

Societal research perspectives on protected areas in Europe

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Abstract

Managed large protected areas today are faced with tasks that go beyond conservation and landscape protection, especially societal demands for regional development and an active role in shaping the future. This means that protected areas research needs to focus more on the involvement of protected areas in shaping the future of their regions. Analysing the results of a European expert workshop, the authors have identified six priority areas for research: first, the material and immaterial benefits of protected areas; second, tourism and recreation; third, innovations in regional economy geared towards conservation and landscape protection goals; fourth, images and regional identities; fifth, handling regional and global change, and sixth, participation and governance. What this means for protected areas research is a strong orientation on interdisciplinarity, more comparative analyses and greater involvement in transdisciplinary networks at the interface of research and practice.

Introduction

Today in Europe, and as a result of a process going back decades, managed large protected areas, such as national parks, biosphere reserves and nature parks (referred to as PAs below) are instruments of regional development (Mose 2007). This process manifested itself first in France, in the late 1960s, when the first integrative regional nature parks were set up within the framework of promoting rural regions. Depending on conservation category, the initial focus of PAs was on ecosystem protection, research and education as well as on recreation for locals and on tourism. Not until much later was the objective of sustainable regional development explicitly added, nationally to the various PA missions and internationally, for instance, in the Seville Strategy of 1995 for biosphere reserves. This may include maintaining traditional forms of land use, supporting regional quality products, eco-tourism or the regional economy in general.

The complex range of tasks for PAs can be read off the fact that conservationist actors demand the fulfilment of protection goals, local and regional actors expect first and foremost positive effects on the regional economy and tourism managers see PAs primarily as an advertising and image medium for their region. In addition, society as a whole demands that PAs grow out of their already progressive role as *learning regions* and become *teaching regions*, i.e. take on a higher function as model landscapes or model regions of sustainable regional development, open up options for the future of their regions and, lately, even contribute to controlling regional and global change.

This comprehensive range of tasks and demands raises a wealth of issues on the self-image, expectations and challenges of the local actors as much as those of researchers (Vilsmaier 2010). On some of these issues we already possess research findings and insights. What is lacking to date is an overview of those thematic areas and issues that, in the view of PA managers and researchers, should be tackled as a pri-



Researchers, PA managers and representatives of PA networks met in St-Pierre de Chartreuse, France, from 13–15 October 2011, for an international workshop. © ALPARC

ority. A European group of experts recently assessed these topics. Researchers, PA managers and representatives of PA networks met in St-Pierre de Chartreuse, France, from 13–15 October 2011, for an international workshop. In the course of this workshop, they discussed and reflected on the current state of research, identified research gaps and hitherto neglected issues and deduced research areas and issues that should take priority in future work. This paper aims to argue for and explain the prioritized research areas and issues with regard to their significance for PAs.

Six priority research areas

Below we discuss these research areas, clustered around themes. We avoided arranging them around any specific criterion so as not to force key themes into a particular scheme.

Research area 1 – Material and immaterial services provided by PAs

In this area, research has hitherto concentrated on monetary, especially tourist, impacts of PAs and tended to disregard immaterial services. The benefits of PAs, but also of public goods in general, can be subdivided into ecosystem services and cultural services. Since the discourse has its roots in national parks

research (Slocombe & Dearden 2002), ecosystem services are the dominant issue. So far, a holistic approach that gives equal weight to cultural services has been lacking (Schaich et al. 2010). K pfer & Scheurer (1997), Hunziker (2007) and Pruckner (2007), among others, have looked at the value that society puts on PA landscapes and nature in general.

Empirical analyses of PA services have so far been primarily carried out to calculate or gauge the added value and job creation effects in tourism and on the labour market as a whole (CDC Consultants 1996; Job 2008; Heintel & Weixlbaumer 2009; Ketterer & Siegrist 2009). An other deficit stems from the fact that the data captured mostly come from the expenditure side. Future research and management activities need to focus more on the value components in their entirety.

Despite current deficits in the data sets, which are mainly based on ecosystem services or utility values of PAs, various common strategies exist to appreciate PA benefits. These range from awarding labels to landscapes to direct monetary compensation for individual landscape services – e.g. through contract conservation. The legal framework at EU and national level as well as PA administrations and regional governance arrangements greatly influence the implementation of these strategies.

