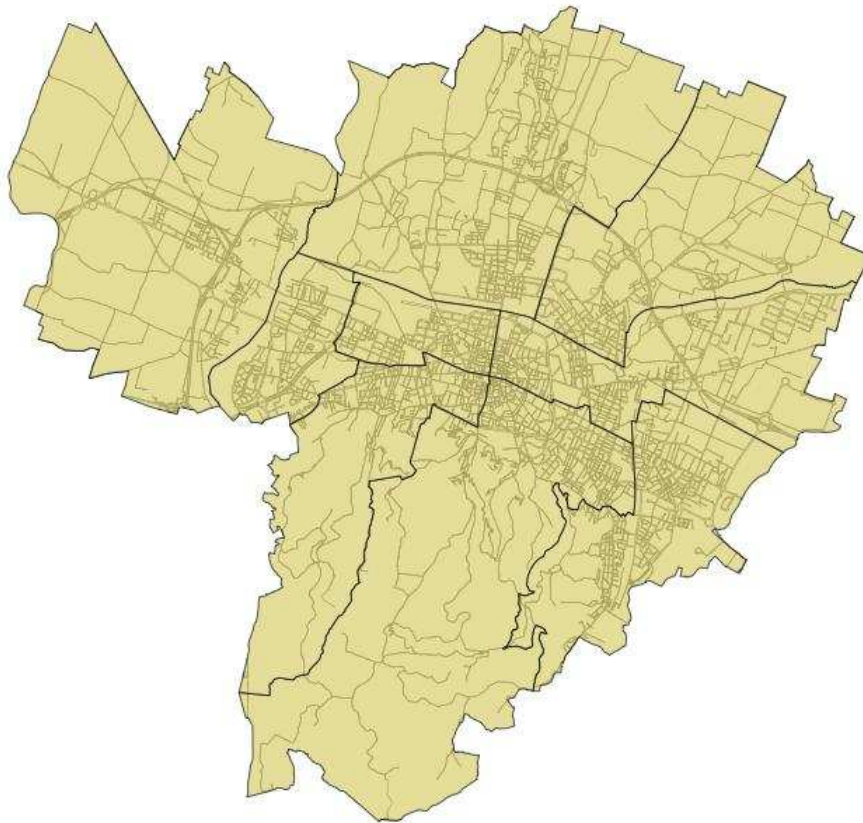
Project: BLUE AP (LIFE11
ENV/IT/119)

Coordinator: Comune di Bologna

Partner: Kyoto Club, Ambiente
Italia, ARPA Emilia Romagna

Project duration: 36 months
(01/10/2012-30/09/2015)

Main objectives: In the context of European initiatives to improve awareness and actions regarding climate change, the BLUEAP project aims to support activities which will lead to the production and adoption of the climate change adaptation plan for Bologna.



First Step: Bologna's overview

- The city is divided into 9 districts and has a wide central area (4 kmq)
- Density: 2700 x kmq
- Population: 380.000
- Economy: mainly small and average companies very competitive on the market. Strong industrial tradition in mechanical engineering, machinery, electronics, packaging and logistic.
- University: founded in 1088, plays an important role from the point of view of population (85.000 students living/gravitating towards the city) and economy.

BLUEAP

Bologna adaptation plan
for a resilient city
Bologna città resiliente

Main actions

- 1) Learn from and disseminate the best EU experiences in Adaptation Planning at city level;
- 2) Realise a comprehensive information system, scaling down and producing new informations about climate change impact risks and vulnerability in the city;
- 3) Increase awareness of Bologna local target stakeholders and decision-makers;
- 4) Provide to the Bologna community a Strategy document/tool and a coaching support in order to drive the participatory planning and to make aware about the measures defined by the Local Adaptation Plan;
- 5) Monitor and evaluate the effectiveness and sustainability of the proposed actions;
- 6) Communicate project guidelines and results.



First Step: some vulnerabilities...

