

# Final Report


## Final report of the pilot Project: Building Resilience: A Transdisciplinary Approach to Soil Conservation in Abla.



### Publishable summary

The project “Building Resilience: A Transdisciplinary Approach to Soil Conservation in Abla” was developed in response to the clear degradation of local soils, driven by a semi-arid climate, erosion-prone terrain, and a crisis in traditional agriculture—factors that have led to widespread land abandonment. Adding to the challenge is the general lack of awareness about the issue, which makes finding effective solutions even more difficult. To address this situation, the project organized a series of participatory workshops aimed at: diagnosing the main ecosystem services provided by soils in Abla’s most representative landscapes, Identifying the key threats to soil health, and developing an action plan focused on soil conservation or restoration, with the ultimate goal of improving the health of the municipality’s landscapes. The methodology was based on Participatory Action Research (PAR) principles. In the context of this pilot study, the approach included four key phases: (i) Pre-diagnosis, (ii) Participatory diagnosis, (iii) Identification of soil health indicators, and (iv) Co-creation of a

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participatory action plan. In total, 75 individuals took part in the project. Of these, 24 participants—representing the key actors of the "quadruple helix" model (institutions, academia, private sector, and civil society)—were involved throughout the entire participatory process. A variety of techniques were used, including interviews, surveys, sociograms, and discussion groups. The analysis of the information gathered through these techniques led to the following key findings: The main threats to soil health in the municipality were: (i) Water and wind erosion. Caused by low vegetation cover and lack of regenerative practices, especially in arable land, degraded forest areas and bare soil. (ii) Loss of biodiversity. The alteration of forest areas, the spread of agricultural practices that encourage monocultures and the intensification of agriculture, among other factors, have led to a loss of biodiversity. (iii) Loss of organic matter Apart from the region's own conditioning factors due to its relief, lithology and water deficit, there are certain practices that contribute to the loss of organic matter, such as intensive agricultural practices with excessive use of chemical fertilisers, among others. And (iv) to a lesser extent, compaction and nutrient imbalances were also considered threats to soil health within the municipality.

As key solutions, nine actions were proposed. For each action, the main responsible stakeholders, specific tasks, implementation timelines, required resources, and potential barriers were clearly defined. From a technical standpoint, proposed solutions included promoting the planting of legumes to enhance nitrogen fertilization and adopting soil management practices that reduce compaction and improve porosity and water infiltration—essentially creating "sponge soils." From a broader, integrated perspective, two main actions were emphasized: encouraging the efficient use of water across all activities and implementing a comprehensive restoration effort in the “Huertas” area. Sociopolitical actions included promoting cooperative models and regulating recreational activities that harm soil health. Economically, the proposal suggested creating incentives for sustainable agricultural practices. Finally, from an educational perspective, the importance of maintaining an ongoing environmental education program was highlighted

**Detailed description**

**1. Concept and Objectives**

The project originated from a series of discussions between staff from the Abla Town Council and the University of Almería. These conversations brought to light growing concerns among local residents about increasing water scarcity and the declining growth of both wild and cultivated plant species. Through these dialogues, it became clear that several contributing factors were at play, highlighting the urgent need to prioritize soil management as a strategy for optimizing water use and improving plant health. In recent years, various initiatives have been launched in the municipality, primarily focused on addressing water shortages. However, these efforts often lacked a comprehensive

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