Interreg

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Italy – Croatia

CAMPUS

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PUBLIC INSTITUTION FOR COORDINATION AND DEVELOPMENT OF SPLIT-DALMATIA COUNTY

D.2.1.1 Living-lab collaborative methodology

Project acronym:	CAMPUS
Project full title:	Climate Adaptation Plans for UNESCO Sites
Programme:	Interreg Italy-Croatia
Start date:	01/02/2024
End date:	31/07/2026
Project ID:	ITHR0200358

Name of the deliverable	D.2.1.1 Living-lab collaborative methodology
Activity	A.2.1.
WP	2
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Contributing Partners:	/
Version:	1.
Date:	21.03.2025.

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Introduction to the project

The CAMPUS project addresses the challenges posed by climate change to UNESCO sites, with a particular focus on natural and cultural heritage sites located in Italy and Croatia.

Climate change hazards, such as extreme heat, precipitations, flooding, landslides, wildfires, and sea level rise threaten universal heritage. The establishment of monitoring systems and site-specific adaptation plans has therefore become a critical priority.

The primary objective of this project is to develop a shared cross-border framework for monitoring systems, action plans, and climate adaptation measures, aiming to preserve the Outstanding Universal Values (OUV) of the involved UNESCO sites.

The project engages several public and private entities:

- Municipality of Ferrara (Lead Partner) – Italy
- IUAV University of Venice – Italy
- Municipality of Monte Sant'Angelo – Italy
- Veneto Regional Park Authority of the Po Delta – Italy
- Development Agency of Lika-Senj County (LIRA) – Croatia
- Regional Development Agency of Split-Dalmatia County (RERA) – Croatia

Additionally, the Plitvice Lakes National Park and the City of Trogir are involved as associated partners.

The project is composed of three Work Packages and each of them has five Activities:

WP1: Climate change scenarios of the UNESCO sites and risk assessment

- A.1.1: Analysis of potential impact and data collection
- A.1.2: Vulnerability and risk analysis
- A.1.3: Climate change risk scenarios
- A.1.4: Creation of a cross-border Monitoring System Tool template
- A.1.5: UNESCO sites stakeholders and community perception

WP2: UNESCO Climate Change Adaptation Plans

- A.2.1: Activation of "Living Labs" to engage local communities in plan development
- A.2.2: Creation of a UNESCO sites Cross-Border Climate Change Adaptation Guidelines
- A.2.3: Design of UNESCO sites Climate Change Adaptation plans and measures
- A.2.4: Organisation of local integration workshops
- A.2.5: Organisation of Regional Conferences

WP3: UNESCO Climate Change Adaptation Countermeasures

- A.3.1: Implementation of NBS and natural restoration solutions
- A.3.2: Implementation of building restoration solutions
- A.3.3: Implementation of light infrastructure solutions
- A.3.4: Assessment of the adopted Climate Change countermeasures in UNESCO sites
- A.3.5: Awareness-raising activities in primary and secondary schools

CAMPUS project aims to provide practical solutions to address climate change in the involved UNESCO sites. One of the key outcomes will be the creation of a cross-border monitoring system to assess the vulnerability, sensitivity, and resilience of these sites using indicators aligned with UNESCO guidelines. Common guidelines will be developed to support local management plans, improving the response capacity of authorities. Concrete measures will be implemented, including nature-based interventions such as habitat restoration and control of invasive species, restoration of historical buildings, and the construction of light infrastructure. The project will actively engage local communities through Living Labs, workshops, and conferences, and will promote climate risk awareness through campaigns targeting students. The collaboration between Italian and Croatian partners will ensure the sharing of methodologies and best practices, contributing to the preservation of the cultural and natural value of UNESCO sites and supporting their sustainable management.

