

DAIA COMMUNITY-BASED WATER RETENTION – bringing water back to the hills of Transylvania



Photo: Farmers building check dams in the neighbouring village of Petecu, inspired by Daia. Credit: Szilvia Bencze, ACNT



Name	Daia climate adaptation pilot project
Country	Romania
Biogeographical Region	Continental
Region	Central Romania, Harghita county
Landscape/ Eco system type / protected area	Hilly region designated as mountain area (above 600 m average elevation) under the CAP Strategic Plan, dominated by grasslands, to lesser extent crop lands and forests.
Size / Scope	Watershed of Daia village, ca. 3,000 ha
Type of farm	One 'commons' (composesorate), around 13 small semi-subsistence farmers, community grazing, few family farms for beef and dairy cattle, water buffalo, sheep.
Agricultural Use	Mixed farming, mainly extensive animal husbandry, grasslands, pastures, some crop lands.
Best-practice / main idea	Community initiative to improve the water retention potential of the land on landscape level through nature-based solutions (NBSs).
Involved Stakeholders/ Partners	Community of Daia village, common land management organization, local government, local LEADER action group, county level authorities (water, environment, CAP paying agency, land amelioration)
Duration	Initial community discussions started in the end of 2023; planning phase - Communities for Climate project 2024-



	2025; first physical implementations - EU Staff Fund support 2025-2026; agroecology living lab project launched in April 2026 (running till 2029)
Goals	Restoration of the water balance in the watershed of Daia village to maintain and improve the foundation of life in the valley for the current and future generations.
Activities	• Community meetings to discuss needs and priorities and community works to build NBS. • Organizational, financial and technical support from the Homoród-Küküllő Leader Association (LAG) to involve the county level authorities to facilitate the implementation of NBS in communities and/or by local governments. • The LAG also raises awareness in the region about the good practice and the potentials of NBS. • The LAG and the local university centre organized a university camp to build log dams to orient students to this challenge and related NBS.
Measures addressing water and/or soil management	• Landscape-level implementation of nature-based solutions for water retention such as weirs in the main water streams and ditches, swales where justified, water retention ponds, planting trees, tree or hedge rows. • In the context of the recently launched agroecological living lab, farmers will be encouraged to experiment with rotational grazing and min-till crop cultivation technologies to further improve soil health and its water retention capacity.
Measures addressing biodiversity, climate	• The primary goal is to restore the water balance of the valley, which will also improve the environmental conditions for preserving the biodiversity and to improve the micro-climate. • In the frame of the agroecological living lab, only ecological regenerative technologies will be promoted. • All above practices contribute to improved carbon sequestration in the soil and biomass.



Funding / Financing	• Voluntary works • Communities for Climate (DG REGIO) • Homoród-Küküllő Leader Association CAP contribution and member contribution • EU Staff Fund grant • Agroecology Partnership – REAGRY Living Lab programme
Transferability	The example demonstrates how a local, community-based, landscape-level climate adaptation initiative can be developed from the ground up, while also showing how to build a supportive regional institutional ecosystem.
Tip / suggestion from the project coordinator	Most importantly, replicating the process requires a sufficiently pressing challenge, such as water scarcity, together with a proactive community or community member and a trusted, dedicated and cooperative organisation with long-standing social capital in the territory, such as a local action group.
Role of Landcare Associations	Agri-Cultura-Natura Transylvaniae Association supports the community and local farmers by mobilising academic input and professional expertise to develop and adapt regenerative solutions for small-scale farms that are appropriate to their environmental and economic context.
Further information	Asociatia GAL Homoród-Küküllő LEADER AGRI-CULTURA-NATURA TRANSYLVANIAE
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“There is a severe knowledge gap in the context of shrinking water resources and especially about the available solutions, which leads to inaction. Different stakeholders and authorities are aware of this overwhelming problem, but due to its complexity, neither of them could address it individually. However, when this community initiative was presented, representatives from all competent authorities were supportive and constructive in finding the way forward and enabling this and similar communities to implement nature-based solutions.”

László Lázár, director, Homoród-Küküllő Leader Association



Photo: Expert visit under the C4C programme on Daia's community pastures. Credit: Szilvia Bencze, ACNT

Water scarcity challenges in the hilly regions of Transylvania

In the hilly landscapes of central Romania, water scarcity has become more than an environmental concern. It has become part of everyday life. In the village of Daia, known in Hungarian as 'Székelydália', the problem can be felt in households, on pastures, and in the work of small farmers who still depend closely on the land. Located in Harghita County along the 1,400-kilometre Via Transilvanica hiking route, Daia is home to around 250 inhabitants, many of whom continue to rely on semi-subsistence farming. Among them are professional small-scale farmers and artisanal cheese producers whose livelihoods depend on reliable access to water.

