

Collaboration between researchers and protected area managers - Empirical insights

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Abstract

We will present the results of a series of quantitative and qualitative studies recently conducted in France and at the alpine scale about the collaborations between researchers and protected area (PA) managers. We will analyse the characteristics and factors of these collaborations and tease out three collaborative models that coexist in PAs and entail specific difficulties and benefits.

Keywords

Collaboration, researchers, managers, protected areas, quantitative and qualitative surveys, France, Alps

Introduction

Collaborations between researchers and PA managers are increasingly encouraged by research and management institutions and have become commonplace (see PARKER et al., 2010). However, they have so far been little studied. This situation called for obtaining an overview of these collaborations, in order to characterize them, identify their main factors, and tease out distinct collaborative models.

Methods: three complementary surveys

Over the last three years, we carried out a series of quantitative and qualitative surveys in France and the Alpine space to explore and analyse the collaborations between researchers and protected area managers.

One of these surveys focused on scientific councils that have been established in several Alpine countries, notably France and to a less extent Switzerland, and are one specific way of gathering together scientists from several disciplinary and institutional backgrounds and managers (for a description of this survey, see ARPIN et al., 2016).

Another survey was carried out by the French Foundation for Research on Biodiversity and included two steps, the first one quantitative and the second one qualitative. The quantitative part was based on two national questionnaires which were sent by email to scientists working in PAs and to PA managers, in the spring of 2016. Its goal was to obtain an overview of the research carried out in PAs and of the collaborations involved from 2010 to 2015. We received usable responses from 116 managers and 185 researchers. Results were analysed through R. The qualitative part consisted of semi-directed interviews conducted in the spring of 2017 with 9 self-constituted pairs of managers and researchers who collaborate. These interviews aimed to collect empirical material about specific cases of collaboration rather than general opinions about collaboration. We first chose one member of the pairs among the respondents to the questionnaires and asked him/her to designate one researcher or manager with whom s/he collaborates. We chose the first member of the pairs so as to diversify the collaboration situations in terms of types of PAs, age of the collaboration, degree of satisfaction of the respondents. The interviews were conducted with the manager and with the researcher separately, so as to collect their respective viewpoints about their collaboration. The interviews were analysed using qualitative data analysis software (MaxQDA).

Finally, an empirical survey was conducted concerning a specific programme involving managers and researchers, the 'Alpages sentinelles' programme. This programme aims to document and improve the adaptation of alpine grazing systems to climate change. It was born in the Ecrins national park and has gradually been extended to other French alpine protected areas and will be soon extended in the Italian Alps. The survey consists of some twenty semi-directed interviews with participants in the programme, notably researchers from various disciplines and protected area managers.

Results

Overview of collaboration in protected areas

Collaboration appears first of all as a professional resource, most respondents expecting that it will enable them to do their own job better. For instance, a majority of researchers (notably from life sciences) indicate that their main reason to collaborate is that PAs are a privileged research field and that their main expectation is to obtain support for their research. They see the PA regulations and the poor quality of data collected by managers as major sources of difficulties.

Overall, collaborations are deemed to be rather or very satisfactory by a large majority of respondents. However, dissatisfied respondents are three times more numerous in the managers' group than in the researchers' group. Collaboration usually concerns some steps of research projects and not others. We suggest to position researches on a collaboration gradient rather than distinguish between collaborative and non-collaborative researches.

Factors of collaboration

Structural factors

The lack of financial and human resources, and the scientific rewards system based on peer-reviewed publication are considered to be key constraints by many respondents in both professional groups. There is a significant link between the effort invested in research and the research activity when this effort becomes important (> 30 person-days/year).

Institutional factors

Acknowledgment of the importance of research and collaboration in PAs by research and nature management institutions at all institutional levels is considered to be a major step for improving collaboration. Researchers observe a positive evolution toward a better recognition of the importance of collaborating with operational actors in general. Another institutional factor concerns the visibility of PAs for researchers, which varies a lot according to their status, location, age, and activity. Creating a scientific council can be a means of gaining more visibility but is never sufficient and requires a genuine involvement to be effective.

