



Policy Brief

Projections of future impacts of visions on PA management strategies

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Introduction

Protected areas (PA) are a traditional strategy for biodiversity conservation. Primarily managed for biodiversity, they also support a range of ecosystem services such as agricultural, forestry and energy production, recreation and aesthetics and mitigation of climate change through carbon sequestration. With the continuing decline of biodiversity and the urgency of the situation highlighted by recent environmental assessments, protected areas are under increasing pressure to “deliver”¹. The need to expand conservation networks as well as make PAs more ecologically effective, representative and well-connected has been stressed^{1,2}.

Managing multiple distinct interests represents one of the major challenges for PA management³. Successful nature protection and management has been at least in part linked to understanding and engaging with the multiple ways in which people value, perceive and relate to nature⁴⁻⁷. Among others, one of the global science-policy processes, the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), argues for a pluralistic approach to recognizing the diversity in values.⁸ The IPBES report on scenarios and models⁹ calls for improvements and wider applications of participatory scenario methods in order to enhance the relevancy and acceptance of conservation measures. New theories, concepts and tools need to be developed for uncovering and representing the diversity in values held by stakeholders. For instance, scenarios and projections can be effective means to help understand relationships between humans and nature, and to incorporating stakeholders’ values and concerns into decision-making. Engagement in the dialogue between stakeholders, scientific experts and policy actors for development of scenarios and considering projections and their consequences helps to uncover the diversity of values as well as enhance the relevance, usefulness and acceptance of scenarios and the resulting decision-making. Importantly, such dialogue is a helpful tool towards the enhancement of the ownership of stakeholders over the biodiversity targets, which is a fundamental condition for the achievement of the global and EU biodiversity targets.





Inclusive conservation – ENVISION's approach to assessing and balancing impacts of multiple visions

The **ENVISION project** develops, tests and validates a novel trans-disciplinary scenario approach for engaging multiple stakeholders and local communities in the protected area management and biodiversity decision-making at multiple scales¹⁰.

This inclusive approach to conservation includes employing a variety of tools and processes to identify, compare and balance the consequences of different perspectives and visions on how nature should be conserved (exemplified approaches are described in the fact sheet "ENVISION's approach to inclusive conservation"¹¹).

This policy brief presents first findings from the case study area in the Netherlands – the Kromme Rijn region and Utrechtse Heuvelrug National Park, a multifunctional landscape with several PAs of different sizes and designation context, where we applied a set of tools from the **inclusive conservation approach toolbox**. Specifically, we conducted a series of interviews with local actors, targeting different groups such as local residents (at local town markets), recreationists and residents in the area (at a popular recreation spots) and representatives of the local government, NGOs and other relevant organizations (at their offices). To guide the interviews we used a narrative approach from anthropology called **STREAMLINE** and elements of participatory mapping, where participants were given a series of interactive A3 canvases on which they were providing their answers, for example, in form of drawings on the map. In the interviews we focused on eliciting the conceptual and spatial diversity of visions stakeholders have for the area, including their knowledge of existing competing landscape functions and perceptions of multifunctional areas.





Case area – The Kromme Rijn region and Utrechtse Heuvelrug National Park (The Netherlands)

The region is located next to one of the largest cities in the Netherlands, Utrecht, and consists of a cultural landscape (the Kromme Rijn area) with several PAs lodged in its land use mosaic and part of the Utrechtse Heuvelrug National Park located next to it. The Kromme Rijn area is about 219 km² and place of residence for 86.090 inhabitants. Different elements of typical Dutch landscapes are present here: varying from mosaics with patched forests to wide open pastures on the river bank. Fruit cultivation, dairy farming and other types of agriculture are practiced in the area. It is also a popular recreational destination.