This framework perspective raises the fundamental question of how to assess PA benefits in their regional and transregional impact: who assesses what and to what end? This is directed at the various actors around the PAs: state organizations, representatives of economic sectors (esp. agriculture, tourism, energy) and civil society groupings – and most of all the people involved *in situ*.

Attempts have been made, particularly in biosphere reserves, to arrive at a more effective analysis of PA management. In general, the focus should be more on the intended benefits of PAs. This includes the issue of how the local population and the political decision makers see their PAs and/or the PA management (Newing 2011; Stoll-Kleemann et al. 2011). Against the background of scarcer resources, social assessment will be a relevant area of research and action in the future (IUCN-TILCEPA 2010).

Research area 2 – Tourism and recreation

There is a wealth of study results for this classic research area, especially on the ecologic impacts of tourist use and on visitor management and its factors of success. Recently, this research area has opened up new themes, such as the significance of PAs and intact landscapes on human health and wellbeing, or environmental education. The topic of visitor management, with sub-themes visitor monitoring, visitor control and visitor information is gaining in significance.

Another important topic is *PA tourism as a sector in itself*. Here, there are unresolved research questions about the economic added value that PAs generate

(see research area 1). Other interesting aspects would be current and future demand for PAs, opportunities for sustainably optimizing valorization and the issue of financing PA tourism (K pfer & Elsasser 2000; Friedl et al. 2005; Ketterer & Siegrist 2009; Mayer & Woltering 2008; SECO 2002; Wenzel & Kirig 2006).

In terms of *ecologic and social impacts* of tourism and recreation in PAs, the focus is on the manifold variations of outdoor recreation in natural areas (traditional and new opportunities) and their effects on fauna and flora. Key research questions yet to be addressed concern the non-monetary benefit of PAs for tourism and recreation, e.g. for human health and wellbeing. How can such benefits be identified, quantified and marketed, also for the local population? (Arnberger et al. 2005; Cessfort & Muhar 2010; Hunziker et al. 2006; Ingold 2004; M ller 2007; Muhar et al. 2005; Haider 2006; Abraham et al. 2007; Condrau et al. 2012).

Strategic and practical issues of tourism and recreation trends as well as the interfaces and interaction between touristic and other fields of action (e.g. transport, agriculture, forestry) come under the heading *destination management*. It also covers the effects of climate change on PAs and on tourism and the significance of PA concepts for tourism. A key research question here concerns the integration of tourism and PA management (McCool 2006; Hammer & Siegrist 2008; Siegrist & StremLOW 2009).

Controlling tourist and recreational activities within PAs can be linked with the theme of environmental education. Key issues are the capacity and limits of the use of PAs for tourism and recreation, as well as options for environmental and sustainability education and heritage interpretation (Eagles 2009; Siegrist et al. 2008; Newsome et al. 2009; Manning 2011).

Research area 3 – Innovations in regional economy in accordance with conservation and landscape protection objectives

This research area covers one of the key challenges for PAs. In the course of a conceptual paradigm shift, the debate has moved from segregative to integrative area protection. This means that all actors within a given area can and should contribute to the conservation objectives (Mose & Weixlbaumer 2007; Hammer et al. 2007).

Within regional economy, research has so far concentrated on the economic and socio-economic role of tourism. From an integrative perspective in the sense of a holistic approach to the interaction between regional economy and protection and development objectives, it must be stressed that the regional economy is much more important for attaining the PAs' objectives than research has hitherto acknowledged. This is so because it is precisely the economic motives and actions that shape the use of natural resources in PAs and with it the state of those resources, the biological diversity of habitats and the overall landscape (Wallner 2005; Weixlbaumer 2010). To a relatively large part, PAs are usually (except for the core zones) made up

of near-natural landscape elements such as pastures, meadows, fens and commercial forests, which depend on utilization and maintenance in accordance with the conservation aims and a matching regional economy.

