

Best practice

BLUEAP - Local Climate Change Adaptation Plan for the city of Bologna

Municipality of Pescara – PP4

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| Title of the Case study | |
| General data | |
| Promoter | <p><i>Lead partner and main beneficiary: Bologna Municipality</i></p> <p><i>Project partners: Kyoto Club, ARPA (Agenzia regionale prevenzione e ambiente dell'Emilia Romagna), Ambiente Italia</i></p> |
| Timeframe | <p><i>October 2012: Start of Blue AP Bologna Resilient Project</i></p> <p><i>June 2014: Subscription to Mayors Adapt programme</i></p> <p><i>June 2015: Adoption of the Bologna climate change Adaptation Plan</i></p> |
| Target area and scale | <p><i>The project is financed by the LIFE financial instrument of the European Community (LIFE11) and is focused on the target area of Bologna Municipality</i></p> |
| Brief description | <p><i>To face the climate change challenges, the Municipality of Bologna in collaboration with Ambiente Italia, ARPA Emilia Romagna and Kyoto Club, wanted to develop, through the BLUEAP project, a Local Adaptation Plan to climate change together with the experimentation of some effective and tangible pilot actions, to be implemented on the territory of Bologna in order to make the city more resilient.</i></p> <p><i>The general purpose of the initiative was to prepare the governmental bodies and citizens to cope more effectively with heat waves, droughts, floods (reactive adaptation) and other effects of climate change, while reducing existing vulnerabilities on territory (anticipatory adaptation).</i></p> <p>Specific goals:</p> <ul style="list-style-type: none"> <i>to create an innovative information system integrating environmental and social data able to produce new information about environmental risks and the best strategies to adopt in order to face them;</i> <i>to raise awareness of local authorities, socio-economic players and citizens on the real risks associated with climate change in the Bologna's territory, motivating them to adopt more environmentally conscious behavior and to responsibly manage the water resources;</i> <i>to offer technical support and training to local stakeholders, with the aim of planning and enacting some actions outlined in the Adaptation Plan. BLUEAP has also played the role of a start-up by launching pilot actions in the Bologna's territory with the participation of local companies and players;</i> <i>to monitor and evaluate the effectiveness and sustainability of the actions taken and the results obtained during the implementation of the project;</i> <i>to share and communicate the guidelines and results of the project, promoting the dissemination and exchange of the generated know-how, to allow other local communities to use the developed models.</i> |

Project Phases

- Local Climate Profile (LCP): the action focused on the analysis of climate variability at different levels - European, Italian, regional (Emilia Romagna) and local (Bologna) - on which future climate scenarios were built. The analysed climate variables were the minimum and maximum temperature and the amount of precipitation, both in medium and extreme fields. The second part of the action was focused on the analysis of the territory, by identifying the main vulnerabilities arising in relation to the climate projections.
- Participatory process: this action was aimed at developing, further refining and implementing a replicable process of bottom up participation in order to face the climate challenges with the support of the local community, involving politicians, citizens, representatives of the production sector, etc. Within the participation process the scheme for the definition of the Adaptation Plan has been developed: each vulnerability identified in the Local Climate Profile has been associated with a strategy and a selection of actions.
- Adaptation Plan: the aim of the action was to define the Local Climate Change Adaptation Plan for the city of Bologna which was developed with reference to three main themes, i.e.: drought and water scarcity, heat waves in urban areas, extreme rainfall events and hydrogeological risk.
- Pilot actions: implementation of pilot actions aimed at creating resilient communities in order to raise awareness of climate change risks.
- Monitoring of the project actions' impacts: monitoring was based on two main instruments: the "Monitoring protocol on climate change impact risk and vulnerability", based on the provisions of the LCP, and the "Monitoring protocol of adaptive interventions in Bologna".

