

## Planning the Adaptation of European Landscapes to Climate Change : The Experience of the EIT Climate-KIC AELCLIC Project

Cultivating Continuity of the European Landscape: New Challenges, Innovative Perspectives

Torreggiani, Daniele; Galan, Juanjo; Galiana, Francisco; Pedroli, Bas; Servera-Martínez, Emilio

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# Chapter 19

## Planning the Adaptation of European Landscapes to Climate Change: The Experience of the EIT Climate-KIC AELCLIC Project



**Daniele Torreggiani, Juanjo Galan, Francisco Galiana, Bas Pedroli, and Emilio Servera-Martínez**

**Abstract** Despite growing awareness about climate change (CC) issues, European landscapes are facing increasingly severe challenges related to CC for which a common understanding, vision and effective integrated solutions are not yet available or implemented on a large scale. Therefore, planning the adaptation of landscapes to CC is crucial for our well-being and socio-economic development. From this concern stemmed the EIT Climate-KIC AELCLIC-Pathfinder project ([aelcllic-pathfinder.com](http://aelcllic-pathfinder.com)), aimed at defining and testing transferable and scalable models in different climatic, socio-economic, cultural and bio-geographical European conditions for the creation of local networks able to define their own Landscape CC Adaptation Plans (LACAPs). The paper presents some of the main findings of a comparative analysis of the 15 pilot landscapes included in the project. The following were found to be key AELCLIC principles: 1. The landscape concept functions as a systemic and integrated framework to overcome sectoral approaches and to foster a new approach to CC adaptation, deeply rooted in participatory learning and co-creation processes. 2. The construction of multi-stakeholder local networks helps assure the implementability, legitimacy and feasibility of the outcomes. 3. The community-based

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D. Torreggiani (✉)  
University of Bologna, viale G. Fanin 48, 40127 Bologna, Italy  
e-mail: [daniele.torreggiani@unibo.it](mailto:daniele.torreggiani@unibo.it)

J. Galan  
Department of Architecture, Aalto University, Espoo, Finland

J. Galan · F. Galiana · E. Servera-Martínez  
Department of Urban Planning, Universitat Politècnica de València, Valencia, Spain

B. Pedroli  
Wageningen University, Wageningen, The Netherlands

identification of landscape values, CC impacts, goals and topics for CC adaptation enhances local support and the solidity of the adaptation strategy or LACAP. Moreover, by following this process, opportunities for innovative actions, potential solutions for foreseeable problems and options to overcome barriers can be discussed in a more productive and visionary way. In all its pilot landscapes, AELCLIC led to the co-definition of programmatic inputs for LACAPs, whose scope and form varied based on the specific context (strategic plans, thematic or specific plans, pilot actions, etc.). Their potential integration with other policies and planning tools were taken into account. AELCLIC has created new spaces and expanded existing ones for international and intercultural dialogue on an issue of crucial importance for both local communities and Europe. This shows that CC adaptation can become an opportunity for promoting landscape quality and strengthening landscape identities.

**Keywords** Climate change adaptation · Landscape planning · Participatory planning · Co-creation process

## 19.1 Introduction and Goals

Despite growing awareness about climate change (CC) issues, European landscapes are facing increasingly severe challenges related to CC for which a common understanding, vision and effective integrated solutions are not yet available or implemented on a large scale. Therefore, planning the adaptation of landscapes to CC is crucial for our well-being and socio-economic development. From this concern stemmed, the EIT Climate-KIC AELCLIC-Pathfinder project ([aelcllicpathfinder.com](http://aelcllicpathfinder.com)) aimed at defining and testing transferable and scalable models in different climatic, socio-economic, cultural and bio-geographical European conditions for the creation of local networks able to define their own Landscape CC Adaptation Plans (LACAPs). This paper presents some of the main findings of a comparative analysis of the 15 pilot landscapes included in the project.

