



# Summary of ENVISION Deliverable 5.3

Decision-making toolbox for inclusive  
conservation in protected areas

# Decision-making toolbox for inclusive conservation in protected areas

The ENVISION project examines **inclusive conservation** from a theoretical and practical perspective. Inclusive conservation refers to a new approach where multiple visions of stakeholders are considered for **promoting biodiversity conservation** and **human well-being** in protected areas. The approach considers multiple visions for protected area management, assessing the **consequences** of each vision, collectively defining new visions through **social learning**, assessing **uncertainty** and building **resilience**, acknowledging **power relations** and rethinking **governance**, while informing biodiversity and protected area management policy.

This toolbox introduces a set of **participatory research tools** to help protected areas managers and practitioners enhance **social engagement** in conservation decision-making by identifying, navigating and balancing visions, tensions, and power relations between stakeholders. The toolbox has been co-created in the context of the ENVISION project between scientists and protected areas managers to support the development of **socially inclusive policies and management actions** in protected areas, and it is based on the approaches developed in four protected areas in Europe and U.S.A.: Sierra de Guadarrama National Park, Spain; Västra Harg Nature Reserve, Sweden; Utrechtse Heuvelrug National Park, and Kromme Rijn region, Netherlands; and Denali National Park and Preserve, Alaska, U.S.A.

Four assumptions underlie the implementation of the toolbox in protected areas:

1. Facilitating place-based processes that foster inclusive conservation necessitates the collection of **local/traditional knowledge, views, and values** from multiple stakeholders;
2. Identifying visions and elaborate future scenarios should be done in a **participatory way**;
3. Addressing **power dynamics** and facilitating **collective action** is crucial to promote stakeholders' participation and engagement in conservation;
4. Strengthening the science-policy interface for **socially inclusive governance** requires promoting collaborative work among stakeholders.



The tools applied for the protected area case studies are available on the **PANORAMA Solutions platform** (one per study area) to guide other practitioners and protected areas specialists worldwide. Each solution describes **a set of tools** that support inclusive conservation from different perspectives, the enabling factors that facilitate their use, and the main lessons learned from their application:

- **Sierra de Guadarrama National Park**
- **Utrechtse Heuvelrug National Park and Kromme Rijn region**
- **Västra Harg Nature Reserve**
- **Denali National Park and Preserve**

To ensure that ENVISION's tools respond to protected areas' management needs and challenges, these have been tested in the Sierra de Guadarrama National Park. We first applied the tools as designed by the research team and subsequently improved and adapted them according to the feedback received from the National Park decision-makers and experts in protected areas management. This **participatory approach** facilitates the applicability of these tools into the protected area management cycle by co-creating implementation mechanisms and management actions in an inclusive manner.

Detailed descriptions of the tools in the ENVISION toolbox can be found on the following pages.





## Application site

Sierra de Guadarrama National Park; Västra Harg Nature Reserve, Utrechtse Heuvelrug National Park, and Kromme Rijn region.

## Results from the application

Identification of different **future visions** for the protected areas, including values that support them, factors that generate changes in the territory, preferences for ecosystem services, and management of the sites.