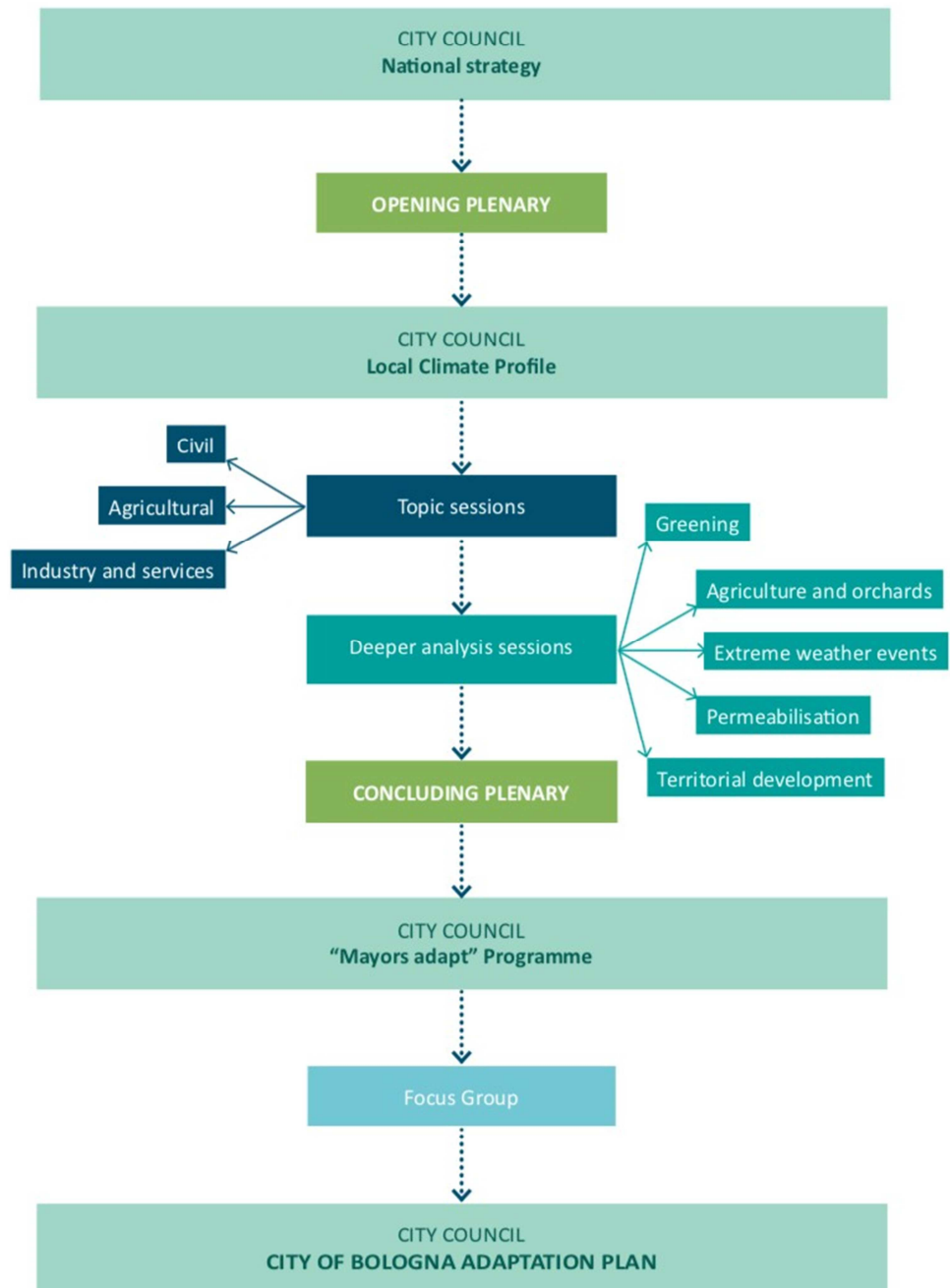
The project included, moreover, an intensive communication, networking and dissemination activity in order to inform the public and raise its awareness about adaptation to climate change, as well as to disseminate the project results at local, national and European level through the development of communication tools (video, brochures, pictures, posters, gadgets) and the participation in national and international events.

Project Results

- Creation of the Local Climate Profile which contains information about the territory's vulnerabilities relating the climate change, highlighting the risks and the opportunities of resilience.
- Development of a reference map to visualise risk factors emerging from the climate analysis and to identify policies and actions.
- Development of a replicable bottom-up participatory process.
- Greater awareness about the risks associated with climate change, by stakeholders, local authorities, citizens and enterprises.

