

Extended Abstract

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Paper/Poster Title	Uncovering the biodiversity value landscapes of the Swiss population
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Abstract prepared for presentation at the 98th Annual Conference of The Agricultural Economics Society will be held at The University of Edinburgh, UK, 18th - 20th March 2024.

Abstract	<i>200 words max</i>
<p>Understanding the plural values of biodiversity can help to disentangle the complex relationships that humans establish with nature, and the role they place in shaping environmental management decisions. The study builds on the Value Landscapes Approach (Schulz et al., 2018) and the IPBES (Balvanera et al., 2022) values assessment framework to understand people's values regarding biodiversity and their preferences in relation to what constitutes good biodiversity governance. We implemented a nationwide survey with 1667 respondents. Results suggest that biodiversity values go beyond the specific economic, cultural, and environmental values and encompass broader governance principles such as economic efficiency and intergenerational justice. Findings on how the general population perceive the role of biodiversity protection suggest two clear contrasting perspectives connecting to how people understand the role and position of humans versus nature. Within this debate, the role of agriculture as an economic activity and provider of economic goods, while also cause of biodiversity degradation and a pathway for protection requires a deeper understanding from a values perspective.</p>	
Keywords	Biodiversity values, biodiversity governance
JEL Code	Renewable Resources and Conservation Q2 see: www.aeaweb.org/jel/guide/jel.php?class=Q)
Introduction	<i>100 – 250 words</i>
<p>Understanding the plural values of biodiversity can help to disentangle the complex relationships that humans establish with nature and the role they place in shaping environmental management decisions. If environmental decision making challenges existing societal values, this can lead to conflicts that might impede environmental policy implementation, or more generally, undermine their legitimacy. The 2022 IPBES values assessment (Balvanera et al., 2022) calls for a recognition and visibility of the plural values of nature beyond the traditional focus on monetary values only. This is particularly relevant in complex decision-making contexts, such as the case of biodiversity, where tensions may arise between conservation and other land uses, such as agriculture.</p> <p>This study builds on the IPBES values assessment framework and applies the Value Landscapes Approach (Schulz et al., 2018) to understand people's values regarding biodiversity and their preferences in relation to what constitutes good</p>	

biodiversity governance. The Value Landscapes Approach (VLA) brings together three types of values: fundamental values, governance-related values, and assigned values. Fundamental values encompass people’s personal and often abstract goals and principles guiding their decisions. Governance-related values relate to the desirable characteristics of the governance system as expressed by individuals or groups. Assigned values, or biodiversity values, are the instrumental and economic values that humans ascribe to biodiversity, such as in the form of different NCPs (e.g. food provision, aesthetics, pollination, etc.). This study applies the VLA to explore these values amongst Swiss population and their different perspectives on biodiversity protection.

Methodology	100 – 250 words
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The study implemented a nationwide survey with a sample of 1667 respondents across the Swiss population (age of 18-75 years). The sample is representative across the three language regions in Switzerland (German, French, and Italian). The survey included 7 sections: biodiversity values and views on the role of biodiversity management, governance-related values, fundamental values, attitudes to biodiversity conservation, conjoint analysis on policy attributes, policy beliefs, and sociodemographic information. We assessed fundamental values using a shortened 23-item Schwartz Value Scale (Schwartz, 1992). The items covered self-transcendence values (e.g., “Helpfulness - helping family and friends”), self-enhancement values (e.g., “Success - achieving one’s goals”), openness values (e.g., “Curiosity - being interested in everything”), and conservation values (“Social order - having a stable society”). The sample was divided into two sub-samples (a control and treatment group). The treatment group received information on the status of biodiversity in Switzerland and on the level of protected areas in comparison to other OECD countries. The treatment was introduced before the questions on attitudes to conservation and the policy attributes. For the purpose of this study, only questions focusing on values and not affected by the treatment were taken into account. The results were analysed using principal component analysis to understand the structure of biodiversity values. We used a varimax rotation, and the Kaiser’s criterion and the scree plot to determine the number of components for each type of value. Only items with loadings higher than 0.40 on any of the components were taken into account.

Results	100 – 250 words
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Results from the principal component analysis are organised into the different types of values: biodiversity values, governance-related values, and fundamental values. Factors with eigenvalues higher than 1 were interpreted. Results on biodiversity values show that there are two prevalent types (components) depending on to which extent they prioritise instrumental values related to the economy and other provisioning and regulating services (such as protection against pest and hazards) or cultural and relational values (such as traditions, and social and community connection). In terms of the perspectives on governance-related values, there are two main types. A first type characterised by an emphasis on effectiveness and favouring intergenerational justice, transparency and accountability, along with clarity and evidence-based. A second type that prioritises efficiency and simplicity in biodiversity governance. Results on fundamental values align with Schwartz’s model. Our results indicate that there are four types that can be organised along

two orthogonal motivational dimensions: self-transcendence versus self-enhancement and openness versus conservation. Self-transcendence values promote the welfare of others, while self-enhancement values promote the self. Openness values promote broadmindedness, whereas conservation values emphasise tradition and security. Finally, results regarding perspectives on the role of biodiversity protection fall under two distinct archetypes corresponding to contrasting perspectives on the role of humans with respect to nature and to which extent biodiversity protection should maximise benefits for humans, or minimise the negative impacts of human activity and bring people and nature into balance.

Discussion and Conclusion

**100 – 250
words**

This study draws on a nationwide survey with 1667 respondents focusing on understanding what biodiversity values are latent amongst the general population, as well as to what extent certain types of values, such as instrumental, intrinsic or relational, are more prevalent amongst Swiss population. Our results align with previous studies applying the Value Landscapes Approach to water resources (Schultz et al., 2018, 2017) suggesting that biodiversity values go beyond the specific economic, cultural, and environmental values and encompass broader governance principles such as economic efficiency and intergenerational justice. Findings on how the general population perceive the role of biodiversity conservation suggest two clear contrasting perspectives connecting to how people understand the role and position of humans versus nature. Decision-making about biodiversity conservation thus needs to consider this multiplicity of values and contrasting perspectives on what people expect from biodiversity, but also on how it should be managed and protected. Accounting for these differences, requires paying attention to the plurality of values and negotiations that may be required between different uses and users. Within this debate, the role of agriculture as an economic activity and provider of economic goods, while a cause of biodiversity degradation and a pathway for protection requires a deeper understanding from a values perspective. Overall, this study aimed to contribute to the increasing evidence on the value base of biodiversity, and how the different types of values that people hold may influence biodiversity conservation decisions.