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Bridging the research-practice gap: Conservation research priorities in a Central and Eastern European country

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ABSTRACT

Halting biodiversity loss is a critical aim for the forthcoming decades, but is hindered by the gap between research and practice. Bridging this gap is a significant challenge in the countries of Central and Eastern Europe, where, compared to Western European countries, biodiversity is higher but the research budget is lower. Approaches to address bridging this gap include participatory research prioritizing exercises. These demand-driven collaborative ranking processes have proven to be a useful tool in providing a research agenda derived from a review of critical challenges based on stakeholder engagement. However, for research agendas to be effectively realized, they are best developed and implemented at the operative level of research financing and implementation. This paper shows the process and the outcome

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of an exercise conducted in Hungary aiming to compile the most important conservation research questions at the country-level and outlines a set of further measures and tools required for dissemination and advocacy for the research agenda. During the process 792 research questions were collated from conservation practitioners and natural resource managers based on interviews and via an online questionnaire; the final 50 most important questions were identified by practitioners and policy makers during an expert workshop. Questions are embedded in global and EU biodiversity targets and imply a pragmatic approach with the aim of identifying research that supports policy- and decision-making regarding habitat management, land-use and regional development, while also focussing on conflicting issues. The outcome of the process includes the potential for lobbying, therefore post-publication activities and dissemination strategies are outlined as an integrated part of the exercise.

1. Introduction

Although the knowledge generated by conservation science has increased exponentially over recent decades (Rands et al., 2010), biodiversity loss has still not been halted, despite the ever-growing amount of evidence regarding its importance (Balmford & Cowling 2006; Butchart et al., 2010; Cardinale et al., 2012). One of the main reasons for this failure is the gap between conservation research and practice, as identified by an escalating number of papers in recent years (Arlettaz et al., 2010; Braunisch, Home, Pellet, & Arlettaz, 2012; Laurance et al., 2012; Pullin, Knight, Stone, & Charman, 2004; Pullin, Knight, & Watkinson, 2009). The recent development of systematic reviews and synopses (e.g. Dicks et al., 2013; Pullin & Knight 2009; Sutherland, Pullin, Dolman & Knight, 2004, Williams et al., 2012) help bridge the gap between academics and practitioners by providing critically reviewed, reliable and easily accessible information for evidence-based conservation practice, management and policy (Habel et al., 2013; Knight et al., 2008). In addition to ensuring the availability of scientific knowledge to practitioners by facilitating information flow from the scientific community to the practitioners, there is also a need for a reverse information flow from the practitioners towards the academics to increase the relevance of research. This can be achieved by initiating a participatory research agenda setting involving practitioners and stakeholders with a degree of academic input (Sutherland, Fleishman, Mascia, Pretty, & Rudd, 2011). In these participatory exercises research needs of practitioners (i.e., gaps in their knowledge) are taken into account when identifying research priorities, thus the research agenda setting process becomes more responsive to actual knowledge demands (Sutherland et al., 2009). Participatory methods have gained increasing recognition in identification of research priorities in conservation science since the first such exercise, carried out in the UK by Sutherland et al. (2006). In the past decade a number of similar initiatives have been conducted globally (Parsons et al., 2014; Sutherland et al., 2009) and regionally in the United States (Fleishman et al., 2011), Canada (Rudd et al., 2011), the Alps (Walzer et al., 2013) and in Switzerland (Braunisch et al., 2012). In addition to these ranking exercises, thematic and sectoral research priorities have been identified in the fields of forest management (Petrokofsky et al., 2010), agriculture (Pretty et al., 2010), invasive species (Matzek, Covino, Funk, & Saunders, 2014) and paleo-ecology (Seddon et al., 2014).

As demand-driven research prioritizing can contribute to a more effective allocation of research funding to address real-life problems in conservation (Stroud, Rehm, Ladd, Olivas, & Feeley, 2014), it promises significant social and economic benefits at a range of scales and levels. In order to realize these benefits, research agendas (i) have to be developed at the operative level of research financing and implementation and (ii) have to be successfully channelled into research finance and strategic development. Thus, while thematic, regional and global research agenda setting exercises are invaluable in providing a comprehensive review of critical challenges, these large-scale research strategies have to be realized at an operative administrative scale, most probably at the country-level. However, although the popularity of this approach is growing, there have been few participatory identification of research priorities within individual countries. Furthermore, although effective dissemination of the results should be an integral part of these exercises (e.g., Braunisch et al., 2012), in many cases this is not described in the published studies leaving it unclear as to the extent to which dissemination occurs.

This method especially needs applying in Central and Eastern European countries where research and development expenditures are substantially below the EU average (Abbott & Schiermeier 2014). Moreover, within the post-soviet countries, Hungary is behind Slovenia, Estonia and the Czech Republic in terms of research and development expenditures in the proportion of GDP, and far behind other CEE countries in the employment in research and development (as the proportion of the whole population) as presented by Płoszaj & Olechnicka (2015). Furthermore, the state support for nature conservation is increasingly constrained (Kovács, Bela, & Kiss, 2014). The gap between research and practice in conservation in Hungary has been identified in a few studies in recent decades (Margóczi, Báldi, Dévai, & Horváth, 1997; Mihók & Standovár 2001). Research collaboration between academics and practitioners has been successfully established in different regions, and at various scales, and is further facilitated by the launch of the Hungarian Conservation Biology Conference series (see for example Báldi, Tóthmérész, Kovács, & Lerner, 2009). There is, however, a lack of a national-scale assessment of the research needs in Hungary, based on a wide involvement of conservation practitioners, decision-makers and managers. Improved management of biodiversity in Hungary would be desirable, as biodiversity is still relatively diverse and relatively unaffected by the agricultural intensification that has dominated many western European countries. Thus less management efforts are required to attain high benefits for nature—similar to other countries in the region (Kleijn et al., 2009).

With the aim of addressing the above challenges, and to present a case study from the CEE region, this paper reports on a participatory research prioritizing exercise conducted in Hungary focusing on the gaps of knowledge in conservation. The project had the objective of compiling the 50 most important research questions for the next five years necessary to conserve biodiversity at a country scale. In addition to the research agenda compilation, we also present a dissemination and advocacy strategy and outline a set of further measures and tools required for realizing the research agenda.