Introduction to the deliverable

This document presents the methodology and practical steps for implementing the Living Lab approach within the CAMPUS project. It serves as a simplified guide for partners to engage stakeholders, co-create climate adaptation measures, and develop Climate Change Adaptation Plans tailored to UNESCO sites. After a brief contextualisation of the Living Lab approach in relation to CAMPUS objectives, the deliverable provides easily readable sheets guiding partners in the implementation of each workshop foreseen in WP2 through different questions and tools.

Activity 2.1

Description of Activity

As described in the Application Form Export Pg. 56-57, the activity is outlined as follows:

Based on the workshops of A1.5, the PP2, and PP6, which is the WP coordinator, and the rest of the partnership will be able to involve all the UNESCO sites local authorities into a collaborative participation process, called Living Lab. PP5 and PP6 will directly involve AO1 and AO2 UNESCO sites authorities. PP6 will include also authorities for the old city of Dubrovnik. In total 6 Living Labs in each targeted UNESCO site will be organized, encompassing two rounds: First Round: local stakeholders and decision-makers will be involved in an understanding process to explore their perceptions, expectations and trade-off acceptability for UNESCO climate change adaptation measures. During the first round, the discussion will proceed on how to integrate the monitoring system of A1.4 into the current ones; Second Round: the local stakeholders and decision-makers will be involved in a co-creation phase, where they will work actively in the alternative measure's design. which will be integrated into the Climate Change Adaptation Plans for UNESCO sites.

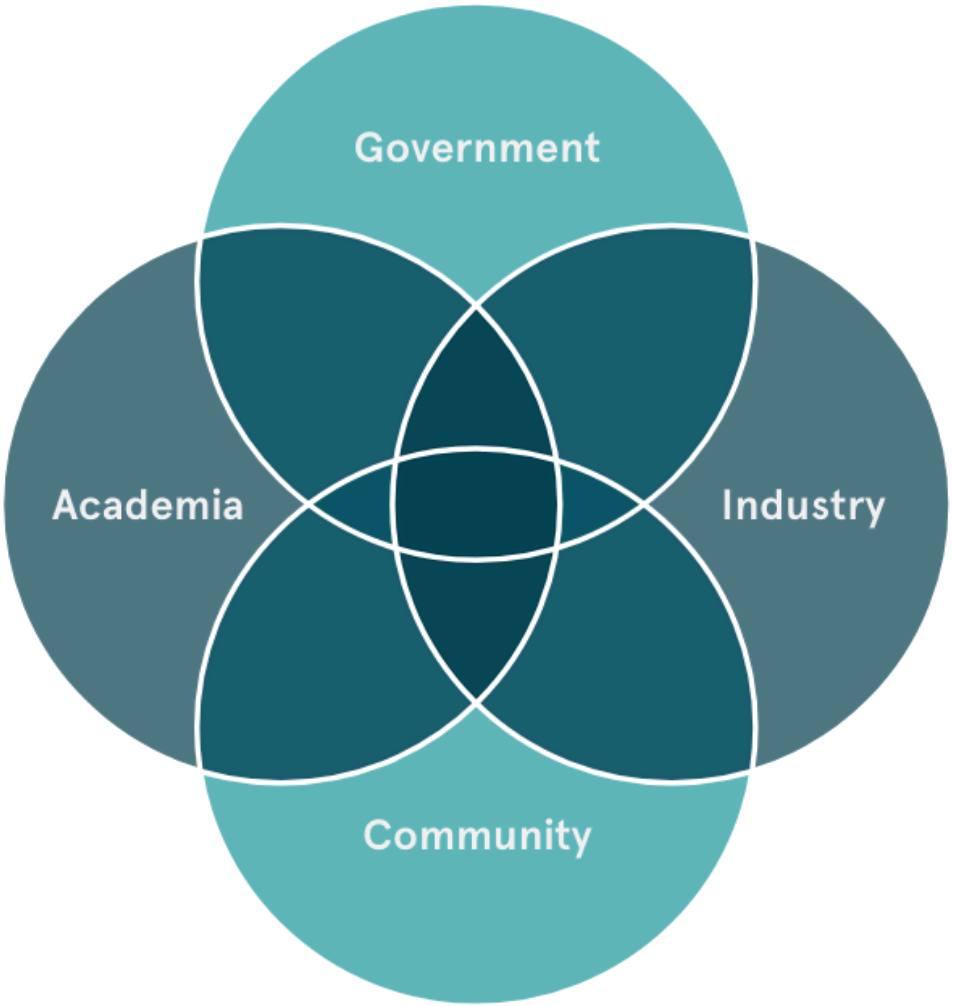
The Living Lab Approach applied to CAMPUS project

