



**ACTIVITY:** workshop AELCLIC\_PATHFINDER project

**DATE and TIME:** September 18, 2019 - from 3.30 p.m. to 6.30 p.m.

**PLACE:** Fondazione Innovazione Urbana, Piazza Maggiore 6, Bologna

**ORGANIZERS:** University of Bologna, Municipality of Bologna and Fondazione Innovazione Urbana

**PARTICIPANTS:**

**Organizers**

- University of Bologna: Daniele Torreggiani, Patrizia Tassinari, Ludovica Marinaro, Giulia Gatta
- Municipality of Bologna: Giovanni Fini
- Fondazione Innovazione Urbana: Valeria Barbi, Federico Salvarani, Marta Bertolaso

**Stakeholders who accepted to join the network of stakeholders:**

- Giuseppe De Togni, Municipality of Bologna
- Julia Colver, Nomisma
- Marco Spinedi: interporto Bologna
- Marco Caliceti: Confagricoltura Bologna
- Claudio Cervellati, Confagricoltura Bologna ed Emilia Romagna
- Michele Solmi: Consorzio Bonifica Renana
- Silvia Bergami: EmilBanca
- Marco Odaldi: AESS (Agenzia Energia e Sviluppo Sostenibile) Modena
- Andrea Bruini: Granarolo Group
- Mirella Di Stefano: Granarolo Group
- Lucia Fresa: Agenzia del Pilastro
- Chloy Vlamidis, Agenzia di Sviluppo Pilastro

The following stakeholders accepted to join the network of stakeholders and planned to participate in the workshop but have not been able to attend due to unforeseen circumstances:

- Fondazione FICO
- CAAB
- Orogel
- Inalca
- Coldiretti Bologna, Carlo Cavallina
- Quartiere San Donato - San Vitale, Simone Borsari
- Orti Salgari, Patrizia Preti
- Francesco Palmieri: Bologna Welcome
- Carmine Preziosi: ANCE Bologna (Board of Builders)

**KEY OBJECTIVES of THE ACTIVITY (expected outcomes):**

This workshop, co-organized by University of Bologna, Municipality of Bologna and Fondazione Innovazione Urbana, is the second one organized in the “north-eastern fringe areas of Bologna”, selected as one of the 16 pilot landscapes where the AELCLIC project aims to create a network of local stakeholders with the capacity to co-define plans for the Adaptation of their landscape to Climate Change. In particular, this second workshop aims at consolidating the network of the local stakeholders connected, at different levels, with the pilot area. It defines the diagnosis of impacts of the climate change on the pilot area, and co-identifies the possible structure and the contents (themes, goals, solutions, actions and roles) for the future definition of a Landscape Adaptation Plan to Climate Change.



The workshop, attended by 20 persons, representatives of the local stakeholder's ecosystem and the event organizers, has been hosted at the headquarters of Fondazione Innovazione Urbana, whose staff provided specialized support aimed to facilitate the participatory process.

The main objectives of the workshop could be summarized as follows:

- Summarize the results of the first workshop and implement them;
- Evaluate the interest of the stakeholders who were not present at the first workshop, in collaborating in the project and receive their expression of interest in appearing in the project website as a member of the network of stakeholders;
- Consolidate the networking between the stakeholders and with the project's partners;
- Map the perception and awareness of the network about climate change issues, carrying out a co-identified diagnosis of climate change impacts in the pilot area;
- Trigger a landscape centered approach to cope the goals of climate change adaptation starting from a landscape characterization of the pilot area and an overview of projects and programs carried out both locally and internationally.
- Co-define the structure and the contents (in terms of themes, goals, solutions, actions and roles) for the definition of a Landscape Adaptation Plan to Climate Change;
- Discuss about the opportunity to apply for a follow-up EU project after this pathfinder (e.g. Climate KIC Demonstrator call for proposals).

All the stakeholders invited to the discussion declared and confirmed their interest in collaborating, with different modalities and contributions, to the projects. They also accepted to be updated on the project development and the future definition of a climate adaptation plan within the pilot area, intended as an integrated and systemic solution and as an information document supporting territorial and sector planning, as well as a reference for public or private initiatives on climate change adaptation.

AGENDA:

### **3.30 – 3.40 p.m. | Welcoming speech and synthesis of the first workshop's results**

- Valeria Barbi – Fondazione Innovazione Urbana: welcoming of the participants and description of the agenda.
- Daniele Torreggiani – professor of the Department of Agricultural and Food Sciences of the University of Bologna: brief summary of the results of the first workshop and description of the objectives of the work to be carried out in the first phase of the workshop.

