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# Abstract Book

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# Programme

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# I. Generating committed action for biodiversity

## *I. 1. The role of non-material values in peatland protection – do they matter?*

Nathalie Soethe<sup>1</sup>, Florin Popa<sup>2</sup>, Juha Hiendapää<sup>3</sup>, Outi Ratamaki<sup>4</sup>, Almut Beringer<sup>1</sup>, Jose Luis Vivero Pol<sup>2</sup>, Tiina Soininen<sup>4</sup>, Paul Knights<sup>5</sup>, Pekka Jokinen<sup>4</sup>

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With more than 90 % degraded area, peatlands are among the most threatened ecosystems in Central Europe. The widespread discourse on the ecosystem services provided by peatlands, such as the regulation of the global climate, as illustrated by the inclusion of peatlands in the UNFCCC following the United Nations Climate Change Conference in 2007, and since 2013 the Kyoto protocol, has helped greatly to improve public awareness regarding the value of peatlands in the last two decades. Despite the success in communicating material services of peatlands, these have been restricted to their use value, and little is known about the role and significance of non-use values, considered in the category of cultural services, in motivating individuals and groups to act for peatlands. Through qualitative interviews with actors involved in peatland protection in four EU countries, this study aims to improve knowledge on the relevance of cultural values and other non-use values of peatlands in motivating different actors to engage in their protection. Our study shows that non-material values of peatlands are important motivational drivers for those actors who experienced direct contact with peatland landscapes, whereas actors who had no direct contact hardly referred to any non-material values of peatlands. Although the importance of material and cultural services of peatlands for the engagement in peatland protection is in line with the idea of the ecosystem services approach as a powerful communication tool for protecting nature and natural resources, the idea of “ecosystem services” does not capture the full range of human-nature relations. Our study showcases how it in fact ignores important reasons why people valued peatlands and engaged in their protection in the areas studied. Communicating material services, including non-use values, and the economic benefits of peatland protection can thus be a first helpful step to “bring people back to peatlands” and to initiate a new connectedness towards these landscapes.

## *I. 2. Public support for wetland restoration: what is the link with ecosystem service values?*

Samantha S. K. Scholte<sup>1</sup>, Astrid J.A. van Teeffelen<sup>1</sup>, Peter H. Verburg<sup>1</sup> and Maya Todorova<sup>2</sup>

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The ecosystem service approach has predominantly been used to educate the public about the ecological and economic importance of an ecosystem, without explicitly including socio-cultural values. Going beyond the ecological and economic domain, and devoting attention to socio-cultural perspectives, this paper explores how attitudes towards wetland restoration may be understood by looking at the socio-cultural values of ecosystem services, exploring how such values can be explained by the awareness people have and how they benefit from them. Through 102 interviews with local users of recently-restored Bulgarian wetlands, this study investigates users’ awareness, attitudes, and values of fourteen ecosystem services, among which the provision of food and cultural

(recreation and values for biodiversity) were found most important, especially among those who economically depended the most on the ecosystem services provided by the wetland. Results indicate that different groups of people with different motivations require different incentives to support nature conservation. Our study suggests that environmental value orientations may be powerful predictors for such motivations, and that it is important to draw links between ecosystem services and not treat them as separate entities.

### ***1.3. Connection to nature in adulthood: investigating the psychology of nature conservation across the lifespan***