In addition to agriculture and forestry, fish farming, crafts and trades, the building sector, industries, retail, the transport industry and tourism all contribute to shaping the state of the natural resources, the biodiversity of habitats and the entire landscape. They can help attain the PAs' objectives directly or indirectly, for instance by generating income and thus maintaining settlements, landscapes and land use, by producing goods and services in a more ecological way and by reducing negative impacts on the environment and on the landscape (Haukeland 2010). It can be assumed that most economic actors have to contribute to the PAs' objectives in their own sphere of action if PAs are to become model regions of sustainable regional development (Hammer & Siegrist 2008; Job 2008).

A key research question should therefore be how and what regional economic actors can contribute with their innovations to the PAs' objectives. Three themes come to the fore here (Wüstenhagen et al. 2008). Which regional economic sectors and value-adding chains may contribute significantly to the PAs' objectives? How best to encourage and promote those goods and services that are produced in the PAs and conform to the PAs' objectives? What are the opportunities and limits for supporting sustainable entrepreneurship in PAs?

Research area 4 – Images and regional identities

Recently it has been recognized that the acceptance of a PA by the population is vital. Against this background, research into images and regional identities of PAs has gained ground.

Depending on the point of view and the specific way in which someone is affected by a PA, a variety of images emerge. Research into perception, acceptance and impact on the regional economy started from these different views, which are characterized by an ambivalence of self-image and public image. Soon numerous studies developed, building on theories of the behavioural approach, cognitive psychology, theories of action and behavioural economic approaches. They range from acceptance studies to analyses of the impact of PAs on the regional economy (Rentsch 1988; Weixlbaumer 1994, 1998; Stoll 1999; Beckmann 2003; Wallner 2005; Job 2008; Ketterer & Siegrist 2009; Voth 2009). In this context, issues of measuring the impacts of PAs at the cognitive-perceptive and monetary levels represent a special challenge.

For the research area *image and regional identities*, the methodology is derived from sense-of-place and mental-map studies of the 1970s (Kaplan 1973; Tuan 1975; Downs & Stea 1977) and researchers use interpretative approaches and measuring techniques, mainly from qualitative social research. There have since been further developments in measuring images and



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regional identity (Weichhart et al. 2006). In the course of these developments, former methodological approaches have been criticized. Aschauer (2000) sees a key problem in the fact that the theoretical basis of regional identity research has not been debated sufficiently and that therefore there is no fitting foundation for empirical research. Kühn & Koch (2011, p. 173) demand a semantic sharpening of the term *regional identity* as well as a theoretical debate that “*does not [formulate] an original theory of social-spatial / regional identity, but [specifies] this phenomenon from the perspective of sociological / social-geography theory.*”

Against this background, there is room for further theoretical and methodological refinement in PAs research. Many methodological questions remain unanswered, for instance, how to capture and analyse the connection between images and regional identities and socio-economic impacts of PAs. Despite great creativity, attempts in this respect have hitherto just amounted to good approaches on partial aspects and need to be developed further (Coy & Weixlbaumer 2009). Reasons for this incompleteness include theoretical-methodological aspects as well as the impossibility of fully capturing the subjectivity of the opinions, regional peculiarities and difficulties in quantifying the often subjective records.

Research area 5 – Handling regional and global change

This research area starts from the recognition that PAs are not immune to global changes, such as climate change or demographic change, and must search for appropriate adaptation strategies.

Regional dynamics triggered by global change greatly challenge PAs, oriented as they are on constant, longer-term objectives. Nowhere is this more true than with climate change, which can damage conservation aims such as species protection or key ecosystem services. It raises the question, among others, what adaptation measures are needed to attain the conservation aims and to safeguard the ecosystem and cultural services (Gambino 2002; Haukeland 2010). Region-specific climate scenarios are needed to plan adaptation strategies, model ecosystems and habitats

and ensure connectivity under conditions of climate change (Alparc 2007; Dittmar et al. 2011).

A key topic in connection with global change is the adaptive capacity of regional systems (in terms of handling global change) and especially the question in how far PAs increase or lower the adaptive capacity of a region. An important precondition for dealing with this issue is understanding the interaction between socio-economic developments (population structure, in- and out-migration, economic structure, valorization), land use and conservation/landscape protection (Landesumweltamt Brandenburg 2004). Two questions are particularly interesting in terms of adaptive capacity: what is the required minimum human capital for ensuring adequate adaptive and innovative capacity and what can PAs (as employers or engines of innovation) contribute? And to what extent do existing political structures enable or impair adaptation processes that involve the population and the PAs?