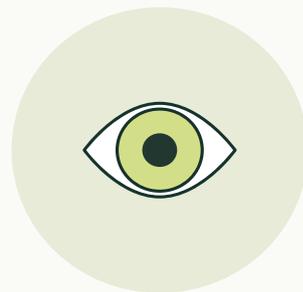
Several small nature areas are located between residential and agricultural areas. One of them is a Natura 2000 site “Kolland & Overlangbroek” (106.81 ha), which is an actively managed ash wood forests on nutrient-rich clay soils – a rare type of forest in Europe. It possesses a large wealth of mushrooms and epiphytic mosses and lichens and is one of the 60 habitat types in the Netherlands that are sensitive to excess of nitrogen deposition.

Utrechtse Heuvelrug National Park centered around the Utrecht ridge hosts the second largest forest in the country, made up of oak and beech trees, and is home to over 100 bird species. It was established in 2003, when more than 30 groups (estate owners, nature conservation organizations, the province of Utrecht, interest groups) joined forces to ensure the recognition, effective protection and development of the natural and cultural-historical values of the Utrecht ridge.



What visions do people have for the area?

In the first step, we focused on eliciting the conceptual diversity of visions stakeholders have for the area represented through combinations of landscape functions they find important for this area. We identified the following four main visions:



- (A) Inclusive cultural landscape for sustainable living
- (B) Productivity-oriented landscape
- (C) A peri-urban landscape of convenience
- (D) Environmentally-friendly landscape

A Inclusive cultural landscape for sustainable living

- ▶ Integrated approach to landscape management
- ▶ Collaboration between different actors
- ▶ "Balancing act": agriculture, biodiversity, recreation, tranquility, residential and other functions
- ▶ Agricultural production – important carrier of this landscape's values → large % organic
- ▶ Sustainable forest management
- ▶ (Smaller) nature areas restored & maintained

B Productivity-oriented landscape

- ▶ Agricultural production – leading interest (organic & intensive approaches in production)
- ▶ Produce bought by locals
- ▶ Cultural landscape – sense of identity
- ▶ ↑ windmills & solar panel farms
- ▶ Sustainable forest management
- ▶ Biodiversity conservation segregated to individual (small) areas

C A peri-urban landscape of convenience

- ▶ Extension of the road network & better transportation
- ▶ ↑ residential areas
- ▶ Farmers benefit from better infrastructure & new local customers
- ▶ Conventional intensified farming
- ▶ Nature conservation at bare minimum
- ▶ ↑ recreational facilities, cafes ("walk in the park")

D Environmentally-friendly landscape

- ▶ Environmental concerns at the center
- ▶ Biodiversity conservation in both nature & agricultural areas
- ▶ Mostly organic farming
- ▶ Produce bought by locals
- ▶ CO₂ important in forest management
- ▶ Tranquility of recreational experience

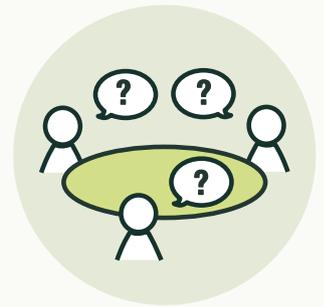


Box A: Brief narratives of visions held by stakeholders and residents in the area (for more detailed narratives and methodology consult [Deliverable 2.1¹²](#))