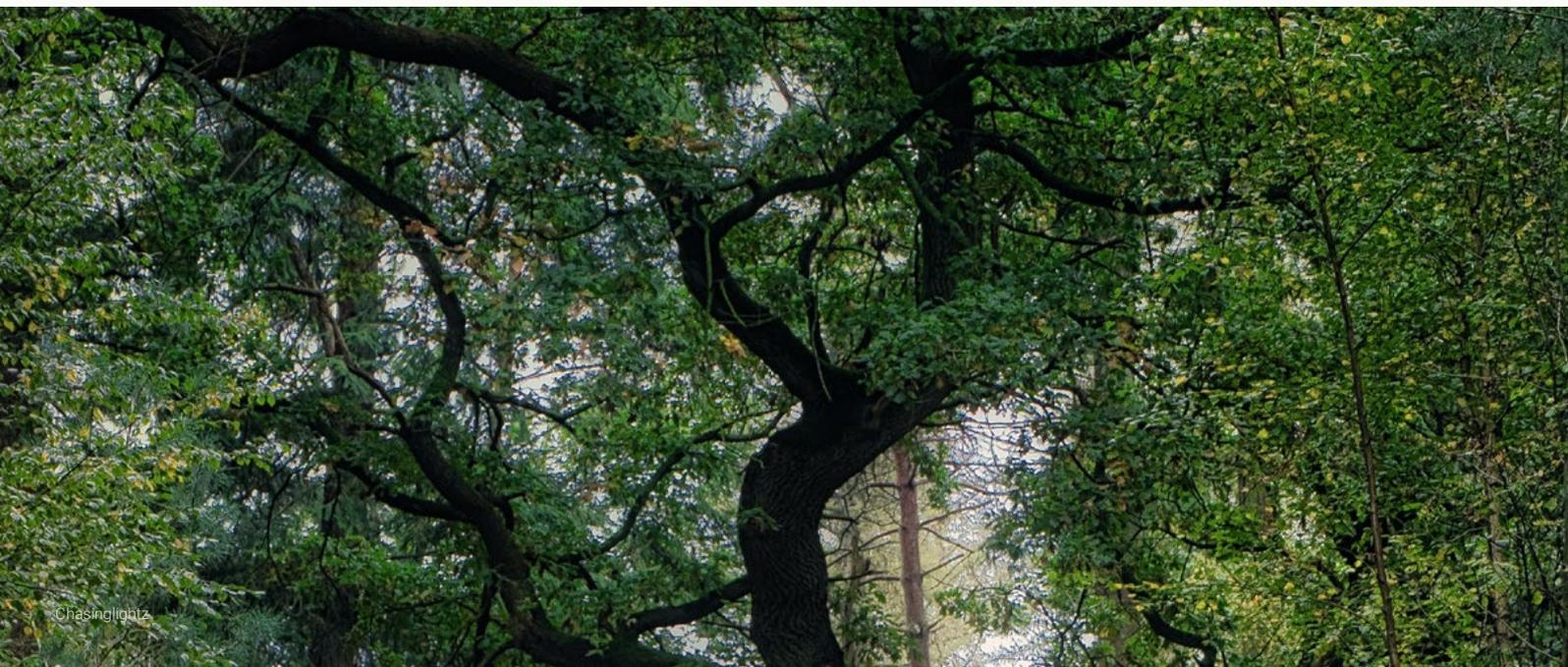
## Interest for the policy domain

- **From an outcome perspective:** input for **comparing and balancing visions** for the protected areas management.
- **From a process perspective:** facilitating in an interactive and creative way the development of a story to build the desired future for the protected areas.