Dealing with regional and global change requires longer-term measures and instruments (monitoring; PA management; adaptive management; regional change management). From a scientific perspective, the task of developing reliable and efficient early-warning and monitoring methods has been handled inadequately for quite some time. In recent years, much has been achieved in developing management concepts for PAs or regions, but there is still a great need for research to develop technical instruments that work well in practice.

Research area 6 – Participation and governance

In this research area, there is a broad consensus on the need for systematic involvement of the affected people in planning and management of PAs, with many experts pleading for the earliest possible involvement. As PAs are increasingly understood as instruments of regional development, there is a growing demand for developing planning approaches based on the systematic participation of the affected actors and which avoid the mistakes of hierarchical top-down planning. This opens up a large area of primarily applied research, which distinguishes between the involvement of stakeholders (i.e. actors with an immediate interest in the PA) and that of the general public. As various case studies show, participative planning is particularly useful for addressing the different ways in which the actors are affected by planning, for ensuring acceptance and for leveraging added value from the actors' knowledge (Stoll-Kleemann & Welp 2008). In terms of both research and planning, it is most important to identify appropriate forms of involvement and relevant actors, to capture their expectations and claims and to motivate them to participate in concrete project initiatives in the PAs (Reutz-Hornsteiner 2002; Clark & Clarke 2011).

Action research (Castellanet & Jordan 2002), social network analysis (Harteisen et al. 2010) and geographic perception research (Coy & Weixlbaumer 2009)

provide us with suitable methods for PA research. It is striking how a growing number of studies are devoted to issues of actor involvement. These have so far been primarily conceived as studies of individual cases, without the necessary comparative component, which would be highly desirable from an European perspective (Mose 2009).

As a result of an increasing orientation on actors and participation, new forms of governance are emerging in numerous PAs (Borrini-Feyerabend 2003; Mehnen et al. 2009). State institutions, private industry and civil society actors are jointly taking on control functions in planning and management of PAs. Research on governance in PAs is in its early stages and quite theory-heavy, while empirical studies are rare. There is a pronounced interest in the dynamic PAs of IUCN Category V (e.g. biosphere reserves, nature parks). Their growing significance for rural regional development makes the emergence of governance structures more likely (Fürst et al. 2006; Brodda 2010; Secco et al. 2011). Still, there is much to be studied in terms of the actors involved in governance, their interests and strategies, as well as how governance functions and how it is legitimized within the respective political system (Fürst et al. 2006). In connection with the last item, research should cover the inter-institutional interaction between new forms of governance and democratically legitimized forms of political will formation, as well as the emergence of characteristic forms of multi-level governance across local, regional, national and European levels (Thompson 2005; Keulratz & Leistra 2008).

As the governance debate is carried on from both analytical and normative perspectives, there is a growing interest in best practices. Against the current paradigm shift in PA policy, this affects especially the discussion about successful methods of participation-oriented PA management that would take account of the changed needs. There is a wealth of practicable instruments available (e.g. focus groups, future workshops, Open Space), but their application in PA development has hitherto been thematized only rudimentarily (Stoll-Kleemann & Welp 2008).

Consequences for research

The paradigm shift in area protection holds out challenges for PA development with far-reaching consequences for conceptualizing PA research. What is needed is an inter- and transdisciplinary approach to the six research areas, plus a broad social science perspective on how regional and global change is handled in PAs. This calls for comparative research, both within PAs of the same conservation category and of PAs from different categories. A comparison of regions should help to identify good and bad examples and yield results that may be utilized in practice.

Researchers need to cooperate more closely with PA managements, take up their issues and include the

stakeholders in the research process. In doing this, they pave the way for results, products and instruments derived from research to be used by the PAs (e.g. monitoring instruments, integrated impact assessment, concrete data).

What is striking about Europe is the low level of networking and the additive character of research. Inter- and transdisciplinary research networks could help to overcome this situation in combination with research programmes that actively involve practitioners from the PAs. In addition, it is necessary to raise the awareness of the relevance of PA research for PA development. This demands action from both researchers and PA management: PA management needs to open up the dialogue with researchers and researchers need to assess their research questions in terms of their relevance for the PAs.

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