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| | <ul style="list-style-type: none"> • <i>Preparation of a “Adaptation best practices”</i>: the document contains a review of measures, already carried out in Italy and abroad, that can improve the ability to adapt to climate change effects, mainly concerning the topics “greening” and “waters” • <i>Elaboration and approval of the “Local climate change adaptation strategy”</i>. The document has been developed with the aim of enhancing the resilience of the Bologna’s territory, through the definition of a Local Climate Change Adaptation Plan and the experimentation of pilot actions to be implemented in the Bologna’s territory. • <i>Development of the <u>Local Climate Change Adaptation Plan for the city of Bologna</u> (Resolution of the City Council)</i>: the Plan outlines the strategies able to confront the critical situations highlighted in the Local Climate Profile and identifies a series of actions which refer to national and international best practices in the management of green spaces for the refreshment of interior and exterior environments, as well as in water management, both in terms of reducing consumption and of managing intense weather events. • <i>Development of the report “Stakeholder engagement outcomes”</i> which outlines the 10 pilot actions tested in the Bologna’s territory with the involvement of the stakeholders. • <i>Creation of the <u>App Play BlueAp</u></i>: an online platform that actively involves the citizens in themes related to on the climate change, particularly about the Adaptation Plan of the City of Bologna. <p>Budget</p> <p>The budget for the project was 986.049 euro, 493.025 from EU contribution.</p> |
| Contribution of the Case study to the Joint_SECAP guidelines for Vulnerability and Risk assessment | |
| Modules of the guidelines relevant to the case study | <p>Please select one or more Modules that you think the Case study gives a significant contribution to (i.e. through methodologies, methods, tools...). Refer to the Joint_SECAP Guidelines for further information on Modules:</p> <p>X M1 PREPARING THE RISK ASSESSMENT (describes the context of the assessment - processes, knowledge, institutions, resources and external factors –, identifies its objectives, expected outcomes and scope, and defines tasks, responsibilities and time planning)</p> <p>M2 DEVELOPING IMPACT CHAINS (identifies and clusters impacts and risks, identifies hazard and intermediate impacts, vulnerability and exposure of the system)</p> <p>M3 IDENTIFYING AND SELECTING INDICATORS (identifies and select indicators for hazards, vulnerability and exposure)</p> <p>M4 DATA ACQUISITION AND MANAGEMENT (regards the collection, quality check, storage and management of data)</p> <p>M5 NORMALIZATION OF INDICATOR DATA (provides normalized data for each indicator in a standardized value)</p> <p>M6 WEIGHTING AND AGGREGATING OF INDICATORS</p> |

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| | <p>(evaluates the influence of the indicators on the respective risk component, assigns different weights, aggregates individual indicators into composite indicators of the risk components hazard, vulnerability and exposure)</p> <p>M7 AGGREGATING RISK COMPONENTS TO RISK (aggregates the risk components into a composite risk indicator)</p> <p>X M8 PRESENTING THE OUTCOMES OF YOUR RISK ASSESSMENT (describes how to elaborate the risk assessment report, taking into account both the objective and the target audience of the assessment)</p> |
| Description of the contribution of the Case study to the Joint_SECAP guidelines | <p>M1: <i>One of the strengths of the BLUE AP plan is its clear and structured methodology. In particular it is useful to mention the "Percorso del piano di coinvolgimento degli stakeholders". As a first step, the stakeholder map was built: Public bodies, public and participated companies, the world of education, universities and schools, specialized agencies, etc. From the intersection of vulnerabilities and subjects involved a participation path was structured as shown below.</i></p> <p><u>Opening Plenary:</u> <i>The objective was to introduce the topic of climate change to ensure correct information on the subject.</i></p> <p><u>Topic sessions:</u> <i>Three thematic meetings were held to illustrate the local criticalities with respect to climate change and their effects on society. The sectors investigated were: public and civil sector, agricultural sector and industrial sector and services.</i></p> <p><i>The three meetings were structured as follows:</i></p> <ul style="list-style-type: none"> • <i>Illustration of the specific critical issues for the sector;</i> • <i>Presentation of best practices at national and international level;</i> • <i>Sharing of local experiences;</i> • <i>Comparison of intervention priorities for in-depth sessions</i> <p><u>Deeper analysis sessions:</u> <i>The objective was to confront each other on 5 themes: urban greening, agriculture and urban gardens, interventions during non-ordinary meteorological events, projects for permeabilization of commercial and industrial areas, economy and development of the territory.</i></p> <p><u>Concluding plenary:</u> <i>In the final plenary the results obtained were returned to the citizenship.</i></p> <p><u>Focus groups:</u> <i>Specific technical tables were activated on the individual projects to elaborate project forms.</i></p> |



Regarding the methodology applied for the definition of the Adaptation Plan, the work scheme is the following: for each of the vulnerabilities identified by the Local Climate Profile this document associates one or more strategies accompanied as far as possible by specific measurable objectives. The detailed definition of actions will take place within the Action Plan once the strategic document

has been approved and the strategies consolidated.