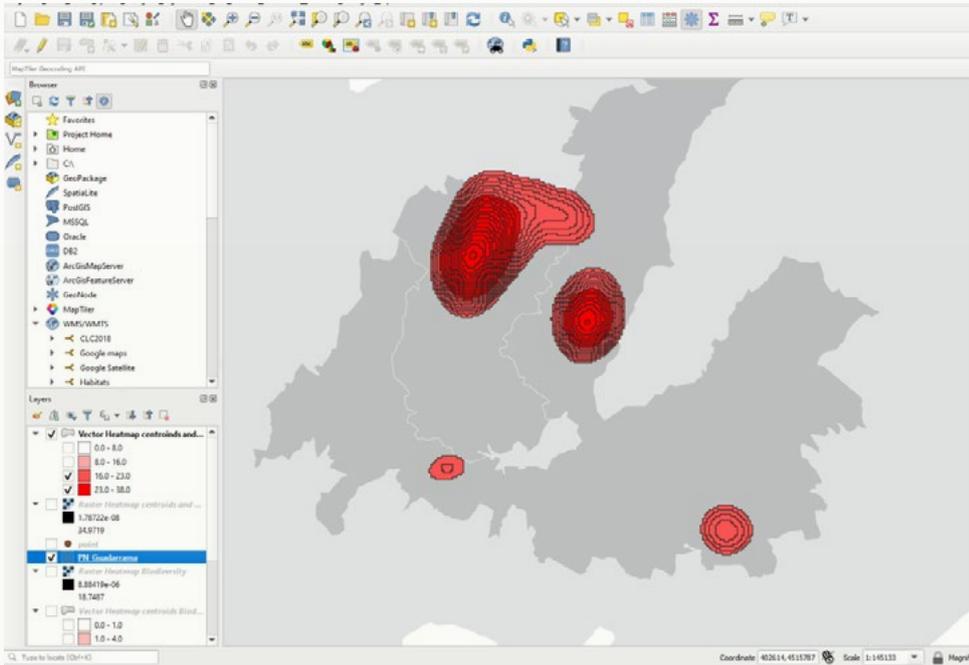
## References

- Lo, V.B., López-Rodríguez, M.D., Metzger, M., Oteros-Rozas, E., Cebrián-Piqueras, M. A., Ruiz-Mallén, I., March, H., Raymond, C.M. (*in press*) 'How stable are visions for protected area management? Stakeholder perspectives before and during a pandemic.' *People and Nature*.
- De Vries Lentsch, Aster; Metzger, M. J. (2018). STREAMLINE - a visual interview methodology that makes semi-structured interviews, focus groups and stakeholder workshops more fun and accessible. [dataset]. The University of Edinburgh. Available at: <https://datashare.ed.ac.uk/handle/10283/3181/> (Accessed: 28 Oct 2021)

<https://www.streamline-research.com/>



# PARTICIPATORY MAPPING



Miguel. A. Cebrián-Piqueras

## Description

Technique to collect, analyze, share or visualize the values, preferences or concerns of citizens and other social actors. Results can be overlaid with other spatial attributes to inform the social acceptability of land-use plans.

## Scientific goal

To identify in a spatially explicit way the relationships between different values, preferences and concerns of citizens, among other social actors.

## Method of application

Online and face-to-face surveys, facilitated by the Maptionnaire software.



## Application site

Sierra de Guadarrama National Park; Västra Harg Nature Reserve; Utrechtse Heuvelrug National Park, and Kromme Rijn region.

## Results from the application

Visualizing georeferenced data associated with different types of **knowledge, values, perceptions** of ecosystem services, and land-use conflicts.

## Interest for the policy domain

- **From an outcome perspective:** obtaining information on **local knowledge** and potential **tensions** for protected areas management.
- **From a process perspective:** input to develop management strategies considering the plurality of perspectives present in the protected areas and contributing to **preventing conflicts** and **involving the stakeholders and local community**.

## References

- Cebrián-Piqueras, M. A., Filyushkina, A., Johnson, D. N., Lo, V. B., López-Rodríguez, M.D, March, H., Oteros-Rozas, E., Pepler-Lisbach, C., Quintas-Soriano, C., Raymond, C.M., Ruiz-Mallén, van Riper, C.J., Zingrebe, Y. and Plieninger, T. (2020) 'Scientific and local ecological knowledge, shaping perceptions towards protected areas and related ecosystem services'. *Landscape Ecology*, 4. [online] Available from: <https://doi.org/10.1007/s10980-020-01107-4>





## Application site

Sierra de Guadarrama National Park; Denali National Park and Preserve.

## Results from the application

Mapping of relationships of **knowledge**, **emotions** and **power distribution** in the protected area.

## Interest for the policy domain

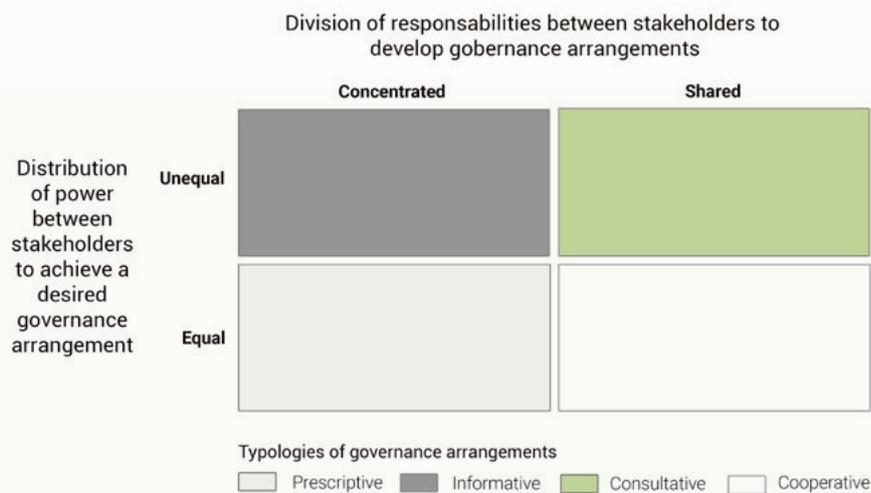
- **From an outcome perspective:** collecting local knowledge associated with the protected area while capturing intertwined **affective relationships** and **power dynamics**.
- **From a process perspective:** opening up a **dialogue** to deal collectively with less-addressed topics in participation, such as emotional and power aspects.