### **3.40 – 4.30 p.m. | PHASE 1: Implementing the impact diagnosis: definition of the hierarchy of climate change impacts in the various areas of the pilot area.**

- The **first group work** (led by Valeria Barbi and prof. Daniele Torreggiani) involves the use of an online application (Mentimeter) for the simultaneous management of data and the creation of graphs that allow identifying the relevance attributed by the stakeholders to the various impacts of climate change on the different homogeneous areas of the pilot area (see annex 1 to the present document).
- Ludovica Marinaro (University of Bologna) - Illustration of the characterization of the various spatial units of the pilot landscape.
- The **second group work** (led by Valeria Barbi and prof. Daniele Torreggiani) using Mentimeter, is aimed at identifying the relevance attributed by stakeholders to the various impacts of climate change on the various structural landscape units of the pilot area, whose



definition derives from the landscape characterization previously introduced (see annex 1 for the related graphs).

#### **4.30 – 5.30 p.m. PHASE 2 | Suitable adaptation solutions for the pilot area**

- Ludovica Marinaro – University of Bologna. Illustration of plans, projects and solutions carried out at local and international level in the climate change's adaptation field, with reference to the main structural units of the pilot landscape.
- **Third group work** carried out on aerial images, aimed at mapping and outlining desirable strategies, solutions, opportunities and projects for adapting the pilot landscape to climate change. The stakeholders are invited to think about the evolution of the landscape starting from the identified structural units. The organizers to define the inputs for the third phase of the workshop systematize the brainstorming of this group work.

#### **5.30 - 6.30 p.m. PHASE 3 | THEMES, OBJECTIVES AND ACTIONS of the plan for the adaptation of the pilot area to climate change and ROLES of the stakeholders**

- Brief illustration of the group work for defining the structure and contents of the Plan. A draft version of the structure and contents of the Plan, prepared by the organizers based on the outputs of the first workshop and further implemented in real time using the outputs of the brainstorming sessions of the previous phases of this second workshop, is showed in a large paper format.
- Focus group with all the stakeholders (led by University of Bologna with the support of the Municipality of Bologna and FIU) aimed at:
  - Sharing the structure of the future LACAP;
  - Co-identifying the contents of the various parts of the Plan: THEMES, OBJECTIVES, SOLUTIONS, ACTIONS and ROLES of the stakeholders.
 The outputs of the focus group are implemented in the draft structure of the Plan.
- Daniele Torreggiani – University of Bologna. Summary of the results of group work and sharing of the results achieved for the future LACAP.

#### **6.30 Closing of the works and networking cocktail**

Daniele Torreggiani – University of Bologna. Closing and general thanks

#### **KEY OBJECTIVE of THE ACTIVITY (expected outcomes)**

**PHASE 1 | Implementing the impacts diagnosis:** Starting from the results of the impact analysis carried out in the first workshop, the stakeholders are asked to verify the number and the level of perceived importance and relevance of the various climate change impacts on the pilot landscape.

The climate change impacts that have been confirmed by the network have been grouped into three main impacts. This result is also consistent with the results of the Climate Change Adaptation Plan of Bologna – BlueAp. The key impacts identified are as follows:

- Drought and water scarcity;
- Extreme events;
- Increased temperatures and heat waves.

After confirming the main perceived impacts on the pilot landscape, the work has been carried out with the help of the Mentimeter app. Each stakeholder has been asked to assess (very low, low,



medium, strong, and very strong) the perceived importance and severity of each CC impact on the main regions of the pilot landscape.

After the illustration of the characterization of the landscape of the pilot area (UniBo), and the identification of its structural units, the stakeholders have then been asked to rate the severity of each CC impact on the various structural units of the pilot landscape (very low, low, medium, strong, and very strong).

### **Summary of Results:**

All the stakeholders have participated actively, contributing to sum up the common perception of the severity of climate change impacts. The results of this focus group are in annex 1 to this report. Temperature increase is perceived as severe problem on average over the entire pilot area, especially on parking areas, on paved areas in general, and on agricultural areas. The consequences of drought are perceived especially on green and cultivated areas, while the effects of heat waves especially on green areas, agricultural areas and pedestrian ways.

### **PHASE 2 | Suitable adaptation solutions for the pilot area**

The first part of this section was aimed at illustrating a selection of projects and programs both at a local and international scale, which can be assumed as reference for the definition of CC adaptation solutions. Examples of projects carried out in the Municipality of Bologna and other European and international contexts have been presented. This is followed by an excursus of the most important, recent and innovative climate adaptation plans implemented in different European and international metropolitan contexts to offer useful examples about possible structures and visions.