Almut Beringer, PhD, Full Professor and Dr. Nathalie Soethe

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‘Connectedness to nature’ has been identified as an important influence in motivating individuals toward nature conservation or sustainable lifestyles. Research to date has often focused on the importance of ‘connectedness to nature’ in childhood. Much less empirical attention has been given to what sustains adults’ motivations to act for nature, in general, and how the factor of ‘feeling’ or ‘being connected to nature’ first, expresses itself and second, fuels caring for nature in adulthood, specifically. This paper examines the notion of ‘connectedness to nature’ as it expresses itself in adulthood. It expands the research on ‘connectedness to nature’ beyond childhood and youth later into the life span. The paper draws on empirical (qualitative and quantitative) data from the EU BIOMOT project. It makes links to and aims to make a contribution to the body of knowledge in conservation psychology. Results suggest that connectedness to nature developed in childhood and youth is the psychological opening to act for nature in adulthood. For this opening, the opportunity to ‘roam’ in nature, plus mentoring adults, are critical. As such, the dynamics of connectedness to nature during the life span suggest interesting insights into the psychology of motivations and actions for biodiversity conservation and sustainable lifestyles.

### ***1.4. Committed actors for nature in Europe: a generalized life story***

Marino Bonaiuto<sup>1,2</sup>, Erica Molinaro<sup>1,2</sup>, Ferdinando Fornara<sup>1,3</sup>, Massimiliano Scopelliti<sup>1,4</sup>, Lavinia Cicero<sup>1,2</sup>, Mirilia Bonnes<sup>1</sup>

<sup>1</sup> CIRPA Interuniversity Research Centre for Environmental Psychology, Italy, <sup>2</sup> Sapienza Università di Roma,

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The aim of this study is to identify which are the motivational forces driving people in fully committed actions for nature and biodiversity protection, according to the general aim of BIOMOT EU 7th FP project. To reach this aim, about 215 semi-structured life-story interviews were conducted among the 7 BIOMOT partners (Belgium, Finland, Germany, Italy, Slovenia, The Netherlands, UK), investigating and integrating three main frameworks: Early Experiences, Quest for Significance, and Environmental Epiphanies. Three sources of influence were identified, namely social, environmental, and psychological, triggered by different planes. The study shows an important element in the development of the ontogenesis: the constant presence of both the social and environmental levels

in scaffolding the developing personal motivation. It shows that, while the process starts from the social and environmental forces creating the psychological ones, the process ends with a reciprocal effect as life passes, that is, the psychological forces (motivation) are able to help environmental and social ones by triggering the level of personal action.

## **II. Surveys of values and arguments in biodiversity communication and leadership**

### ***II. 1. Prudence, justice and the good life. An ethical analysis of biodiversity communication in Europa***

Uta Eser<sup>1, 2, 3</sup>

<sup>1</sup> Office for Environmental Ethics, Germany <sup>2</sup> Nuertingen-Geislingen University <sup>3</sup> Eberhard Karls Universität Tübingen

Communication, Education, and Participation (CEPA) are considered key to the implementation of the UN Convention on Biological Diversity (CBD). To improve biodiversity communication, the German Federal Agency for Nature Conservation (BfN) sought ethical advice on good arguments in favour of biodiversity found in the German national strategy on biological diversity, in which the arguments were subjected to critical analysis with regard to their scope, strengths and weaknesses (Eser et al 2011). In a follow-up study, this analysis was expanded to a comparative study of the four biodiversity strategies of Germany, Austria, Switzerland, and the EU with the aim to foster ethical debate in the European biodiversity discourse (Eser et al 2014). This paper presents assignment, approach, and major results of the studies.

### ***II. 2. Money talks: using economics to enable communication and mainstreaming nature's values into decision-making***

Heidi Wittmer, Bernd Hansjürgens, Christoph Schröter-Schlaack

Helmholtz-Centre for Environmental Research, Germany

Inspired by the release of the Stern Report on climate change and of the TEEB initiative, using economic arguments to strengthen the case for biodiversity conservation and sustainable use of ecosystem services has become a popular approach among policy-makers. The concept seems to have become the preferential approach of communicating the importance of natural capital at European level (e.g. see European Biodiversity Strategy), also reflected by sectorial and national level successors of the TEEB study, among which the German contribution "Natural Capital Germany – TEEB DE". In many instances, however, economics is reduced to monetary valuation of ecosystem services. Based on extensive literature review, we argue that economic analysis is also an effective tool to initiate communication processes within and among different groups in policy, society, and science about the importance of nature for human well-being.