## References

- Oteros-Rozas E., M.D. López-Rodríguez, M. Heras, C. Piñeiro, H. March, V. B. Lo and I Ruiz-Mallén. 2020. "Imaginando colectivamente el futuro del Parque Nacional Sierra de Guadarrama y su contexto socio-ecológico". Report. DOI: 10.5281/zenodo.4423119



# MATRIX TO CHARACTERIZE GOVERNANCE ARRANGEMENTS AND DELINEATE PARTICIPATORY MECHANISMS



Adapted from López-Rodríguez et al., 2020

## Description

Analytical matrix to characterize **governance arrangements** in a protected area.

## Scientific goal

To understand how (formal and informal) governance arrangements are shaped in terms of **stakeholders' responsibility** (shared vs concentrated) and **influence** (equal vs unequal).

## Method of application

Face-to-face semi-structured interviews.



## Application site

Sierra de Guadarrama National Park.

## Results from the application

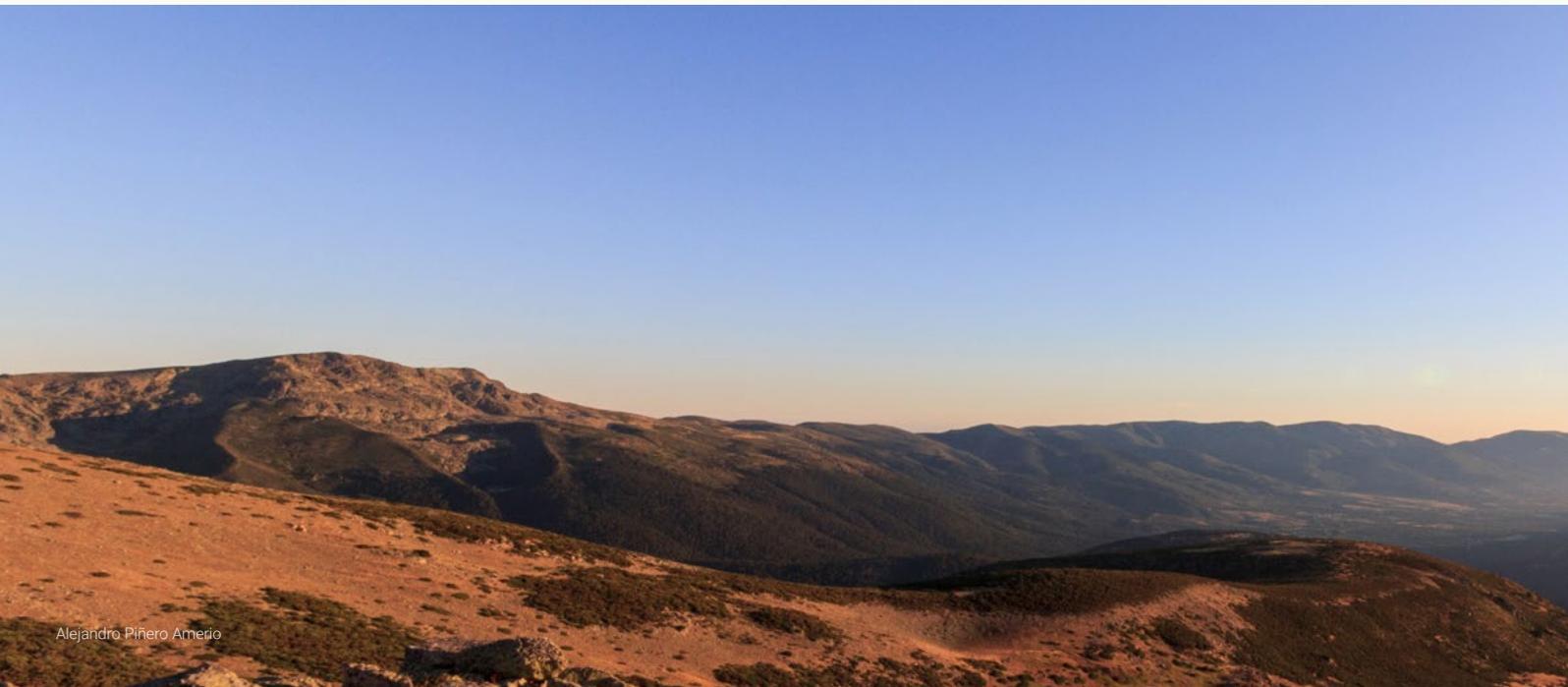
Identification of four types of (formal and informal) governance arrangements: **cooperative**, **consultative**, **informative**, and **prescriptive**.

