



Mizelioa: Art to Raise Awareness of Soil Biodiversity



Domain:
Climate Action
and Environment



Place:
Urdaibai reserve
and Bilbao, Spain



Duration:
One month long
exhibition



Target audience:
Citizens, larger public

Mission

Soil biodiversity is rarely understood: for many citizens, it is “just dirt.” This lack of awareness limits public engagement in soil protection and, ultimately, undermines efforts to address environmental challenges. The Basque Soil Living Lab, coordinated by GAIA and its partners, therefore identified soil literacy as a priority for action: helping people see soil not simply as ground to walk on but as a living, breathing ecosystem essential to life.

Engagement activities

The interaction focused on presenting and celebrating the outcomes of a collaborative process linking science, art, and community engagement around soil health and biodiversity in the Urdaibai Biosphere Reserve. It was designed as both an exhibition of artworks and an interactive learning experience to raise public awareness of soil as a living ecosystem and to explore how creativity can foster ecological literacy.

Artistic activities

30 fine arts and pedagogy students developed unique artworks based on material and inspiration they drew from field immersions in the Urdaibai reserve. These art pieces were then exhibited at the BBF Bilbao.

IMPACT

Create lasting art work

Change public perception on soil

Develop educational material on soil literacy

Encourage intergenerational dialogue between citizens, artists, and experts



WHAT HAPPENED?

The interaction was conducted by the Basque Soil Living Lab (coordinated by GAIA) in close collaboration with the Basque District of Culture and Creativity (BDCC), the University of the Basque Country (UPV/EHU) with 30 fine arts and pedagogy students, and local actors such as the Forua Town Council, San Fidel Ikastola.

The primary objective was to highlight the hidden beauty and significance of soil biodiversity through art and sound, and to stimulate dialogue and reflection among citizens about the role of creativity in fostering ecological awareness and land stewardship. An art exhibition was the visible result of a learning and co-creation process in which fine arts and pedagogy students immersed themselves in the Urdaibai environment, observed soil indicators, and translated these findings into artistic works. Thanks to the connection and exchanges with local partners, the interaction aimed not only to produce creative outputs but also to foster a sense of shared responsibility for the soil and ecosystems of Urdaibai.

The willingness of these artists to fully engage in co-creation processes with scientists, educators, and local communities was a decisive success factor of the interaction. This success translated into the art exhibition attracting **hundreds of visitors** during the one-month display period at BBF Bilbao.

PARTICIPANTS ENGAGEMENT

The artistic activities culminated in a public exhibition on 18 June 2025 at the BBF space in Bilbao, where the final artworks (drawings, paintings, mixed media works, and the soundscape) were displayed. Visitors could walk through thematic zones representing the soil biodiversity story, listen to the soundscape, and interact with the artists, thus transforming scientific data on soil and biodiversity into an engaging cultural experience.

The exhibition was opened by representatives of the Basque Soil Living Lab, who introduced the purpose of the exhibition, the importance of soil biodiversity, and its link to the EU's Mission Soil.

Round Table Discussions featuring experts and local stakeholders focused on the role of the Basque Living Lab and how soil health challenges are addressed in Urdaibai, the experiences of student-artists, who explained how the landscape, biodiversity, and cultural identity of Urdaibai inspired their creative work, and how art can be used as a medium for raising environmental awareness. Pedagogy students then presented a unique auditory art piece capturing the natural soundscape of Urdaibai, translating the reserve's ecological richness into an immersive sensory experience.

During the exhibition, participants got the opportunity to interact with the artists, and discuss the links between soil, biodiversity, and community well-being. Therefore, the exhibition was more than just about art: it was a shared space for reflection and co-learning, engaging citizens, students, scientists, and local authorities in thinking about the importance of soil and our collective responsibility to care for it.



Artistic activities

The artistic activities for this interaction were designed to translate soil biodiversity and ecosystem indicators from the Urdaibai Biosphere Reserve into visual and auditory forms that could communicate with a wide public audience. The process combined field-based learning, studio-based artistic creation, and a final public exhibition.

Field Immersion and Inspiration

The activity began with an immersion visit to Urdaibai, where students observed and learned about biodiversity indicators used by the Basque Soil Living Lab. These included dragonflies, beetles, butterflies and moths, migratory birds, and even soil organisms such as mycelium networks. The students documented textures, colours, and forms of these species and their habitats through photographs, sketches, and notes, which served as the creative basis for later artwork.

Thematic Drawing and Painting

Students of the Fine Arts faculty (UPV/EHU) worked in teams to create thematic artworks, each group focusing on one specific insect, representing an ecological indicator. For example, dragonflies (Libélulas) represent water quality and ecological balance and beetles (Escarabajos) symbolise habitat health and sensitivity to environmental change.

These themes were approached using multiple drawing techniques (graphite, ink, and mixed media) and lateral thinking creativity methods such as the “random word” technique of Edward de Bono, encouraging conceptual connections between species traits and artistic expression.

From Sketches to Final Artworks

Initial sketches explored anatomical details and symbolic associations, later evolving into final compositions that combined realism with abstraction. Works included: detailed anatomical studies of wings, shells, and feathers; and abstract compositions emphasising ecosystem processes like migration or soil humidity.

