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# Conservation of ecological connectivity in Spain

A dialogue to accelerate collaboration and action

Catholic University of Ávila (UCAV), Ávila, Spain

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# Executive summary

The conservation of ecological connectivity has become a priority internationally, across Europe, and within Spain, where it is crucial for the conservation and health of landscapes and ecosystems of the Iberian Peninsula - including the Mediterranean region, a global biodiversity hotspot. A connected and well-conserved landscape is essential for advancing toward an ecologically coherent network of protected natural areas, effectively combating the impacts of climate change, and halting the loss of associated natural and cultural values in the Iberian Peninsula. Spain has a well-defined regulatory framework underpinning connectivity conservation. For example, connectivity is a fundamental pillar of so-called 'green infrastructure', whose other components are biodiversity and ecosystem services. The country also has a National Strategy for Green Infrastructure and Ecological Connectivity and Restoration, along with a methodological guide that supports it. However, a key problem persists: the need for more coordinated and strategic efforts to determine where and what actions could have the greatest impact in achieving connectivity goals.

## The first national dialogues on ecological connectivity

In this context, *Conservation of Ecological Connectivity in Spain: A Dialogue to Accelerate Collaboration and Action* - the first of its kind in Spain - was based on international and national frameworks to facilitate the exchange of experiences and the sharing of initiatives related to ecological connectivity. This included the '30x30' Target of the Convention on Biological Diversity, the EU Restoration Regulation, and Spain's National Strategy for Green Infrastructure and Ecological Connectivity and Restoration. The dialogues took place at the Catholic University of Ávila (UCAV), in Ávila, Spain, on the 24-26 June, 2025. 48 participants attended, representing the national government, autonomous communities, municipalities, the private sector, non-governmental organizations, and research institutions. This report contains a detailed record of the activities carried out, the discussions held, and the next steps identified.



# Conclusions

## Science and data - we can act with what we already know

- We already know enough to take action to reduce habitat fragmentation and reconnect cities with nature.
- On land, there are well-established methodologies to evaluate spatial coherence and functional connectivity across landscapes.
- In freshwater systems, we can advance toward the concept of free-flowing rivers. Tools and models already exist to make efficient decisions, even in the face of future changes.
- It is essential to further develop knowledge of marine environments and cross-ecosystem connectivity (e.g., estuaries).
- Mapping all components of Spain's green infrastructure is critical as a foundational step for sustainable land management. Proper design of this infrastructure is key to achieving its intended objectives.
- Available data should be integrated into a national connectivity repository to serve as a shared reference for administrations and projects.
- It is necessary to harmonise methodologies among Autonomous Communities and at the national level so that connectivity assessments can be compared and incorporated into restoration planning.
- Advances in connectivity should be incorporated into the monitoring of indicators for the European Restoration Regulation and the National Green Infrastructure Strategy.



## **Policy and regulations - integrating connectivity into local processes**

- We have a solid European and national framework, but how it reaches the local level for implementation is the real challenge.
- There is not yet a sufficient legal basis to require connectivity conservation. Specific regulations are lacking to guide administrative decision-making.
- Unclear boundaries of responsibilities and jurisdictions hinder action.
- Practical implementation of existing environmental regulations - especially environmental impact assessments at both project and strategic levels - must be strengthened.
- Develop national connectivity guidelines (terrestrial, freshwater, marine, and urban) as a technical reference framework for administrations.
- Facilitate the inclusion of connectivity in territorial and sectoral planning instruments, such as urban planning, infrastructure, or energy.
- Promote alignment among national, regional, and local planning so that connectivity becomes a cross-cutting criterion in ecological restoration.

## **Financing - combining public and private funding**

- Public funding suffers from instability, fragmented instruments, inconsistent compensation mechanisms, and the need to redesign the Common Agricultural Policy (CAP) to better support ecological connectivity.
- Public priority actions: create compensation mechanisms and a specific EU fund; establish a national registry of best practices; and develop guides and reports on financing and the unintended effects of the CAP.
- A legal framework is needed to require financing for protected natural areas and connectivity actions, as well as to encourage funding calls for restoration.
- Promote the inclusion of connectivity in the post-2027 EU CAP, orienting agri-environmental schemes toward connected landscape objectives.
- Private funding remains heterogeneous and not very strategic, with challenges around biodiversity credits - but land stewardship stands out as a key tool.
- Private priority actions: encourage direct participation of companies in conservation and restoration planning and debates; and foster public-private collaboration and land stewardship mechanisms, especially in strategic corridors.

## **Implementation and management - communication across all sectors active in the landscape**

- Agriculture and livestock play a fundamental role: rural actors shape the landscape and its capacity to connect species and habitats.
- Promote public awareness by presenting ecological connectivity as part of the nation's natural and cultural heritage.
- The transition from science to practice must improve. Scientists should collaborate with managers from the start to adapt methodologies to real-world needs.
- All territorial actors - including the private sector - must be involved, since multifunctionality and cross-sector collaboration are essential to developing and managing green infrastructure.
- Municipalities, councillors, and local technical staff are key actors. Urban planning should be a central tool where restoration and connectivity conservation are explicitly integrated.
- Develop technical protocols for specific sectors (agricultural, forestry, fluvial, marine, urban) to help managers and technicians incorporate connectivity into their work.
- Publish suitable technical standards and protocols to support on-the-ground implementation of policies and regulations.
- To improve ecological connectivity, we must improve human connectivity - communication and cooperation across all parts of society are essential.



# Next steps

1. Create a national ecological connectivity working group or expert panel, whose first task could be drafting the aforementioned national connectivity guidelines for marine, aquatic, and terrestrial environments.
2. Jointly develop a digital platform for ecological connectivity in Spain - a repository of projects, methodologies, and experiences from all sectors mentioned in this report, serving as a catalyst for action.
3. Establish a dialogue and collaboration channel with the agricultural sector to develop a shared vision for landscape management.
4. Promote a joint project to explore the ideas and challenges discussed in the Dialogues, focusing on practical applications and on-the-ground implementation.
5. Organise the first marine connectivity dialogues.
6. Plan for a second, more ambitious edition of the Dialogues to continue the learning process and assess progress on initiatives that emerged from these first Dialogues.

Find the full report in Spanish here:

<https://www.uicn.es/conectividad-ecologica/>