## 19.2 Methodology, Process and the Participatory Approach

AELCLIC addressed CC adaptation from a landscape perspective, which meant taking landscape as a framework for CC adaptation, rather than as an object, and using the landscape concept as an ideal platform for seeing the whole integrated picture instead of individual parts. Among the main implications of this approach is the adoption of a systemic, cross-disciplinary and participative perspective to interpret the relationships between environmental, cultural, economic and social factors and to co-define holistic interventions on them based on co-construction and design thinking processes. The stakeholder-driven process characterizing the activities of

the AELCLIC project was based on a sound consideration of CC impacts, risks and vulnerabilities derived from state-of-the-art knowledge and previous experiences at a local level, tightly integrated with an analysis of the public’s perception of them. Since European landscapes, expressing our history, diversity and identity and supporting our economic development and well-being, are the result of our collective creation and of the action and interaction of natural and human factors (ELC), their CC adaptation must be site-specific and based on the contribution of all the people and groups that live, work and enjoy those landscapes. Therefore, AELCLIC was firmly based on a bottom-up approach aimed at including—more or less directly and consciously—all the relevant stakeholders involved in landscape transformation from the initial phases of co-defining the workplan and goals to the co-identification of impacts and the co-design of different visions and aspirations.

This process was developed and tested in 15 pilot landscapes distributed in rural, urban and fringe areas, selected to cover Europe’s diversity and to enable the production of transferable and scalable models (Fig. 19.1). The project was carried out by 20 European organizations (of which 9 Climate-KIC partners), including universities, local and regional administrations, NGOs, social and economic actors.

The AELCLIC process was started in a set of leading pilot landscapes, one in each of the four European macro-regions of the project (Northern Europe, Atlantic-Alpine Europe, South-Western Europe, South-Eastern Europe), where tandems of Universities and Regional/Local Authorities (all Climate-KIC Partners) initiated the definition of different models for the generation of local networks of stakeholders. The AELCLIC process was then propagated to a set of multiplier pilot landscapes with the support of academic, regional/local authorities, business and non-governmental third parties. A total number of more than 100 public and private organizations and 500 participants covering societal, economic, institutional and academic sectors were

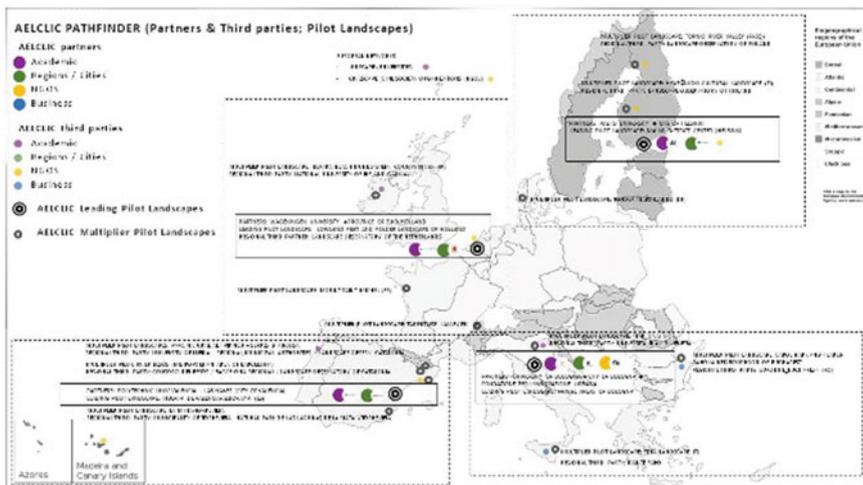


Fig. 19.1 AELCLIC’s European macro-regions and pilot landscapes

involved in all the pilot landscape network processes. In addition, the participation of the UNISCAPE and CIVILSCAPE networks provided a solid platform for dissemination and scalability. Regular meetings between the universities leading the implementation of the project in the European macro-regions and an international workshop in which representatives of each pilot landscape participated resulted in combining a site-specific and local approach with a trans-national vision and exchange of experiences that, indirectly, promoted the co-creation of feasible and sustainable follow-up actions.

A circular and iterative process allowed the pilot landscapes to fruitfully exchange experiences with cross-fertilization and mutual learning of both methods and results. In each pilot, the project partners promoted and led the identification and creation of open and inclusive networks of stakeholders. These networks started their work by defining a workplan to be developed throughout the year 2019 that would lead them to the co-definition of a basic framework for future preparation of their own landscape CC adaptation plans (LACAPs). In particular, each group went through a series of hands-on workshops under the facilitation and the knowledge-based guidance of the project partners and other experts, where they co-identified the impacts that CC might have on their landscapes and their own ways of living.

After this diagnosis, the project activities focused on the co-definition of objectives, structure and basic contents of future LACAPs whose scope and form varied depending on the specific context of each pilot landscape, ranging from strategic plans, to thematic or specific plans, pilot actions, etc. Moreover, these different typologies of LACAPs were taken as clustering criteria for the international workshop activities where representatives of the various local stakeholder networks had the opportunity to work together, even across the European macro-regions, to launch follow-up phases. In this way, the project was conducted on a local scale but always referring to a European vision and to the generation of new alliances among landscapes with similar expectations and challenges.