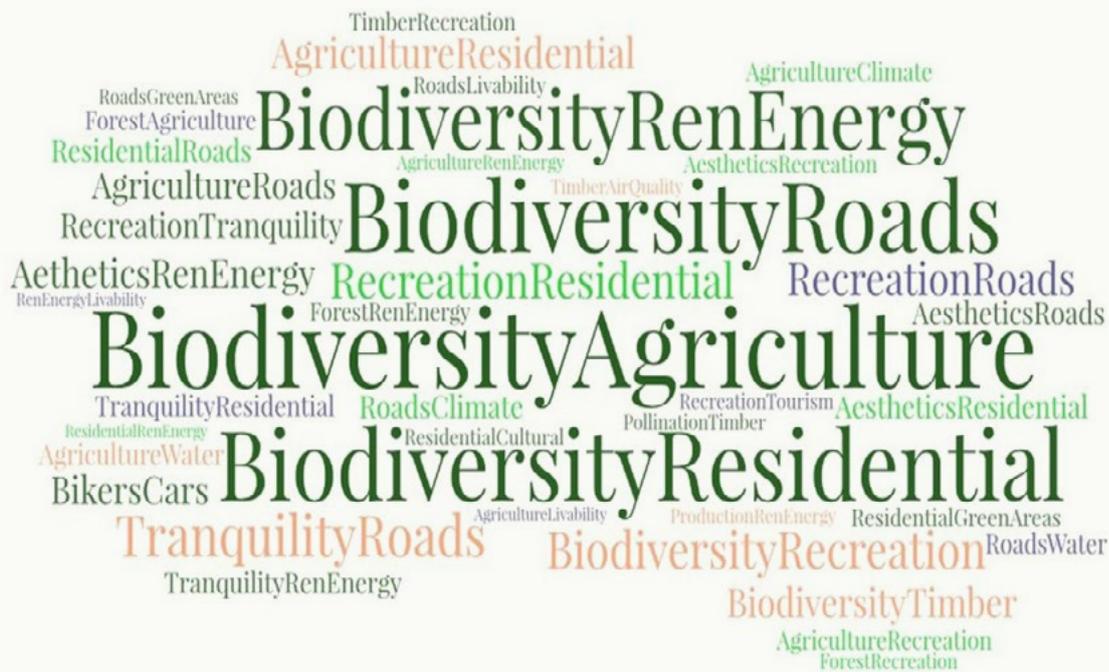


What conflicting interests do people see in the landscape?

Second, when stakeholders were asked about conflicting interests, they often named those in sets of pairs, for example agricultural production vs biodiversity. One of the most common answers were references to the following sets of conflicting relationships: provisioning services (e.g., agricultural production, construction of new roads and residential areas, wind mills and solar panel farms for energy production) vs biodiversity or recreation/aesthetics/tranquility. A few concrete examples included: nitrogen pollution from farming vs biodiversity conservation vs farming’s contribution to climate change, or recent timber harvests conducted in the national park vs recreation/aesthetics vs carbon sequestration.



This demonstrates that stakeholders are aware of a diverse range of competing interests. When all responses are combined, a multi-dimensional board of potential competing interests emerges (see Box B), outlining the complex and inter-linked nature of potential conflicts in the area.



Box B: A “wordle” of pairs of conflicting interests named by participants (e.g., “BiodiversityRenEnergy” – biodiversity vs renewable energy). The size of each word combination reflects the relative frequency with which it’s been named.



Where do people see the landscape as multifunctional?

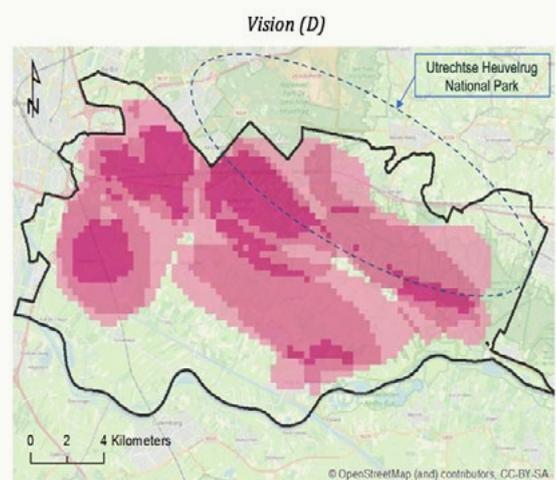
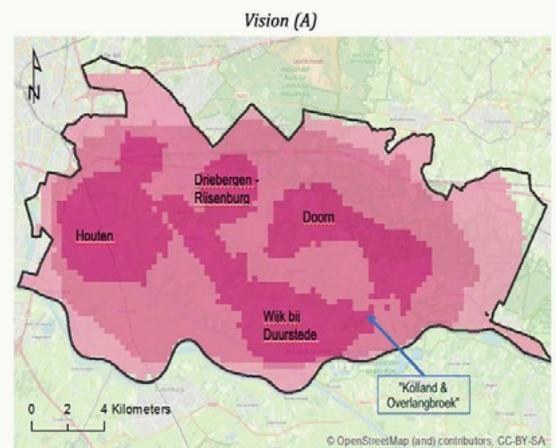
Complementary to the assessment of visions and of potentially conflicting interests, participants were asked to outline (draw) the areas of the landscape they see as multifunctional.