An ample body of research and testing has proven that Living Labs are extremely useful in the context of climate change adaptation planning. **The Living Lab approach allows the systematization of different interests, skills and disciplines towards the co-creation of context-specific solutions.** This makes its application suited for the purpose of the CAMPUS project which is providing practical solutions for climate change adaptation in the UNESCO sites. Furthermore, involving diverse stakeholders in the co-creation process from the beginning suggests that both the local government and the community play a critical role in climate adaptation, thus guaranteeing long-term sustainability to the project and community ownership of the solutions.

The multi-stakeholder platform to be involved in the CAMPUS living labs is based on the concept of the Quadruple Helix consisting of four key stakeholder groups:

- GOVERNMENT - local governments and other public institutions managing the sites and invested in the role of main policy and decision-makers.
- ACADEMIA - universities and research institutions that contribute to the collection of data necessary for the overall evaluation of the impacts that can affect the UNESCO sites taken into consideration and that can provide the technical knowledge for the identification and co-creation of adaptation solutions.
- INDUSTRY - representing the private sector that can have direct (economic) interest in the protection and valorisation of the heritage.
- COMMUNITY - NGOs active in the territory and individual citizens that can have, in many cases, ownership interests.

The list of stakeholders to be involved will be different for each one of the UNESCO sites targeted through the CAMPUS project and will be determined by multiple criterias including; territorial extension, characteristics of the site connected to the UNESCO Outstanding Universal Values (see A1.1 deliverables for more details on this matter), general objective of the Living Lab approach application, and the objectives of each participatory session, to be detailed in the next chapters.



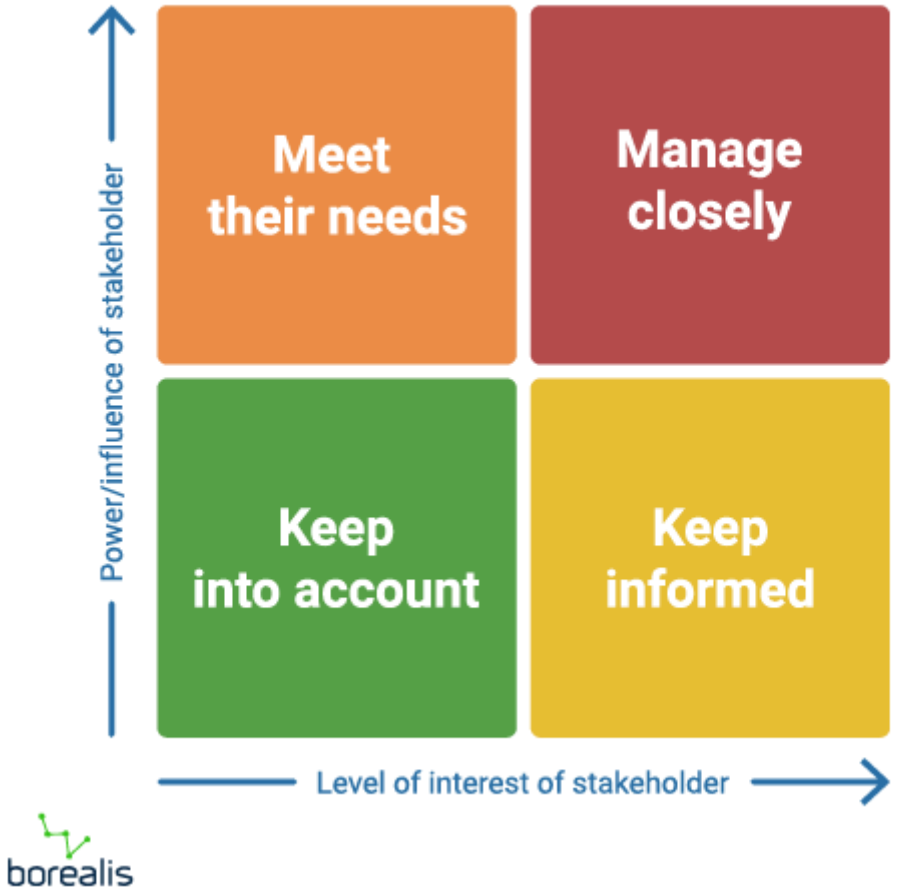
Source: GRRIP Project (2020)