**Discussion:** The work was conducted using aerial images of the pilot area and stickers of 7 different colors (1 for solutions and 6 for actions), to allow the stakeholders to differentiate the Solutions and the different types of actions. UNiBO maps on the areal images the solutions and actions identified in the focus group. To trigger a fruitful discussion the organizers prepared some examples of solutions derived from the results of the first AELCLIC workshop, the analysis of the climate change adaptation plan of Bologna and inspired by the most relevant CC adaptation plans at the international level. Each stakeholder has been invited to think about the suitable solutions and relative actions for the future LACAP.

### **The solutions and actions identified are as follows:**

The opportunity to perform some data analysis and assess the real dimension and evidence of CC impacts on the pilot area and to assess the economic impact of CC. This proposal can be considered a preliminary action for each solution proposed.

One of the solutions should address the improvement of the quality of the built heritage and architecture. It would be useful to consider bioclimatic, traditional and sustainable technologies that can help to improve the energetic efficiency of the built heritage of the pilot area, as for instance some wind towers, green walls, green roofs, etc.

It would be important to provide some solutions integrating the production of energy from renewable sources. The network proposes to integrate photovoltaic panels inside the parking areas and on the roofs of industrial and commercial buildings, balancing these last potential interventions with green roofs (always considering their maintenance costs).

All the stakeholders converge on the proposed solution of creating a **linear system of green areas** including a slow mobility network (bike lanes). In the perspective of increasing the amount of high-



quality green areas, it is important to pay attention to the maintenance costs and tasks. Some green areas of the pilot area, which already represent an attraction in themselves, could be connected and increase their degree of accessibility. In general, the pilot area is already well equipped with gardens, especially the Pilastro neighborhood, hence the supposed interventions must act to better connect the urban tissue with green infrastructure. The design will have to pay specific attention to the choice of plant species able to withstand extreme events in order to reach conditions of continuous safety of users as well as of movable and immovable property.

The stakeholder agree with the necessity and the opportunity to create a solution for the **water management** for the entire pilot area. Water management in fact could be considered as one of the major themes for the pilot area. The solution of creating an interconnected system for the storage, treatment and distribution of rainwater may help in mitigating extreme events and reusing water when/where it becomes a scarce resource. The solution aims at creating a virtuous water cycle in the neighborhood. If the excess of water gives problems to urbanized areas and the lack of water gives problems to green/agricultural areas, close to each other in the pilot area, the LACAP should plan a solution to establish a virtuous connection.

In general, the network agrees to identify solutions related to water storage, which could be performed through systems for micro-accumulation in the rural territory or larger reservoirs, retention basins which could also have a naturalistic value; and through bios wales, raingardens and road-related blue infrastructures in the urban areas. Unused areas may be used for the creation of retention basins.

Industrial water storage and treatment would call for different solutions. The reclamation consortium is working to find water from wastewater treatment plants, especially for agriculture. Therefore, the LACAP may focus on solutions related to water recycling for green areas.

To address drought in agricultural areas, according to the stakeholders it is necessary to combine a reduction in the use of water, accumulation, precision agriculture, and the adoption of draught-resistant cultivars.

One of the other complementary solutions that the LACAP should address concerns **education and communication**. This is necessary not only to provide dissemination of the pilot projects and solutions, but also to increase awareness about climate change effects on the landscape. Platforms, awareness raising campaigns, training about green areas and urban health should be considered.

**Summary of Results:** The discussion was lively and full of ideas. Each stakeholder has actively contributed to the definition of the solutions and the subsequent definition of many of the information necessary to support their implementation. It clearly emerges the need to establish priorities not only for the plan, but also more generally for the prospects of use and transformation of the pilot area. It is therefore necessary to establish priorities and avoid conflicting actions in the plan, which can therefore inspire the solutions, share a hierarchy of interventions and guide the transformation of the landscape of the pilot area.

### **PHASE 3 | THEMES, OBJECTIVES AND ACTIONS of the plan for the adaptation of the pilot area to the CC and ROLES of the stakeholders**

#### **Discussion:**

After a brief explanation of the work for the third phase of the workshop, the organizers illustrate the draft structure of the Plan taking prepared considering the results of the first workshop and previous



brainstorming sessions of this second workshop, and the analysis of examples and models at international level. The structure that is presented constitutes the strategic and design framework for the future creation of the LACAP. It identifies the THEMES; the OBJECTIVES, which can be linked to more than one theme; the SOLUTIONS formulated to face the major impacts of climate change detected in the pilot area, and the ACTIONS needed to implement them, subdivided into 6 types (analysis, diagnosis, project, pilot actions, monitoring and communication). The LACAP structure also contains a section about the roles of the members of the network, to be linked to specific actions. The group shares and confirms the themes identified by the basic structure of the plan.