## Interest for the policy domain

- **From an outcome perspective:** guidance to delineate and monitor (formal and informal) participatory mechanisms through which two or more stakeholders interact to adopt governance arrangements.
- **From a process perspective:** input to improve the understanding of participatory mechanisms in order to identify barriers and opportunities that promote institutional reforms for enhancing **social participation and engagement** in the protected area.

## References

- López-Rodríguez, M. D., I. Ruiz-Mallén, E. Oteros-Rozas, H. March, R. Keller, V. B. Lo, M. A. Cebrián-Piqueras, and R. Andrade (2020). Delineating participation in conservation governance: Insights from the Sierra de Guadarrama National Park (Spain). *Environmental Science and Policy* 114(September):486–496. <https://doi.org/10.1016/j.envsci.2020.09.019>



# DELIBERATIVE PROCESSES BASED ON SOCIAL LEARNING AND KNOWLEDGE CO-PRODUCTION



Oteros-Rozas et al., 2020

## Description

Social processes to promote **collective reflections** among diverse stakeholders and guide them in creating **visions of desired futures** for protected areas management (e.g. participatory scenario planning).

## Scientific goal

To guide stakeholders to think collectively on plausible and hypothetical futures while discussing priorities, actions, and policies with the final aim of **guiding conservation governance** in the face of perturbances and uncertainties.

## Method of application

Online and in-person workshops, and meetings.



## Application site

Sierra de Guadarrama National Park; Västra Harg Nature Reserve; Utrechtse Heuvelrug National Park, and Kromme Rijn region; Denali National Park and Preserve.

## Results from the application

Co-creation of different future scenarios (plausible and desired ones) for the protected areas and strategies to achieve the desired aspects and address the undesired ones for each scenario.

## Interest for the policy domain

- **From an outcome perspective:** incorporating **local concerns, diverse knowledge** and **values systems** in the protected areas management and create collectively strategies to advance towards a more sustainable future.
- **From a process perspective:** gaining knowledge about diverse perspectives of the dynamics and uncertainties of human-nature interactions and their consequences for **biodiversity conservation** and **human well-being**, and building valuable relationships to increase **community capacity** for engaging in decision-making.