Multifunctionality (provision of multiple landscape functions or ecosystem services) is an inherent feature of this landscape, and to a different extent has been reflected in visions (presented in Box A).

Maps in Box C demonstrate where people, grouped based on their visions, see multifunctional areas in the landscape.

Image above in Box C: For a group of participants representing visions cluster (A) “Inclusive cultural landscape for sustainable living” (stakeholders who valued all landscape functions highly), much of the landscape was perceived as multifunctional by the majority of participants. Hotspots almost perfectly aligned with towns and villages. This highly perceived multifunctional spots also included areas surrounding the ash coppice Natura 2000 sites (“Kolland & Overlangbroek”), which are vulnerable to the excessive nitrogen deposition, often resulting from farming. This could present conflicts and trade-offs since this cluster of respondents valued both biodiversity and agricultural production highly.

Image below in Box C: For the group of participants representing vision cluster (D) “Environmentally-friendly landscape” (stakeholders who appreciate services such as tranquility, recreation and biodiversity much more than timber production and other provisioning services) a much smaller proportion of the landscape was seen as multifunctional. However, the relatively high perceived multifunctionality index of the National park could be a source of conflicts since there are plans for timber harvest in the area. These harvests are motivated by such reasons as habitat development, reduction of spread of bark beetles and supplementary income. A possible management implication of these findings could be that timber harvest needs to be allocated to a different forest segment as much as possible to have a lower social impact.



Box C: Proportion of respondents marking the area as multifunctional for groups of stakeholders representing two visions: (A) Inclusive cultural landscape for sustainable living, and (D) Environmentally-friendly landscape. Darker shades of pink indicate higher proportion of participants seeing that cell as multifunctional.





Implications of findings for management strategies and post-2020 biodiversity policy

During the months of the lockdown humanity had an opportunity to rethink our relationship with nature, and we all realized how close the link between the pandemic and the loss of biodiversity is. The Global Biodiversity Outlook 5¹³ published by the Convention on Biological Diversity (CBD) has alarmingly found that none of the 20 Aichi Biodiversity Targets set in 2010 have been met, and only six were partially met. Confirming this reality is also the recent WWF's Living Planet Report¹⁴, which recorded an average decline of two-thirds of wildlife.

The European Commission presented its EU Biodiversity Strategy to 2030¹⁵ in late May 2020, which “aims to put Europe’s biodiversity on a path to recovery by 2030 with benefits for people, the climate and the planet”. This is also the chance for Europe to establish itself as an ambitious leader on the global arena during the preparations for the future Global Biodiversity Framework, to be agreed in 2021. The current zero draft² considers certain enabling conditions for the implementation of the framework, including:

“The participation of all relevant stakeholders, non-governmental organizations, youth, civil society, local and subnational authorities, the private sector, academia and scientific institutions through a whole-of-society approach and through inclusive and representative multi-stakeholder and multisectoral platforms”²



In this context, the most recent findings from the ENVISION project, listed below, can be a helpful tool in the discussion about effective management of protected areas, under the umbrella of the upcoming Global Biodiversity Framework:

- **Management strategies for PAs**, especially those (small) ones lodged in multifunctional landscapes close to big cities, need to be able to balance diverse interests.

These interests are reflected in different visions stakeholders have for the area. We observed that different actors bring their own perspectives on how they see the landscape, what they value in the landscape, and their backgrounds to the decision-making. **Understanding this plurality is a crucial step in the inclusive conservation approach.** It can help decision-makers to navigate towards more balanced and holistic management strategies.



- **Spatial representations of stakeholders' visions** for PAs and surrounding landscapes could be equally as informative and important in supporting management decision-making as visions themselves.

Such information could both shed light on where potential conflicts could occur and how to navigate them.



- **Participatory methods** have the potential to be a useful set of tools to both understand the diversity of visions stakeholders have for the area, as well as to engage with stakeholders.