- The central part of the city and the first belt are mostly composed of historical buildings and have a very high population density
- The city has an high percentage of old people
- Social problems related to census are spread in non-homogeneous manner (high variability in the city centre districts, i.e.)
- The city is an important mobility hub between the north and the south of the country and suffers of traffic congestion

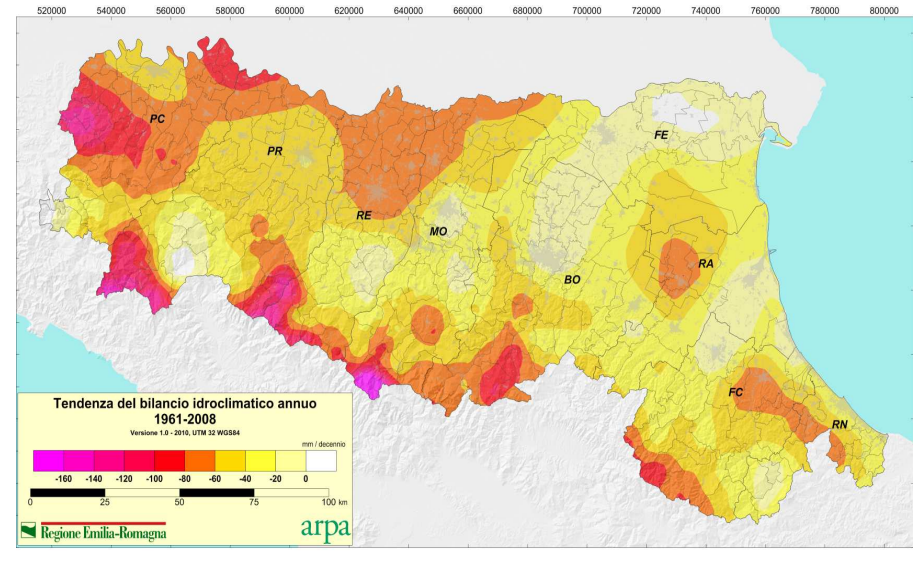
...and some hazards

- Because of its location the city is suffering more and more for heat waves
Exposure: HIGH
Sensitivity: HIGH (population, tourism, air quality)
- The region suffers of more and more frequent phenomena of water scarcity and droughts
Exposure: MEDIUM/HIGH
Sensitivity: HIGH (population, mobility, economy)



ACTION A.1 - Analysis: climate profile, vulnerability assessment, mitigation needs, resilience opportunities

Production of a comprehensive information system (Local Climate Profile), well oriented to support the participatory planning process, to select better and effective strategies, useful as baseline framework to monitor and to periodically improve the actions defined by the process.



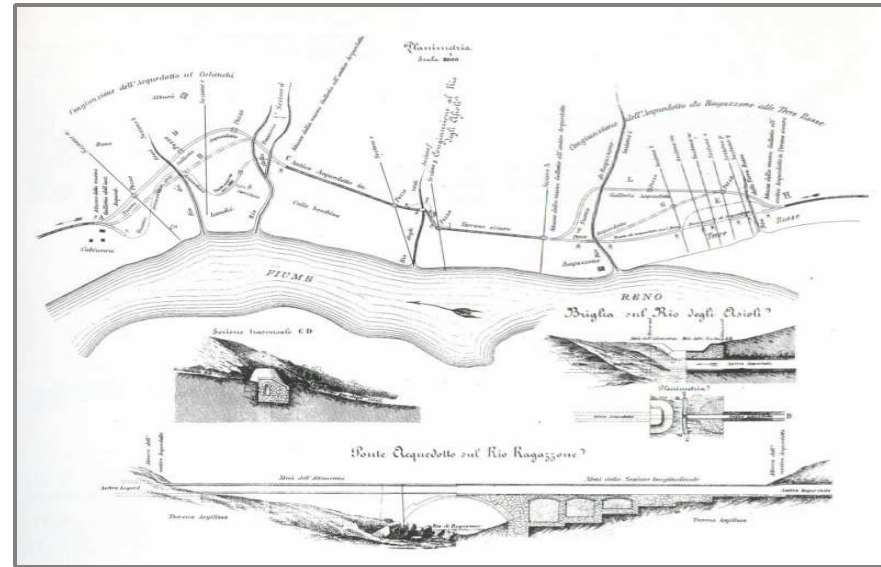
ACTION B.1 - Stakeholder's engagement

Develop, refine and implement a replicable participatory bottom-up decision-making process involving all the relevant stakeholders in the adaptation measures.