The discussion then focuses on the part dedicated to solutions and actions to summarize and give concrete expression to the proposals that emerged in the second phase. The network agrees on the solutions of the draft version prepared by the organizers based on the elaboration and development of the previous results, configured as “integrated landscape strategies”. Some additional solutions are discussed and added, as follows:

- A water management solution aimed at creating a closed-cycle water system for the neighborhood.
- The creation of a linear system of green public spaces that include the soft mobility network, improve the climatic comfort of existing roads, connect existing green areas and provide better services for the neighborhood in general. This solution, aimed to give greater impulse to the circular economy, must be calibrated to consider the authorization procedures and regulation-related issues. According to the network, various bottlenecks related to the current legislation system reduce the implementation of innovative projects in the rainwater reuse or renewable energy auto production field at the neighborhood or block level. The LACAP may thus focus on those bottlenecks to facilitate the implementation of adaptation solutions. This task may be included for each solution or may be defined as a specific solution. The actions may facilitate the creation of energy communities with the active involvement of the population.
- The third solution may focus on the built environment, to increase its resilience in terms of energy efficiency and energy production.
- A fourth solution may focus on education and communication about climate change effects on landscapes. This solution would include information campaigns, training courses, open construction sites and concrete demonstration actions of adaptation projects as well as the effects of climate change.

### Summary of Results

The LACAP may be defined as a masterplan defining the specific adaptation scenario of the pilot area. The future steps of development of the LACAP should address the necessary preliminary analytical and diagnostic phases, analyze the technical and economic feasibility of the various solutions, and study and design them in detail, within a general and coordinated vision, and considering the relationships and mutual connections among the various solutions and landscape systems.

The stakeholders agree that a follow-up project should focusing both on developing a masterplan (that would provide guidelines for future public and private developments and actions in the pilot area), and on real demonstration actions. Pilot actions should be considered as part of a broader unitary strategy, and as innovative actions planned and conceived within a more general framework allowing to demonstrate the potential beneficial effects of various scenarios where those solutions can be scaled-up.

The organizers will integrate the draft LACAP structure resulting from this workshop and circulate it to the network of stakeholders, in order to allow them to send any further comment and suggestion and to confirm/express their potential contribution (in terms of knowledge, skills, activities, synergies, etc.) related to a future project for the development of the Landscape Adaptation Plan to Climate Change. The potential contributions identified by the stakeholders so far are as follows:

- Territory Analysis (Data/knowledge);
- Risk analysis and risk evaluations;
- Data and knowledge, raising awareness and dissemination in the agricultural world;
- Supply of historical data on crops and irrigation. CAP data;
- Study of impacts on the energy front;
- Community awareness;
- Constructive Support in identifying building and infrastructure solutions to respond to environmental and functional problems;
- Contribute with analysis results/pilot projects on mobility, water, waste;
- Triggering virtuous processes for circular economy;
- Sharing of the experience gained in environmental assessment and certification;
- Networking and involving other actors also for potential regeneration projects;
- Promoting internal/external awareness and dissemination through the own business, financial and entrepreneurial network.

### Closure

The organizers thank all the stakeholders for their active participation. The stakeholders confirm their interest in further developing the activities on the pilot landscape and in the future development of the LACAP.

### Picture(s) of the activity, presentation, raw outputs, etc.





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#### SUMMARY:

- Participants agree in being part of the local network of stakeholders;
- Participants agree in being updated on the project's phases and development;
- Participants agree in being involved in a next workshop or meeting;
- Participants agree in using their logos on the project official website;
- Participants confirm their interest in being involved in a future project for the definition of the plan;
- Level of Achievement of the expected outcomes: 5 out of 5.
- Main Shortcomings or barriers for the full achievement of the expected outcomes: no barriers emerged during the workshop. Participants were proactive and sensitive to the topic.
- Main Reasons for the successful achievement of the expected outcomes: climate change regularly affect stakeholders' daily activities both from a personal and professional perspective. They probably perceive the urgency to tackle the challenge and to create a network of actions. They are also interested in being promoters of a new approach with concrete actions.
- Learnt lessons and recommendations for similar activities in the same place/other places: The stakeholders and the group in general want to achieve a concrete result and have shown interest in continuing the experience towards its realization. They aim to create a coherent, organic and innovative plan that can be configured as a model experience in urban areas and beyond.
- Level of influence of the local characteristics (social, geographical, etc.) in the development of the activity: 5 out of 5.

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