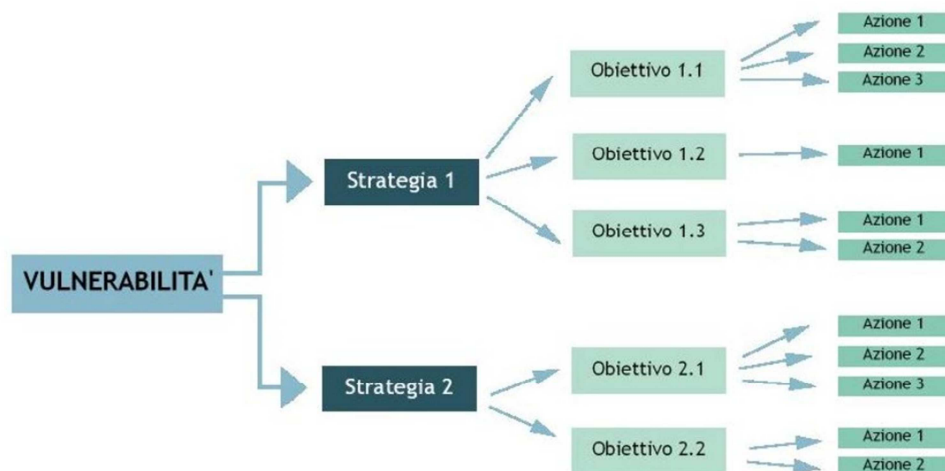


Figura 5. Dalle vulnerabilità (profilo climatico locale) alle strategie (documento strategico) alla definizione delle specifiche azioni (Piano d'azione)

The Action Plan also clearly distinguishes the actions attributable exclusively to the Municipality from those in which there are other subjects called to intervene.

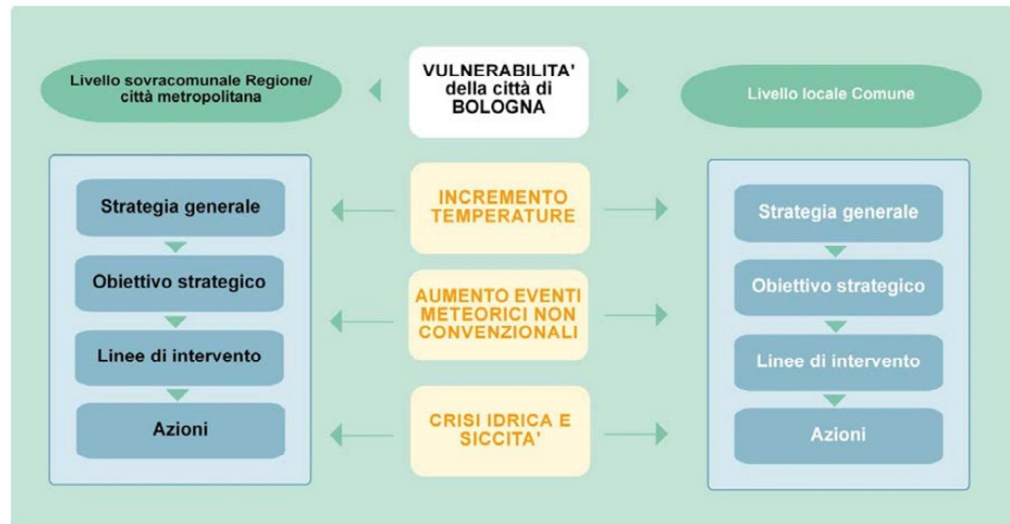


Figura 6. Lo schema logico del Piano : a sinistra le azioni a carattere sovra comunale, a destra quelle di livello Municipale.

You can find more about the topic visiting the official web page of BLUE AP.

M2:

M3:

M4:

M5:

M6:

M7:

M8: The BLUEAP Adaptation Plan is very attentive to the presentation of the final outcomes, so as to have developed a "Dissemination and Communication Plan". It describes in detail the manner in which the information generated by the BLUE AP plan will be disclosed, specifying: targets, dissemination modes, time lines, general rules and communication tools. The plan is also focused to stakeholder engagement processes, outlining specific tools and guidelines for this purpose.

Moreover, they built a database where all the BLUE AP activities have been reported and processed. It is chronologically accessible and shows each activity's details. All the information collected will form a comprehensive and dynamic repository available as a useful reference also for partners in other cities and countries. Files may be filled in using a specific template (see image below) directly through the project site, where the database can be consulted.

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| | <p>Here is a dissemination report of prototype:</p> <div data-bbox="416 454 1430 1205"> <p>BLUE AP Dissemination Activity Report</p> <p>Date</p> <p>Country</p> <p>Place</p> <p>Partner</p> <p>Initiative</p> <p>Role in the initiative</p> <p>Area of the initiative</p> <p>Number of contacts</p> <p>How to reach useful contacts</p> <p>Cost of the initiative for the partner</p> <p>Cost per contact</p> <p>Links to Internet websites</p> <p>What has been done for/downloads</p> <p>Notes</p> </div> <p><i>For more information on this topic see the document "Dissemination and Communication Plan" published on</i> http://www.blueap.eu/site/documenti/</p> |
| References | |
| Website(s) | http://www.blueap.eu/site/ http://www.pdc.minambiente.it/it/progetti/blue-ap-piano-locale-di-adattamento-ai-cambiamenti-climatici-la-citta-di-bologna http://www.blueap.eu/site/documenti/ |
| Bibliography | / |

Images