These methods have the capacity to include a diverse set of actors, including local residents. Different components (such as mapping exercises) could be integrated in these methods in order to better understand different dimensions of human-nature relationships and how they manifest in this specific landscape.



- **Stakeholders generally have a high degree of awareness** of potential competing interests in the landscape, which could be beneficial for the use of participatory methods or other engagement processes.

It also means that this knowledge could be further built upon when new management strategies are introduced, resulting in a more balanced outcome.



References

1. IPBES (2019) 'Global Assessment Report on Biodiversity and Ecosystem Services'. [online] Available from: <https://ipbes.net/global-assessment> (Accessed 23 October 2020)
2. (CBD), Convention on Biological Diversity (2020) 'Update Of The Zero Draft Of The Post-2020 Global Biodiversity Framework.' [online] Available from: <https://www.cbd.int/doc/c/3064/749a/0f65ac7f9def86707f4eaeafa/post2020-prep-02-01-en.pdf>
3. Blondet, Marieke, de Koning, Jessica, Borrass, Lars, Ferranti, Francesca, et al. (2017) 'Participation in the implementation of Natura 2000: A comparative study of six EU member states'. Land Use Policy, 66(April), pp. 346–355. [online] Available from: <http://dx.doi.org/10.1016/j.landusepol.2017.04.004>
4. Palomo, Ignacio, Montes, Carlos, Martín-López, Berta, González, José A., et al. (2014) 'Incorporating the social-ecological approach in protected areas in the anthropocene'. BioScience, 64(3), pp. 181–191.
5. Mace, Georgina M. (2014) 'Whose conservation?' Science, 345(6204), pp. 1558–1560.
6. Tengö, Maria, Hill, Rosemary, Malmer, Pernilla, Raymond, Christopher M., et al. (2017) 'Weaving knowledge systems in IPBES, CBD and beyond—lessons learned for sustainability'. Current Opinion in Environmental Sustainability, 26–27, pp. 17–25.
7. Díaz, Sandra, Pascual, Unai, Stenseke, Marie, Martín-López, Berta, et al. (2018) 'Assessing nature's contributions to people'. Science, 359(6373), pp. 270–272.
8. Pascual, Unai, Balvanera, Patricia, Díaz, Sandra, Pataki, György, et al. (2017) 'Valuing nature's contributions to people: the IPBES approach'. Current Opinion in Environmental Sustainability, 26–27, pp. 7–16.
9. IPBES (2016) The methodological assessment report on scenarios and models of biodiversity and ecosystem services., [online] Available from: https://ipbes.net/sites/default/files/downloads/pdf/2016.methodological_assessment_report_scenarios_models.pdf
10. ENVISION (2019) 'Fact sheet: What is inclusive conservation and why is it important to biodiversity conservation and protected area management?' [online] Available from: https://inclusive-conservation.org/wp-content/uploads/2019/11/ENVISION_factsheet-for-policy-makers.pdf
11. ENVISION (2019) 'Fact Sheet: ENVISION's approach to inclusive conservation: A scientific overview and project update'. [online] Available from: https://inclusive-conservation.org/wp-content/uploads/2019/11/ENVISION_factsheet-for-knowledge-alliances.pdf
12. A. Filyushkina, P. H. Verburg (2020) ENVISION project. Deliverable D2.1: Visions for each protected area. Available at, [online] Available from: <https://zenodo.org/record/3674738#.X3HQxS8RqNY>
13. Diversity, Secretariat of the Convention on Biological (2020) Global Biodiversity Outlook 5, Montréal. [online] Available from: <https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf>
14. Almond, R.E.A., Grooten M. and Petersen, T. (Eds). (2020) WWF 2020 Living Planet Report 2020 - Bending the curve of biodiversity loss., [online] Available from: <https://f.hubspotusercontent20.net/hubfs/4783129/LPR/PDFs/ENGLISH-FULL.pdf>
15. Commission, European (n.d.) 'EU Biodiversity Strategy for 2030 – Bringing nature back into our lives'. [online] Available from: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380>





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