[note: tested during the implementation of SEAP]

ACTION B.2 - The Adaptation Plan

Definition of the City Adaptation Plan. The strategy development will focus in particular on Water Management, Sustainable Urban Drainage Systems, Blue and Green Infrastructures.



ACTION B.3 - Measures start up- Pilot Actions Experimental Applications

Launch of some of the measures and actions defined by the Adaptation Plan, which will take into account both urgent matters regarding the urban territory and the stakeholders suggestions.

ACTION C.1 - Monitoring of the impact of the project actions

Evaluation of the main project goals and actions expected results.

ACTION D.1 - Communication and dissemination actions

Communication of the results of the project at a local, national and European level and to serve as communication tool for the project itself.

ACTION E.1 - Project management

Coordination and management of the individual action and activities in order to accomplish the project's goals with the budget constraints.



Activities	Leader	Oct-12	Nov-12	Dic-12	Gen-13	Feb-13	Mar-13	Apr-13	Mag-13	Giu-13	Lug-13	Ago-13	Set-13	Oct-13	Nov-13	Dic-13	Gen-14	Feb-14	Mar-14	
		M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	
A.1 <u>Analysis-Local Climate Profile</u>	ARPA										Local Climate Profile (LCP)									
B.1 <u>Stakeholders Engagement</u>	Kyoto Club						Stakeholders Engagement Process Launch													
B.2 <u>Adaptation Plan</u>	Ambiente Italia																			
B.3 <u>Measures Start-Up - Pilot actions Experimental Application</u>	Ambiente Italia																			
C.1 <u>Monitoring of the impact of the project actions</u>	CoBo												Monitoring Step 1 st year							
D.1 <u>Communication and dissemination actions</u>	Kyoto Club						Notice Board				Notice Board					Notice Board				
							Blue AP 2.0									Forum Stakeholder	Forum Stakeholder	Forum Stakeholder	Forum Stakeholder	
D.2 <u>After LIFE+ Communication Plan</u>	Kyoto Club				Provisional "After LIFE+ Communication															
D.3 <u>LIFE+ Networking with Other Relevant Projects and EU Programs</u>	Kyoto Club												Adaptation Best Practices Report							
E.1 <u>Project Management and Monitoring of the Project Progress</u>	CoBo									Inception report			Presentazione LCP in Commissione Consiliare (OdG che	Approvazione in Giunta di		Progress Report				

Activities	Leader	Apr-14	Mag-14	Giu-14	Lug-14	Ago-14	Set-14	Ott-14	Nov-14	Dic-14	Gen-15	Feb-15	Mar-15	Apr-15	Mag-15	Giu-15	Lug-15	Ago-15	Set-15	
		M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	
A.1 <u>Analysis-Local Climate Profile</u>	ARPA																			
B.1 <u>Stakeholders Engagement</u>	Kyoto Club		Blue AP Protocol for Bologna Stakeholders		Stakeholders Engagement Outcomes (Report)															
B.2 <u>Adaptation Plan</u>	Ambiente Italia				Adaptation Plan (Summary)															
B.3 <u>Measures Start-Up – Pilot actions: Experimental Application</u>	Ambiente Italia															Report Pilot Actions Outcomes				
C.1 <u>Monitoring of the impact of the project actions</u>	CoBo							Monitoring Step 2 nd year								Report Monitoring Outcomes (Summary)				
D.1 <u>Communication and dissemination actions</u>	Kyoto Club	Notice Board					Notice Board			Notice Board					Notice Board	Report Dissemination (Main Results)	Final Conference			Notice Board
		Forum Stakeholders Forum	Forum quartiere	Forum quartiere																Layman's Report
D.2 <u>After LIFE+ Communication Plan</u>	Kyoto Club																			AfterLIFE + Communication Plan
D.3 <u>LIFE+ Networking with Other Relevant Projects and EU Programs</u>	Kyoto Club																			
E. 1 <u>Project Management and Monitoring of the Project Progress</u>	CoBo			Mid Term Report									2nd Progress Report							

ACTION A.1

First assessment of the Local Climate Profile:

- downscaled researches about climate change in the urban area;
- first draft the elaboration of comprehensive information system that integrates georeferenced environmental and social data (external service);
- start of the data gathering from other Departments and Companies.