Setting Local Living Labs

A successful Living Lab requires a preliminary thorough Stakeholder Mapping. This procedure is necessary to ensure that all the stakeholders of the sectors relevant to the planning process are taken into consideration and given the chance of contributing to the decision-making.

Using the Quadruple Helix approach illustrated above, partners can create an extensive list of stakeholders relevant to the goals of the Living Labs. The stakeholders can be further mapped according to their relevance for each topic using tools such as the **influence-interest matrix**.

Influence refers to how much power and capacity a stakeholder has to affect change, and interest refers to how likely a stakeholder is to participate in activities or initiatives relevant to the case study's subject; this could be owing to a positive or negative. The localisation of the stakeholders in each quadrant, as shown in the picture below, can determine a different engagement strategy.



Source: borealis project. https://www.boreal-is.com/blog/stakeholder-mapping-identify-stakeholders/

Some stakeholders might increase or decrease their levels of power/ influence and interest. Updating the scheme, making it also a part of the participatory exercises conducted with stakeholders, might lead to more successful engagement strategies.

These engagement strategies or levels of engagement are well summarised by the IAP2 Public Participation Spectrum (see picture below).

iap2

	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
PUBLIC PARTICIPATION GOAL	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives and/or solutions.	To obtain public feedback on analysis, alternatives and/or decision.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision-making in the hands of the public.
PROMISE TO THE PUBLIC	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

Source: IAP2, scheme re-elaborated by the Tamarack Institute

Engagement Tools & Tips for Living Labs

During the workshops and events that will be organised to engage stakeholders, partners will have the opportunity of exploiting different tools to make the interactions more effective. Below are some tips and tools that can support the organisation and facilitation.

- Hybrid Formats: consider offering both in-person and online formats for workshops and meetings to ensure wider participation.
- Craft clear and consistent messages that explain the objectives of the Living Lab, and its anticipated impact. Tailor messages to different stakeholder groups to ensure relevance and engagement.
- Use techniques to structure discussions and enhance creativity. Examples include:
    - Brainstorming and brainwriting to identify innovative solutions in a group setting.
    - Journey Mapping to visualize user experiences and identify problem areas.
- Present concrete examples of solutions to trigger the discussions.
- To adapt the format to different stakeholders and objectives, consider organising Focus Groups or one-to-one interviews to collect detailed information to be further discussed during the living labs sessions.

Thematic Focus of Living Labs

Thematic Focus on Two Round Living Lab for UNESCO Climate Change Adaptation

The two-round Living Lab is structured to facilitate collaboration among local stakeholders, decision-makers, and technical experts. The process integrates scientific research, stakeholder engagement, and co-creation of adaptation measures to ensure practical and effective solutions.

The CAMPUS Living Lab will be organised in two rounds:

- The first one more focused on exploring the quadruple-helix stakeholders' perception of the impacts that climate change has on the characteristics of the UNESCO sites and their willingness to accept necessary counter-measures. This can be also the occasion of exploring, together with the decision-makers, the potential of integrating the monitoring system elaborated in WP1 into the existing policy framework.
- The second one aimed at discussing with the stakeholders the applicability of existing climate change adaptation solutions in the local context and co-creating new ones.

