



Need for a cross-sector approach in protected area management



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ARTICLE INFO

Keywords:

Consultation
Nature conservation
Protected area
Self-organizing map
Romania

ABSTRACT

The need for various stakeholders to harmonize their policies and practices has emerged as a dominant paradigm for 21st century natural resource management. Cross-sector coordination is promising because it can enhance policy consistency, enable the realization of synergies and resolve conflicts among sectors regarding resource management. The extent to which ministries and their main stakeholders make efforts to achieve integrated policies for nature conservation requires further research. Therefore, the aim of this study was to explore the consultation reports of ministries from relevant fields (i.e., environmental protection, agriculture, spatial planning, and security) regarding the management plans for Romania's protected areas. We analysed and visualized 152 consultation reports (2013–2016) covering 15% of Romania's protected areas using self-organizing maps (SOMs), an unsupervised machine-learning method. Our results showed that considerable attention was paid to formal issues in these reports. The cross-sector issues that emerged as the most important were those related to forest landowner consultation, and the harmonization of agricultural and forestry practices, as well as spatial plans for conservation. The resulting SOMs could be used as a tool to strengthen protected area management in the future because they can (i) guide managers of protected areas to develop plans that ensure that resources will be used in the best way according to the visions of multiple sectors and (ii) help the relevant ministries to improve future consultation reports.

1. Introduction

The changing views on nature and conservation (Mace, 2014) as well the complex and uncertain problems in resources management made the central governments to adhere to decentralized conservation decision making (Berkes, 2010). Continuous efforts are made at the EU level to move toward a participatory approach (i.e., through Public Participation Directive (2003/35/EC); Public Access to Information on the Environment Directive (2003/4/EC), Environmental Assessment Directives (2011/92/EU and 2001/42/EC); and Water Framework Directive (2000/60/EC)). According to these directives it is highly recommended that member states ensure stakeholders' consultation and encourage participation in order to enhance the legitimacy of decision making.

Public participation ranges from state actors' consultation toward more citizens involvement (Orenstein et al., 2008). While state actors may offer technical expertise on complex and urgent issues (Newig and Fritsch, 2009a), the non-state actors may provide valuable local

knowledge that can complement expert knowledge (Reed et al., 2007). In practice, public participation has proved effective in increasing the quality of plans and their legitimacy (Burby, 2003; Newig et al., 2016), achieving more inclusive conservation solutions (Whitehead et al., 2014) and driving positive changes in biodiversity conservation (Hill et al., 2015). However, resource management plans are often abstract, lack detail and present vague indications about the implementation of measures. This is especially the case if they are only developed to meet the European Commission requirements (Newig et al., 2016).

Protected areas are among the most effective institutional arrangements for safeguarding biodiversity (Possingham et al., 2007) and ensuring the well-being of a community (Thapa Karki, 2013). They have achieved significant prominence in many countries around the world (Joppa et al., 2016). The Natura 2000 network is the most extensive protected area system in European Union (EU), and covers approximately 18% of the EU territory (EC, 2016).

Government-controlled protected areas for which the responsibility lies with public authorities represent one of the most common forms of

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<http://dx.doi.org/10.1016/j.landusepol.2017.10.012>

Received 17 April 2017; Received in revised form 6 October 2017; Accepted 7 October 2017
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management (Borrini-Feyerabend and Hill, 2015). A key condition for a socially and ecologically acceptable management of protected areas is related to the capacity and willingness of the various stakeholders to collaborate for nature conservation (Avdibegović et al., 2015). This is a challenging task, especially because the economic sectors related to natural resource management (i.e., agriculture, forestry) and spatial planning either (i) have no experience in protected area management and 'conservation thinking' and/or (ii) exploit natural resources, which often conflicts with conservation. Indeed policies on key economic sectors are primarily concerned with optimization of production and sectoral policy mandates are often conflicting (Roux et al., 2008).

Cross-sector coordination is thus important. It can ensure that the same concepts and thinking are used in all sectors which enhances policy consistency (Stringer et al., 2014) and that synergies across different sectors can be realized (Roux et al., 2008). When issues (such as protected areas management) are of cross-sector importance, stakeholders from different sectors should engage in dialogue to formulate common goals as well as clarify and resolve disagreements through negotiation and consensus building (Innes and Booher, 2003). This can facilitate knowledge exchange which in turn can lead to innovative policy outputs. Even though mainstreaming of conservation in sectoral strategies is increasingly common (EC, 2012), it does so far not deliver the expected benefits of cross-sector coordination since conservation continues to receive little weight compared with other policy sectors (Spierenburg, 2012).

Management plans are key instruments by which managers of protected areas promote conservation activities. For ministerial acceptance of the management plans in Romania, consultation with various relevant stakeholders is mandatory (Fig. 1). These stakeholders are typically asked to review the content of the management plans and to propose modifications for various issues they consider relevant.