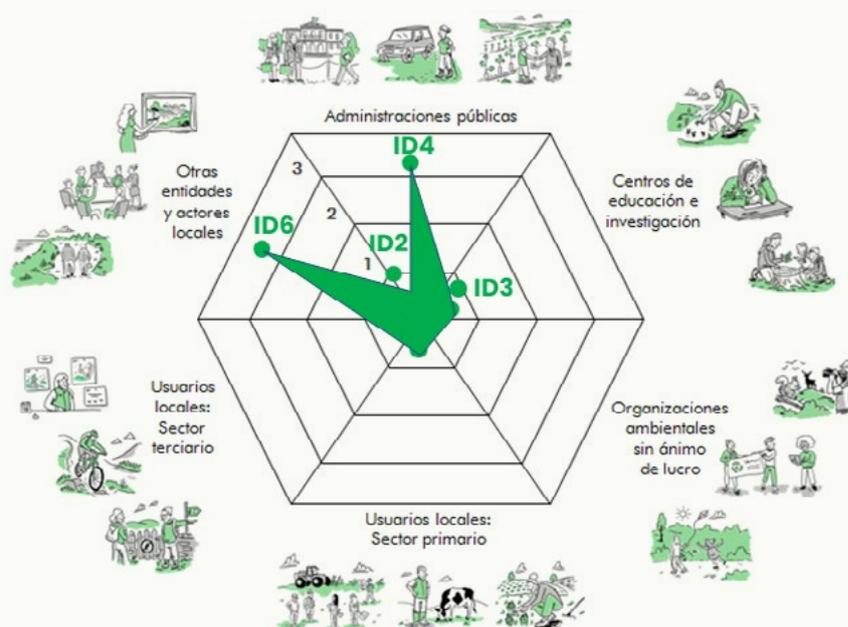
## References

- Oteros-Rozas E., M.D. López-Rodríguez, M. Heras, C. Piñeiro, H. March, V. B. Lo and I Ruiz-Mallén. 2020. "Imaginando colectivamente el futuro del Parque Nacional Sierra de Guadarrama y su contexto socio-ecológico". Report. DOI: 10.5281/zenodo.4423119



# CONTEXT-SPECIFIC BOUNDARY OBJECT TO FACILITATE COLLECTIVE ACTION

## Pastoreo controlado áreas cortafuegos



María D. López-Rodríguez

## Description

A specifically created boundary object in a graphical tool form that supports social processes by framing and guiding strategies for **facilitating collective action**.

## Scientific goal

To facilitate **stakeholder organization** and identify their willingness to take tangible joint action.

## Method of application

Online workshop (as part of a participatory scenario planning process).



## Application site

Sierra de Guadarrama National Park.

## Results from the application

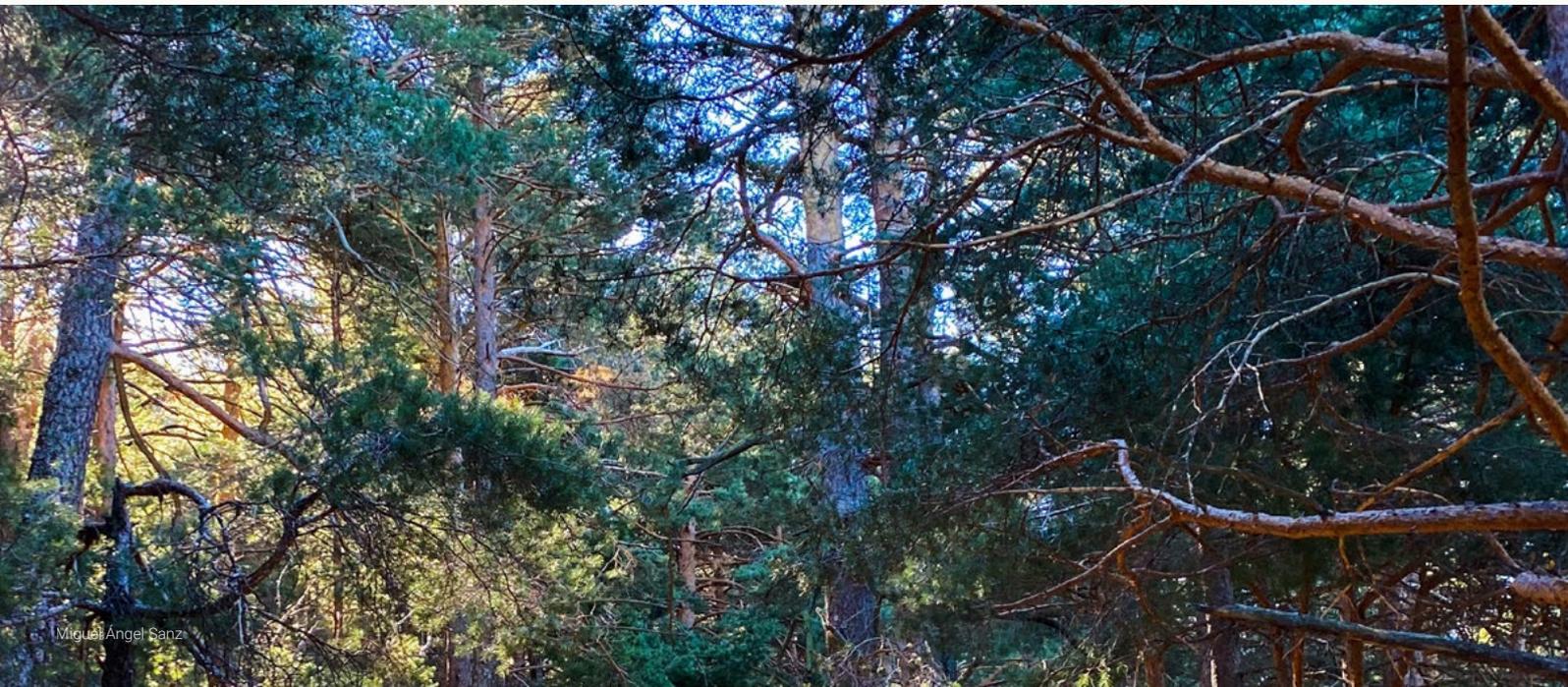
Shaping a diversity of collective strategies in terms of stakeholders' diversity and willingness to take action to implement them.