ACTIONS D.1-D.2-D.3

- Web-site;
- Communication Plan and the draft of the After Life+ Communication Plan;
- involvement of potential private stakeholders;
- spread of the project during workshops, events and meetings;
- start of the networking with other projects and EU programmes.

ACTION B.1

Ongoing organization of technical boards in the frame of the Piano Strategico Metropolitano. The main goals are:

- raise awareness and interest on the project;
- elaborate some measures and actions with the participants (public and private stakeholders, associations);
- integrate measure and actions in a wider context;
- unify the stakeholders proposals in one document related to climate change and Adaptation Plan.

ACTION E.1

Reporting and monitoring activity.



Action and measures: a first draft

- Regarding the recent extreme events related to water scarcity and heat waves, the consortium decided to start working mainly on actions and measures regarding water management and UHI (Urban Heat Islands)

- Monitoring actions of the drainage system of the historical part of the city (WATER);

- Integrating the existing rehabilitation projects of the city water channels as green corridors (WATER/HEAT WAVES);

- Prosecution of the actions for water use and saving (WATER);

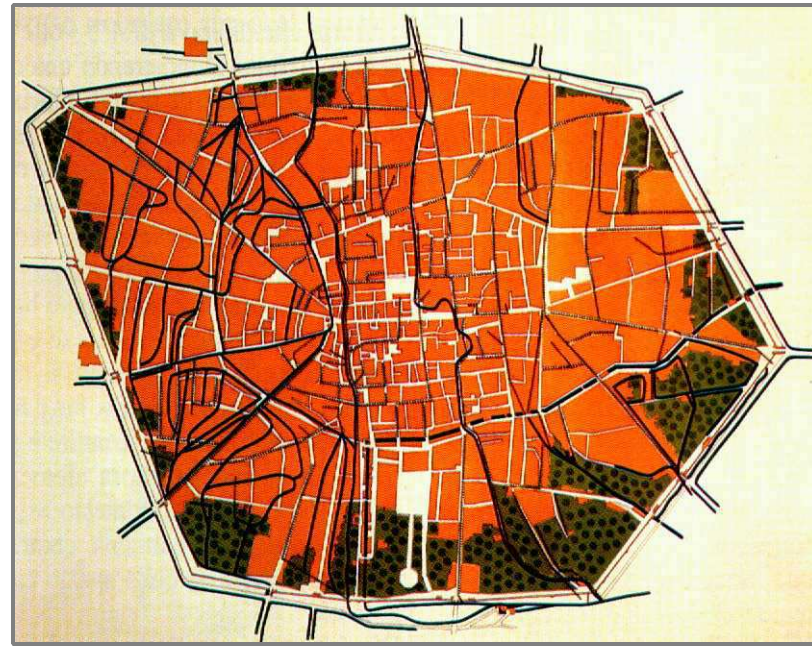
- Measures for urban greening (HEAT WAVES): an analysis cost/benefit is still needed, in order to understand how greening measures could negatively interact with the water scarcity problems.

- Energy management is also very important for the climate change: as the city has already signed the SEAP, the BlueAP Project will focus for the moment on other issues and then try to integrate them with the Energy Plan of the City.



At this stage of the project no particular technical, financial or organizational problems or difficulties occurred.

Possible problems regarding the ongoing actions can be referred mainly to the data gathering from public and private stakeholders (data regarding water management, health and diseases due to heat waves), which is still ongoing: these uncertainties make the work on GIS database elaboration more difficult and could cause a delay in the risk assessment of the Local Climate Profile, and consequently in the other milestones and deliverables.



Possible risks

- Many stakeholders have to be involved in the project: a potential risk is the lack of collaboration and (in some cases) the potential conflict of interest (i.e. water management), which could be an obstacle in the implementation of some selected measures.
- The Adaptive Capacity Assessment could take more time than expected and cause a delay in the implementation of the actions.
- Some measures could not be undertaken because of the high costs; the economical crisis will surely not help the private stakeholders involvement.
- Decision-makers and policy are the most important stakeholders for the approval of the Adaptation Plan; if they are not properly involved and motivated to spread it, the Plan could not become a planning tool as expected.



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Thank you for your attention.

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