Individual factors

Trust is a main factor for collaboration (e.g. HARRIS & LYON, 2013), as collaboration entails risks for both partners. Trust requires time to be established and remains fragile. It is enhanced by the proximity of training and career paths, previous knowledge of partners, and by the formalization of collaborative arrangements, especially at the beginning and at turning points of the collaboration.

Collaborative models

Three collaborative models can be distinguished, based on the type of collaboration: 1) a science-centred model, where most steps of researches are led by researchers and collaboration is mainly oriented towards the production of scientific knowledge; 2) a management-centred model where most steps are led by managers and collaboration mainly aims to improve PAs management ; 3) a hybrid model, where most steps are jointly carried out and collaboration aims to produce scientific knowledge and to contribute to the PAs management. These models coexist in all types of PAs. Managers and researchers can be satisfied in all of them and none of them guarantees a high level of satisfaction, even if the hybrid model is generally considered ideal. Some difficulties of collaboration are common to all models, whereas others are specific to some.

Elements of discussion

Data suggest that differences in the degree of satisfaction between researchers and respondents might come from the fact that researchers draw more for their work from the collaboration than the managers. Moreover, the managers' comments show that they sometimes experience collaboration as unbalanced and feel subordinate to researchers, even though this subordination is attenuated by their mastery of the field and depends on individual variables, such as stage of career, age, gender, and reputation.

Despite the emphasis commonly put on the hybrid model, the science-centred and the management-centred models should not be overlooked as they appear to be very present and able to respond to specific needs and expectations.

Recommendations

Some recommendations are common to all collaborative models, e.g. :

- Pool research efforts and resources from several PAs, as a minimum effort is necessary to be effective and to enable inter-PAs partnerships;
- favour encounters between researchers and managers, through different and complementary means and with moments of conviviality to attenuate power effects: creation of scientific councils, provided conditions are met to make them effective (see Arpin et al., 2016), participation in federative structures such as LTSER sites and in joint research programmes, organization of mutual visits in labs and PAs, etc. Structures such as LTSER sites are particularly effective to achieve long term collaboration.
- Familiarize managers to the researchers' work and vice-versa, in initial training and through training sessions;
- Encourage researchers and managers to explicit the collaborative model of their joint research projects so as to anticipate potential difficulties;
- Recruitment of managers trained in human and social sciences in order to increase collaboration in this domain.

Other recommendations are particularly important for each collaborative model, e.g.:

- Science-centred model:
 - explicit the PAs regulations. The elaboration of an 'ethic charter of research in PAs' could be a way of avoiding tensions;
 - Improve the quality of data collection and analysis in PAs;
 - Systematic information provided by researchers to managers about the researches carried out in the PA.
- Management-centred and hybrid models:
 - Encourage/help researchers to publish their research in peer-reviewed journals;
 - Encourage institutions to acknowledge the researchers' commitment to PAs in professional careers.

Future steps

Results will be presented and discussed in Salzburg and Montpellier in November 2017. Reactions to these presentations and participants' suggestions will help refine the results and analysis.

References

ARPIN, ISABELLE, GAËLLE RONSIN, THOMAS SCHEURER, ASTRID WALLNER, FABIEN HOBLÉA, OLGA CHURAKOVA, DOMINIK CREMER-SCHULTE, AND VALERIE BRAUN. 2016. 'The scientific councils of Alpine protected areas: an overview and analysis of their contribution to linking science and management.' *eco.mont* 8.

HARRIS, FRANCES AND FERGUS LYON. 2013. 'Transdisciplinary environmental research: Building trust across professional cultures.' *Environmental Science & Policy* 31:109-119.

PARKER, JOHN, NIKI VERMEULEN, AND BART PENDERS. 2010. 'Collaboration in the new life sciences.' Ashgate.

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