## Interest for the policy domain

- **From an outcome perspective:** visualizing potential action networks in which the willingness of each stakeholder is a constituent of collective action.
- **From a process perspective:** opening up a **dialogue** to foster stakeholder mobilization from theory to joint action for implementing the strategies.

## References

- López-Rodríguez, M.D., Oteros-Rozas, E., Ruiz-Mallén, I., March, H., Horcea-Milcu, A.I., Heras, M., Cebrián-Piqueras, M.A., Andrade, R., B.P.G. Lo, V. and Piñeiro, C. A boundary object approach to call for collective action in participatory scenario planning. *Ecology and Society* (Under review)



# Promoting collaboration and understanding between researchers and stakeholders

What we learned from ENVISION is that **promoting understanding** and collaboration between researchers, protected area decision-makers and social actors is necessary to generate the most impact from scientific knowledge in the policy domain. Several activities and processes facilitated building collaborative relationships:

- **Face-to-face or online meetings** to formally introduce the research project to the protected area decision-makers and managers while using media (e.g. radio and press);
- Development of **seminars** to inform local residents and other stakeholders about the project;
- Invitation to decision-makers and managers to be involved in the project activities (e.g. local knowledge alliance, film, and meetings);
- **Tailoring the research activities** to the decision-makers agenda to facilitate their participation;
- Organization of **regular meetings, webinars, and newsletters** in local languages to inform about the project advances and findings;
- Dissemination of **research reports** in the local language in advance of publication in academic journals to validate the results;
- Writing **guest blog posts** in the national park's website, publishing research in **accessible formats** such as in the Panorama Solutions database, and other related channels to disseminate research findings to the protected areas community of practice; and
- Development of **workshops** with decision-makers to analyze the applicability and usability of resulting tools and other research outcomes within the protected areas.

Examples of these activities can be found at:  
[www.inclusive-conservation.org](http://www.inclusive-conservation.org)

Leading author: María D. López-Rodríguez,  
IN3 - Internet Interdisciplinary Institute, Universitat Oberta de Catalunya.





ENVISION is a 3-year research project funded through the 2017-2018 Belmont Forum and BiodivERsA joint call under the BiodivScen ERA-Net COFUND programme and national funders: PCI2018-092958/Spanish Research Agency (AEI), Federal Ministry of Education and Research in Germany, Netherlands Organisation for Scientific Research, and Swedish Research Council for Sustainable Development

DOI: 10.5281/zenodo.5748257

### Partners



### Funders



## For more information

**Isabel Ruiz Mallén**, Ramón y Cajal Research Fellow,  
IN3 - Internet Interdisciplinary Institute, Universitat  
Oberta de Catalunya.

✉ [iruiz\\_mallen@uoc.edu](mailto:iruiz_mallen@uoc.edu)

🖱 [inclusive-conservation.org](http://inclusive-conservation.org)

🐦 [@Envision2050](https://twitter.com/Envision2050)



**ENVISION**