### ***II. 3. A large scale survey on citizens images of nature in nine European countries***

Hans Farjon<sup>1</sup>, Arianne de Blaeij, Fransje Langers, Janneke Vader & Arjen Buijs<sup>2</sup>

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PBL Netherlands Environmental Assessment Agency was asked by the Nature and Biodiversity department of the Dutch Ministry of Economic Affairs to help them prepare a discussion about the future of EU nature policies at an informal ministers conference in April 2016. To this end PBL explores a range of views on nature in the EU in a Nature Outlook, resulting in a set of so-called perspectives on the state of nature in 2050, roles of actors, and possible actions that could help achieve biodiversity targets for 2020 and the strategic goal for 2050. Key factors to discriminate between the perspectives are the objectives for nature policies and its underlying nature-related motivations of citizens, businesses, and organisations. This survey aims to provide a good summary of the whole range of these nature-related motivations of citizens and the objectives that relate with these motivations. The survey will be complementary to several PBL stakeholder workshops that will be organised to summarize objectives and nature-related motives of institutions such as governments, businesses, and non-governmental organisations.

### ***II. 4. Social-psychological features of people highly motivated to act for biodiversity and nature: multivariate analyses on a 7 EU country sample.***

Ferdinando Fornara<sup>1,3</sup>, Marino Bonaiuto<sup>1,2</sup>, Massimiliano Scopelliti<sup>1,4</sup>, Erica Molinaro<sup>1,2</sup>, Lavinia Cicero<sup>1,2</sup>, Mirilia Bonnes<sup>1</sup>

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The aim of this study is to describe the main social-psychological characteristics of people who are highly motivated to act in favour of biodiversity and natural protection, conservation, improvement, according to the general aim of BIOMOT EU 7th FP project. This part of the project is devoted to describing the psychological profile of those highly-motivated people via an online-administered questionnaire. 30 persons in each country (a total of about 210) had been previously interviewed and were then administered the online questionnaire, which was also completed by some other subjects who were also involved in some biodiversity and nature relevant actions. Full valid questionnaires were received from 183 people. Results are discussed to highlight priorities in psychological features and processes favouring people motivation to act for biodiversity and nature.

## **III. Effective arguments for successful biodiversity initiatives**

### ***III. 1. Arguments on livestock traditional practices within conservation strategies***

Marina García-Llorente<sup>1,2,3</sup>, Lorena González<sup>3</sup>, Berta Martín-López<sup>3,4</sup>, David García del Amo<sup>3</sup>, Pam M. Berry<sup>1</sup>, Paula A. Harrison<sup>1</sup>

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In the Mediterranean basin, domesticated animal species and cultivated plants are an important component of biological and cultural diversity contributing to multiple ecosystem services such as food production, the maintenance of the gene pool, multiple cultural ecosystem services, and some regulating ecosystem services. However, classical biodiversity conservation arguments have been based on emblematic and wild species underrepresenting agrobiodiversity. In this study we used an example focused on the importance of livestock breeds in two Spanish protected areas (Sierra Nevada and Doñana Natural Protected Areas) to assess: (1) the relevance of traditional livestock practices and how domesticated biodiversity is included in conservation plans, (2) arguments related to livestock practices and their related ecosystem services following key stakeholders (livestock keepers, managers, and researchers). Through document analysis and Q interviews, we identified 34 arguments from more than 10 documents (including policy documents, sustainable development plans, sectoral plans, or media coverage as newspapers) that were developed during the period 1993-2013. We found that different trade-offs, but also points of agreement, could occur between conservationists' priorities and populations' perspectives. Both protected areas recognize the importance of including human-nature relationships, and the ecosystem service perspective is starting to be included in management plans, being livestock practices a good example. In this sense, arguments related with cultural (mainly in Doñana, such as local knowledge and practices) and economic (mainly in Sierra Nevada, such as its role in rural development) importance have increased during the last years.