"In my childhood, we had ample amounts of and more evenly distributed precipitation that ensured a constant flow of water in the main creek, so much so that we used to catch a lot of fish. Today, there is some water during the spring season, but outside that, the riverbed is mainly dry," says Sándor Nagy, the manager of the common land management organisation responsible for the common pastures. For several years, shrinking groundwater levels have caused local springs and wells to weaken or dry up. In some periods, families have faced days or even weeks without water in the local pipe network. Fields and agricultural activity have suffered as well, turning water scarcity into a direct threat to both daily comfort and rural livelihoods. The situation is especially striking because the wider area was once remembered as a region of waters, shaped by springs, streams, and wet meadows.

Part of this change is linked to large-scale drainage works carried out in the 1980s to support mechanised crop production under the communist agricultural system. Those interventions successfully drained water from the landscape for the purposes of that time, but today the same legacy makes the valley more vulnerable to drought and climate pressures. Yet this history also offers a reason for hope: if human intervention once changed the water balance, coordinated human action can help restore it.



The community initiative and the role of the Leader Association

The first discussions on nature-based water retention in Daia began at the end of 2023, when water management expert Dr Zoltán Hajdú introduced small landscape-level interventions to slow runoff, retain water locally, and help restore the short water cycle. Although Daia's location in the valley made it a promising starting point, many villagers were initially sceptical, as the approach was unfamiliar and new ideas can be difficult to introduce in rural farming communities.

The 'Homoród-Küküllő Leader Association', the local LAG, played a crucial role in turning concern into action. It had already identified water scarcity as a regional challenge and included it in its local development strategy. When the European Commission's Communities for Climate programme was launched in early 2024, the LAG applied on behalf of the community, enabling expert support for a water restoration plan focused first on the village's common pastures.

A four-day study trip to Slovakia, supported by the LAG and the programme, became a turning point. Farmers, local representatives, authority officials, advisers, and LAG staff visited practical water retention sites linked to hydrologist Michal Kravčík. Seeing low-cost measures such as wooden and stone weirs and swales in practice helped shift local attitudes and made the approach feel realistic for Daia.



Photo: Study trip to Slovakia under the C4C programme. Credit: Szilvia Bencze, ACNT

The initiative then moved into implementation. With an additional 10,000€ grant from the 'EU Staff Fund for a Fair and Sustainable Future', the LAG helped organise a university camp and mobilise volunteers to build ten weirs beneath the village's drinking water source area. Over six days in July and August 2025, around 130 people joined the community works.



Photo: Community work to build weirs in Daia. Credit: Szilvia Bencze, ACNT

The LAG and local government also helped bring in the 'Olt Water Basin Administration', which built five additional log dams in the valley's main creek in May 2026. This cooperation created a formal protocol and methodology that can be replicated with other communities in the Olt basin. The LAG also published a good-practice brochure in Hungarian and Romanian to raise awareness and encourage wider action.

Beyond funding and administration, the LAG gave legitimacy to the idea, encouraged local participation, and remained actively involved throughout the process. At the regional level, it used its social capital and institutional links to engage water, environmental, agricultural, land amelioration, and county authorities. As a result, an institutional ecosystem has begun to form around community-led water retention, recognising that water scarcity is too complex for any single actor to address alone.

The road ahead

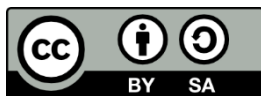
For all that has been achieved, Daia's journey is still at an early stage. The initiative has shown what can happen when local trust, expert knowledge, and institutional support come together, but it has also revealed the limits of relying on small grants and voluntary effort alone. Across the region, many communities face similar pressures, and each could benefit from the same combination of practical funding, clear methodology and patient local facilitation. In this sense, Daia points beyond itself: it suggests the need for a more systemic regional or national framework that can help community-led water retention take root across the hills of Transylvania and the plains beyond.

The story is now entering a new chapter. Building on the momentum already created, the valley of Daia has been selected as a pilot site under the international 'REAGRY Agroecological Living



Lab' project, which will support farmers in experimenting with rotational grazing and regenerative crop cultivation. This is a significant development because restoring the water balance is not only about slowing streams or building weirs; it is also about helping the land absorb, hold, and release water again through better land use. With the support of the project, hydrologist Michal Kravčík has been invited to prepare a plan for the entire watershed of Daia, to be implemented step by step as funding becomes available. If these strands continue to come together, Daia can become more than a local success story: it can become a living example of how rural communities restore water, rebuild cooperation, and prepare their landscapes for a changing climate.

Author: Szilvia Bencze, ACNT, 25.06.2026



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