An important premise to make is that the structure suggested in this chapter is not meant to be binding for partners. Each Living Lab session should be adapted, in terms of format, contents and instruments, to the specific characteristics of the UNESCO site it is addressing and to the needs expressed by its stakeholders who are the direct knowledge providers.

WS1: Understanding & Integration

Objective:
To engage local stakeholders and decision-makers in an exploration of their perceptions, expectations, and trade-offs regarding UNESCO climate change adaptation measures. The session also aims to integrate the monitoring system (A1.4) into existing frameworks.

Key Activities:

- ☐ **Presentation of Climate Change Scenarios (WP1):**
  - Analysis of climate projections for UNESCO sites.
  - Discussion on vulnerabilities and risks associated with climate change.
- ☐ **Stakeholder Perceptions & Expectations:**
  - Interactive discussion to assess concerns, priorities, and willingness to adapt.
  - Identification of trade-offs in adaptation strategies.
- ☐ **Integration of Monitoring System (A1.4):**
  - Examination of the existing monitoring frameworks.
  - Strategies for incorporating the climate monitoring tool into ongoing UNESCO site management plans.

Stakeholders to be involved:

- Local authorities and decision-makers.
- Environmental experts and researchers.
- UNESCO site managers.
- Community representatives.

Expected Outcomes:

- Improved understanding of stakeholder perspectives.
- Identification of barriers and opportunities for adaptation.
- Preliminary integration strategies for the A1.4 monitoring system.

Useful tools:

- Word cafè
- Questionnaires & Surveys
- Roundtables

WS2: Co-Creation & Implementation

Objective:
To engage stakeholders in a co-creation phase, where they actively contribute to the design of alternative adaptation measures that will be integrated into Climate Change Adaptation Plans for UNESCO sites.

Key Activities:

- ☐ **Development of Climate Adaptation Plans (WP2):**
  - Collaborative workshops to design adaptation measures.
  - Discussion on policy frameworks and governance structures.
- ☐ **Design of Climate Adaptation Counter-Measures (WP2 & WP3):**
  - Exploration of nature-based solutions and infrastructure interventions.
  - Planning for cultural heritage protection and ecosystem resilience.
- ☐ **Finalization and Integration of Measures:**
  - Aligning adaptation measures with existing site management plans.
  - Creating a roadmap for implementation and monitoring.

Stakeholders to be involved:

- Decision-makers and local authorities.
- Technical experts (climate scientists, engineers, urban planners).
- Community members and civil society organizations.

Expected Outcomes:

- Concrete adaptation measures designed through a participatory process (nature-based solutions (NBS), infrastructure adaptations, and policy interventions).
- Clear monitoring framework for integrating measures into official adaptation plans.
- Strengthened stakeholder commitment to climate resilience strategies.

Useful tools:

- Case study research
- Roundtables
- Participatory roadmapping

Stakeholder engagement activities reporting

CAMPUS partners will report their stakeholder engagement activities on the basis of the following table that replicates the structure suggested in the chapter above, together with the complete signature list of the attendees and the agenda of the meeting.

WSx: Title
Objective: *What are the local level objectives you wanted to reach through this workshop?*
Discussions: *Please summarise the main points discussed during the meeting and the format you decided to adopt.*
Stakeholders involved: *List of stakeholders present at the workshop.*
Expected Outcomes: *What are your expected outcomes in relation to the specific objectives of your Living Lab?*
Useful tools: *Did you use any specific tools? Would you suggest their application in other contexts/ living labs?*

Next steps

The findings of the living labs, together with the considerations extrapolated from WP1 results, will be integrated in the Climate Change Adaptation Plans that will be elaborated for each UNESCO site targeted in the CAMPUS project on the basis of a common template to be provided by RERA.