### ***III. 2. Deciding what's priority: how stakeholders frame research questions for conserving biodiversity***

Bálint Balázs<sup>1,2</sup>, Barbara Mihók<sup>3</sup>, Eszter Kovács<sup>2,1</sup>, György Pataki<sup>1,4</sup>, Györgyi Bela<sup>1,2</sup>, András Báldi<sup>3</sup>

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Gap between conservation research and practice is a key factor behind the failure of halting biodiversity loss (Pullin et al. 2004; Arlettaz et al. 2010; Braunisch et al. 2012; Laurance et al. 2012). Approaches aiming to bridge this gap includes participatory research agenda settings conducted by concerned stakeholders in conservation (Sutherland et al. 2011). Deliberation provides an opportunity to reveal the underlying context of reasoning behind stakeholders' choices, i.e. to understand why that particular research question has been considered to be a priority and what dimensions proved to be the most important along which the arguments lined up in the ranking process. However, previous studies have not put specific emphasis on exploring arguments behind the ranking choices, although explicating these argumentations reveals actual requirement of stakeholders thus referring to the core of the demand-driven concept. In a research prioritization collecting the 50 most important research questions to conserve biodiversity in Hungary, we aimed to uncover the major discourses and perspectives that exist among different stakeholders in conservation practice and policy. As the main focus of this paper we present the arguments and the normative framework built upon them that shape positions of stakeholders. We argue that when these dimensions and perspectives are opened up in a structured debate, participants can reflect on them consciously, which provides a further step forward in the co-learning process towards bridging the gap between science, policy and practice.

### ***III. 3. Arguing in favor of biodiversity: a case study in Small Island of Braila Natural Park. Romania***

Nicoleta Geamănă, Georgia Cosor, Magda Bucur, Adina Stanciu, Angheluță Vădineanu

Research Center in Systems Ecology and Sustainability, University of Bucharest

Different policies and management plans developed and implemented over the years in the Romanian Lower Danube River Catchment (RoLDC) had a wide range of long term objectives including the development of waterway transport, flood control and power generation, irrigation, increased hydrological connectivity inside coastal delta, land reclamation for agriculture and nature conservation through conventional protection of particular endangered species/taxons at small scales (Vădineanu & all, 1998; Vădineanu & Cristofor, 2001; Vădineanu & all., 2003; Vădineanu & Preda, 2008). In our case study we investigate how different types of knowledge from multiple sources were included and with what efficiency in the process of development and implementation of strategies and plans for sustainable RoLDC management, by analyzing the arguments for conservation, restoration and sustainable use of biodiversity/natural capital and their efficiency for management in a protected area – The Small Island of Braila (SIBr) Natural Park. In this context we investigate, also, the catalytic role of academic sector and the implications of the connections between natural and social sciences for properly management in the area, over the last 25 years. The paper underlines the need for collaboration between natural and socio-economical sciences for an integrated framework for nature/biodiversity management. This fact was often highlighted in previous studies carried out by our team, arguing that the interdisciplinary research is crucial for an accurate and realistic approach of the natural capital, to ensure sustainable development in the area (Vădineanu, 2004; Geamănă & all, 2009; Geamănă & all, 2010; Geamănă & all, 2011).

### ***III. 4. Alternative discourses about economic valuation of biodiversity: an application of Q methodology***

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Economic methods are frequently used to express the value of biodiversity in monetary terms. However, the practice of monetary valuation is controversial and has been the centre of a wide-ranging debate. Discussion about this occurs not only among economists in universities, but also among experts in governmental institutions and NGOs. It has become a societal discussion about how we should make choices about biodiversity conservation. In an application of Q methodology, we systematically examine the various different discourses about monetary valuation. The results matter to policy-making. Deliberative justice and social legitimacy require that distinct voices in society should be heard in public debate and decision-making.