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## EDITED AND REVIEWED BY

Edson Gandiwa,  
Zimbabwe Parks and Wildlife Management  
Authority, Zimbabwe

## \*CORRESPONDENCE

Claudia Capitani

✉ claudia.capitani@ec.europa.eu

Rebecca W. Kariuki

✉ rebecca.kariuki@asu.edu

Francesca Marucco

✉ francesca.marucco@unito.it

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# Editorial: Impacts of people's engagement in nature conservation

Claudia Capitani <sup>1\*</sup>, Rebecca W. Kariuki <sup>2\*</sup>  
and Francesca Marucco <sup>3\*</sup>

<sup>1</sup>Joint Research Centre, European Commission, Varese, Italy, <sup>2</sup>School of Sustainability, College of Global Futures, Arizona State University, Tempe, AZ, United States, <sup>3</sup>Department of Life Sciences and Systems Biology, University of Torino, Torino, Italy

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## Editorial on the Research Topic

### Impacts of people's engagement in nature conservation

People's participation and support have increasingly emerged as essential ingredients for natural resources conservation at global level (CBD, 2022). The concept of participation has evolved over time towards wider concepts encompassing collaborative design, planning and production (Norström et al., 2020), collaborative management and governance (Voorberg and van der Veer, 2020), active campaigning and citizen-science (Fraisl et al., 2022). However, participation itself does not guarantee success in preventing biodiversity loss and habitat fragmentation nor in balancing nature conservation with human well-being (Rahman, 2022).

The articles collected in this Research Topic span across people's engagement in conservation by various perspectives: the integration of local and traditional knowledge into planning (Kariuki et al., Salvatori et al.), the effectiveness and affordability of interventions (Badola et al.), the resolution of conflicts (Floden and Remerson, Salvatori et al.), the equitable distribution of benefits (Manda et al.), long-term sustainability, community empowerment and participation in decision-making processes (Floden and Remerson, Kariuki et al., Manda et al.), public opinion (Badola et al.), and political support (Salvatori et al.). The review by Santini and Miquelajauregui encompasses all these dimensions in relation to nature restoration, while Bennet et al. propose a framework for improving synergies between social and natural sciences.

Santini and Miquelajauregui discuss how habitat restoration can be better managed and monitored by engaging indigenous and local communities. The paper argues that knowledge from Indigenous and local communities is related to cultural and social ties with the land and thousands of years of observing and managing land making it suitable for informing efforts to restore and manage habitats. Where challenges in integrating Indigenous and local knowledge with restoration initiatives are experienced, the paper highlights the need for scientists and decision makers to align restoration objectives and outcomes with community benefits associated with preserving the environment.

Improving effectiveness and enhancing impacts of people's engagement in nature conservation requires an integration of natural and social sciences. Bennet et al. suggests specific topics and linked questions for an in-depth and nuanced investigation of the

human dimension to inform the planning and learning phases of conservation decision-making and adaptive management, particularly when targeting working land- or sea-scape. Along with an understanding of human-environment interactions in both the past and present, this can ensure that conservation actions better fit the social context.

Temporal dimension and place-based knowledge are key elements of the participatory scenarios planning applied by (Kariuki et al.). This study proposes the integration of local and traditional knowledge with scientific evidence to model alternative sustainability scenarios. This approach highlights the usefulness of multi-stakeholder engagement, perspective sharing, and consensus building toward shared socio-ecological goals, and for enhancing horizontal learning, ownership and legitimacy. However, it exposes trade-offs between adopting granular approaches and ensuring large participation and consensus to influence decision-making at large scale.

The effectiveness of collaborative management (co-management) of natural resources between state-run protected areas and local resources users is not well established. Using community perceptions and ecological data, Manda et al. assessed how co-management of a protected area in Malawi contributed to conservation and development outcomes. The paper shows that co-management led to the recovery of wildlife numbers and improved the relationship between protected area officers and communities. Despite this, challenges in sharing wildlife revenues and curbing wildlife crimes such as poaching remained. The paper concludes that effective co-management should integrate resource monitoring and transparency in revenue sharing.

Badola et al. provide an example of incentive-based people's engagement for mitigating impacts by fishing 'ghost gears' (GG) in Ganga River ecosystem. The study highlights how fishermen's know-how on traditional gears, which are suitable for biologically sensitive habitats, may be superseded by the preference for modern plastic gears, unsustainable for the environment but cost effective and more efficient. Prohibition by policy and law cannot transform behaviors. Alternatively, this study proposes a comprehensive process encompassing from building a circular economy system to promoting and supporting traditional fishing gears.

People's engagement is considered a key dimension of human-wildlife coexistence. Salvatori et al. present a stepwise process engaging a variety of stakeholders' in collaborative adaptive planning to reduce wolf depredation on livestock. This study highlights the importance of translating integrated local and

scientific knowledge into effective practices. It emphasizes that funding and administrative authorities should allow for greater flexibility in implementation of adaptive participatory processes. Further, the authors discuss how place-based approaches could tend to generate context-specific impacts and may fail to address societal ethics or socio-economic mechanisms more broadly.

Indigenous people and local communities' participation in management planning and decision-making processes has been often overlooked. discuss the complexity of nature conservation policies on Indigenous peoples' traditional lands, taking the example of the traditional lands of the Saemie people in Sweden. Saemie influence in the governance and management of these areas has been limited and the authors examined how collaborative nature conservation processes work to enable or restrain the influence of Indigenous peoples in protected area governance.

In conclusion, people's engagement in nature conservation is increasingly becoming part of the process, as documented in this Research Topic, however, measures of the impacts of such an approach on conservation successes needs to be further developed, and worldwide common strategies in impact assessments might help compare effectiveness of approaches.

## Author contributions

CC: Writing – original draft, Writing – review & editing. RK: Writing – original draft, Writing – review & editing. FM: Writing – original draft, Writing – review & editing.

## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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## References

- CBD. (2022). *Kunming-Montreal Global Biodiversity Framework UN doc CBD/COP/DEC/15/4* (Montreal, Canada: United Nations).
- Fraisl, D., Hager, G., Bedessem, B., Gold, M., Hsing, P.-Y., Danielsen, F., et al. (2022). Citizen science in environmental and ecological sciences. *Nat. Rev. Methods Primers* 2, 64. doi: 10.1038/s43586-022-00144-4
- Norström, A. V., Cvitanovic, C., Löf, M. F., West, S., Wyborn, C., Balvanera, P., et al. (2020). Principles for knowledge co-production in sustainability research. *Nat. Sustain.* 3, 182–190. doi: 10.1038/s41893-019-0448-2
- Rahman, M. M. (2022). Is co-management a double-edged sword in the protected areas of Sundarbans mangrove? *Biol. Philos.* 37, 4. doi: 10.1007/s10539-022-09836-3
- Voorberg, W., and van der Veer, R. (2020). Co-management as a successful strategy for marine conservation. *J. Mar. Sci. Eng.* 8, 491. doi: 10.3390/jmse8070491