The final artworks included mixed media pieces integrating found materials and embroidery to evoke soil textures and biodiversity interactions. Many works were produced on 50x50 cm formats, using acrylics, oils, watercolours, graphite, embroidery threads, and even natural pigments such as turmeric, symbolizing organic connections with soil.

Soundscape Creation

A unique component was developed by Pedagogy students: a soundscape (paisaje sonoro) of Urdaibai. Inspired by R. Murray Schafer’s concept of soundscape composition, it blended recordings of birds, insects, water flows, and human environmental sounds, aiming to raise awareness of human impact on natural sound environments. This auditory artwork added an immersive sensory layer to the final exhibition experience.

Publication: The Fanzine Mizelioa

The creative process and results were documented in the fanzine “Mizelioa - Art to Raise Awareness”, which combined images of artworks, conceptual texts, creative exercises (such as word puzzles and horoscopes inspired by nature), and educational references for further learning.

This publication acted both as a memory of the project and as an educational tool for future replication.



Impact of the interaction

By selecting an art-driven scheme, the project created an attractive and memorable citizen experience where art served as an effective medium to make invisible ecological processes visible, allowing citizens to see, hear, and feel the beauty and vulnerability of soil biodiversity through paintings, drawings, and a soundscape. This approach made soil literacy interactive and accessible: rather than being told why soil matters, people were invited to experience and reflect on it themselves.

The interaction generated a collection of art work and educational resources, that can now be used in new contexts, to increase its impact. Indeed, 30+ visual artworks were created (paintings, drawings, and mixed-media works), reflecting on biodiversity indicators such as dragonflies, beetles, migratory birds, butterflies, and forest microhabitats. The creative process that led to these artworks is now documented in the “Mizelioa” fanzine, providing an educational tool for future use in schools, communities, and Living Lab outreach.

The interaction involved 30 university students, primarily women (approx. 70%), thus contributing to youth and gender inclusion. Students gained experience in interdisciplinary collaboration, combining scientific knowledge and artistic creativity, with a strong emphasis on societal impact. They were able to further share the outcomes of the interaction with their own networks.

The co-organisation of the interaction with several partners (the Basque Soil Living Lab, UPV/EHU, Forua Town Council, San Fidel Ikastola, GAIA, KSIgune, and local cultural actors) strengthened their relationships. New connections were created between emerging artists, educators, and environmental stakeholders, laying the groundwork for potential future collaborations and replication of similar initiatives.

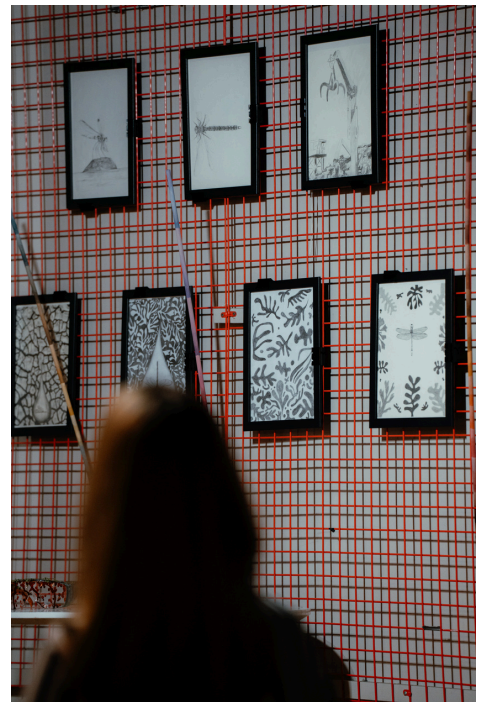
Finally, the exhibition attracted around 50 participants during the opening and hundreds of visitors during its one-month run at DOCK Bilbao, ensuring broad visibility and community involvement. Visitors engaged in dialogues with students and other participants, creating a space for reflection on the relationship between people, soil, and nature.

Overall, the interaction demonstrated the effectiveness of art-based approaches for engaging communities on environmental issues, delivering immediate educational and cultural value while also planting the seeds for future collaborations and public awareness initiatives.



To ensure the successful replication of its innovative approach, GAIA highlights five essential strategies:

- Engage local education and cultural actors early. Partnering with universities, art schools, and local educational institutions ensures access to motivated young talent and supports skill development in parallel with awareness raising.
- Integrate field immersions for the artists. Starting with a field visit (e.g., in Urdaibai) allowed participants to experience the natural environment first-hand, inspiring authentic artistic responses and strengthening emotional engagement.
- Include multisensory elements. Combining visual artworks with auditory experiences (like soundscapes) enhances accessibility and provides a more immersive learning environment.
- Publish and document results. Producing materials such as the Mizelioa fanzine provides a tangible legacy and supports future outreach and replication efforts.
- Foster collaboration across sectors. Bringing together artists, scientists, educators, local authorities, and community members creates synergy and ensures long-term impact beyond a single event.



Resources

The implementation of the interaction required modest but strategic investment, mainly focused on supporting the co-creation process, event logistics, and public dissemination. The costs can be broken down as follows: Equipment and Materials: 700€, Location and Logistics: 300€, Communication and Dissemination: 1800€.

Besides, the interaction benefited from BBF, providing the space for the exhibition, the Forua municipality, hosting the visit of the students, and a strong involvement of its organisers, and in-kind contributions.



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