In Romania, as in most other countries, inter-ministerial consultation is common in both the policy development and implementation stages, helps to ensure a better understanding of the activities to be regulated (Mathernova, 2003), develops mutually agreed management measures across different sectors (Olsen et al., 2014) and prevents resource conflicts (Schilling-Vacaflor, 2014).

The resulting consultation reports are documents that consist of comments and observations regarding the substantive aspects of each stakeholder's policy (Matei and Dogaru, 2013). Specifically, in the consultation reports of protected area management plans, ministries, local public authorities or NGOs make requests (i.e., modifying conservation activities to best manage a protected area, recommending the consideration of additional threats that may affect a protected area, or harmonizing legislation). At the EU level, there is no obligation for stakeholders' involvement in the development of protected area management plans (Unnerstall, 2008) and no obligation for the managers of the protected areas to revise plans according to stakeholders' requests. In Romania, the Government Decision. no. 561/2009 (GD No 561,

2009) creates the opportunity for stakeholders to comment on draft management plans. The resulting requests are considered by the managers of the protected areas but without any obligation to address them in the plan. This procedure is common in other countries such as the Netherlands and Germany (Unnerstall, 2008). In fact, Newig et al. (2016) found in their analysis of Germany's implementation of the EU Water Framework Directive that the written feedback from participatory processes was often not included in the final plans (Koontz and Newig, 2014).

In Romania, the experts write the consultation reports with the goal of providing feedback in line with the policies governed by the institutions they represent to harmonize their policies with nature conservation policies. These experts are instructed to note the incompatibilities between the management plans and policy, to suggest solutions to strengthen biodiversity conservation using arguments specific to their interests, as well as to note contradictions with existing legislation.

Because Romania has a high proportion of protected areas which is growing every year (Ioja et al., 2010), solid knowledge about their management is a top priority. Romania is a particularly appropriate country in which to conduct this study for the following reasons. First, Romania is extremely rich in genuine cultural landscapes that support a high level of biodiversity (Sutcliffe et al., 2015). Some of these landscapes are veritable 'biocultural refugees' due to high biodiversity, local ecological knowledge and skills related to nature resource management (Barthel et al., 2013). Second, the socio-economic goals of the inhabitants of these landscapes are strongly oriented towards western ideals, while most ecosystem services and biological legacies are less of a priority (Hartel et al., 2014). This, together with the scarce government revenue increases conflicts related to resource management (Ioja et al., 2010). As is commonly the case across contexts, nature conservation is perceived as barrier to economic development (Newig and Fritsch, 2009b). However, when nature conservation supports economic well-being, it gains support from local communities (Newig and Fritsch, 2009b). Third, cross-sector cooperation is scarce in Romania (Nita et al., 2016) which may hamper the good governance of protected areas (Lockwood, 2010). Fourth, since its entry into the EU (2007) Romania has had the obligation to delineate Natura 2000 protected areas and to fund their conservation management (Ioja et al., 2010) which requires supporting research.

The aim of this study is to explore the content of the consultation reports in order to assess the extent to which they focus on cross-sector issues. We expect these consultation reports placed a substantial emphasis on cross-sector issues by either describing how each ministry's interests interfered with nature conservation or by addressing procedural issues of cross-sector harmonization as protected areas serve multiple goals and encompass multiple resources with overlapping management responsibilities (Apostolopoulou and Pantis, 2009). These multiple goals are often conflicting (Hersperger et al., 2015; Tudor

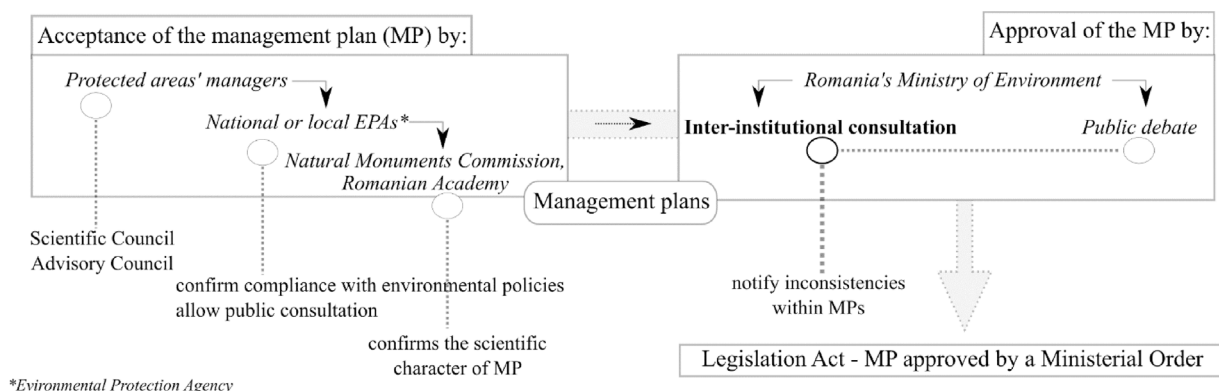


Fig. 1. Steps in the approval of a protected area management plan.

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