The project was based on an interdisciplinary and participatory approach as well as on the use of strategies to promote active learning, team building and planning/design thinking through a wide range of complementary tools and methods that were gradually calibrated by the partners to better fit the specificities of the various pilot landscapes and local networks. The project involved the combined use of multi-criteria analysis with literature, modelling and stakeholder or expert inputs to achieve robust outcomes.

The project results suggest the importance of creating flexible workplans adaptable to the different challenges and conditions that affect different landscapes and of aiming at a balanced combination of bottom-up and transdisciplinary expert-supported processes in the CC adaptation field, covering science, technology and policy issues.

### 19.3 Results

As a general criterion, LACAPs can include regional/local policies, strategies, pilot actions and initiatives to promote CC adaptation. Consistently with the principles of the ELC, the programmatic inputs for future LACAPs in all the pilot landscapes were always related to landscape quality objectives and varied depending on the specific nature of each landscape. Due to the variety of topics, objectives, challenges, barriers, values and resources of each local landscape, LACAPs cannot be referred to a standard set of instruments *ex ante*, but must adapt to local needs in order to guarantee flexibility. Among the most important general findings are the following:

- LACAPs may be translated into specific codified plans or instruments, or into specific layers of climate adaptation policies and planning, encouraging land use, spatial and urban planning policy adaptation, integration with existing or under-development plans and pilot action coordination;
- Integrated landscape projects, including systemic actions on several themes and sectors, can facilitate the implementation of a LACAP and increase its internal consistency and alignment with EU, national and regional/local strategies;
- Climate risk or vulnerability assessments, landscape characterization and the analysis of perceived CC impacts, opportunities, solutions, actions and barriers are fundamental contents of each LACAP, which should also include an implementation and a monitoring plan.

Various factors influenced the development of AELCLIC activities such as the sociocultural and governance environment, the existence of a clear landscape or community identity and its urban or rural character, the type of connections between local inhabitants and their landscapes, existing knowledge of CC and mitigation/adaptation strategies and the level of involvement and role of local and regional authorities. The combination of all these factors led to very different results and the understanding of this diversity constitutes in itself an important result of the AELCLIC project that can also inform the transferability of the AELCLIC methods to other landscapes.

From a methodological point of view, the main lessons learned include the importance of

- guaranteeing openness and representativeness in local networks so as to recognize the different landscape identities democratically, permit a holistic vision and increase the implementability, legitimacy and feasibility of their decisions;
- engaging representatives of supra-regional organizations, key economic actors and administrations in charge of territorial and environmental planning and landscape protection;
- prioritizing options using multi-criteria analysis and stakeholder inputs;
- developing joint workshops or sessions with other projects;
- integrating CC interventions with existing or future policies and planning tools;

- considering the environmental and social effects of CC, from global to landscape-specific scenarios.

## 19.4 Conclusions

AELCLIC fostered a participatory process in which CC adaptation represented a challenge to be addressed collectively. Global threats and trends were addressed in a local and site-specific perspective. This permitted reflection on CC as a boundary condition for landscape protection, management and planning, as promoted by the ELC.

The following were found to be key AELCLIC principles: (1) The landscape concept functions as a systemic and integrated framework to overcome sectoral approaches and to foster a new approach to CC adaptation, deeply rooted in participatory learning and co-creation processes. (2) The construction of multi-stakeholder local networks helps assure the implementability, legitimacy and feasibility of the outcomes. (3) The community-based identification of landscape values, CC impacts, goals and topics for CC adaptation enhances local support and the solidity of the adaptation strategy or LACAP.

Moreover, by following this process, opportunities for innovative actions, potential solutions for foreseeable problems and options to overcome barriers can be discussed in a more productive and visionary way. In all its pilot landscapes, AELCLIC led to the co-definition of programmatic inputs for LACAPs, whose scope and form varied based on the specific context (strategic plans, thematic or specific plans, pilot actions, etc.). Their potential integration with other policies and planning tools were taken into account. With the creation of local networks connected at a European level, AELCLIC has created new spaces and expanded existing ones for international and intercultural dialogue on an issue of crucial importance for both local communities and Europe. This shows that CC adaptation can become an opportunity for promoting landscape quality and strengthening landscape identities.

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