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Research article

## Building on common ground to address biodiversity conflicts and foster collaboration in environmental management

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## ABSTRACT

Conservation biology faces critical challenges that require collaborative approaches, including novel strategies to support interactions among actors in biodiversity conflicts. The goals of this study were to investigate the concept of common ground across multiple issues and to explore its practical application for the support of environmental management. We conceptually defined common ground as the areas of relevance underlying the suite of issues expressed by people regarding environmental management in a particular context. We then empirically tested this in the Calakmul region of Mexico, where the complex socio-historical context and high biodiversity have created environmental management challenges that are now being addressed by a local, multi-stakeholder management board. We conducted 26 open interviews with members of the board and a further round of quantitative prioritisation of issues raised. Using a coding process designed to reveal common ground, we categorized the issues at four levels ranging from coarse to fine (*themes, topics, sub-topics and perspectives*). We then analysed two levels, *topics* (n = 14 issues) and *sub-topics* (n = 51 issues). To do so, we built common ground matrices to identify and analyze common ground among actors and across issues. First, cluster and non-metric data analyses revealed the diversity of actor positions and the lack of consistent grouping among actors by occupational activity. This demonstrated that focusing on actors' differences might be misleading, and that actors' views were not closely aligned with their roles. Second, we located issues according to their levels of common ground and importance among actors. We showed that by not focusing on single issue conflicts, the identification of common ground across multiple issues can pinpoint synergies. We then proposed a framework for collaboration that prioritizes issues of high importance with greater common ground (e.g. sustainable resource use activities), to support the development of trust and norms of reciprocity among actors, strengthening the potential for future cooperation. By adopting this approach, environmental managers could support the initial stages of collaborative conservation strategies, engaging with other actors to seek common ground, avoid the creation of polarised groups and help effectively manage biodiversity conflicts.

## 1. Introduction

It is now accepted that ecological knowledge-gathering alone is insufficient to achieve biodiversity conservation (Ehrenfeld, 2000). Conservation practitioners have called for alignment of conservation with larger social concerns (Bennett et al., 2017; Forbes, 2011) and greater input by multiple actors to influence the pursuit of sustainable and equitable development (Giller et al., 2008). This trend is in line with arguments in favour of collaborative approaches in environmental management to build trust and accommodate multiple perspectives to more successfully manage biodiversity conflicts (Gutiérrez et al., 2016;

Redpath et al., 2013, 2015, 2017). Biodiversity conflicts are defined as conflicts between groups of actors with differing interests, where at least one group acts against the interests of another (Marshall et al., 2007).

Collaborative conservation strategies have received attention within studies on collaborative governance, adaptive co-management and knowledge co-production, among others (Berkes, 2009; Bouwen and Taillieu, 2004; Cash et al., 2006; Plummer, 2009). Collaboration is situated at the higher end of involvement on the participation spectrum (Davies and White, 2012) and culminates in a collective entity acting together and sharing the consequences of their actions (Bouwen and

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Taillieu, 2004). Collaborative approaches typically include: 1) phases comprising limited interaction between actors, joint working then action implementation (Plummer, 2009); 2) an iterative process, including monitoring for each phase and adaptation to new conditions (Fabricius and Currie, 2015; Plummer, 2009); and 3) an emphasis on the social process and context specificity surrounding the approaches (Armitage et al., 2009; Plummer and Hashimoto, 2011). Some studies have investigated the exogenous variables (e.g. ecosystems change or economic drivers) and endogenous variables (e.g. organization attributes, individual traits) that influence the emergence and outcome of these collaborative approaches (see review by Plummer, 2009). Other studies have explored the wider social processes of collaboration and have proposed different typologies of collaboration (Diaz-Kope and Miller-Stevens, 2015). Previous works have distinguished collaborative approaches according to their organizational arrangement (i.e. the level of coordination between entities, Mandell and Steelman, 2003); the goal of the collaborative approach (i.e. from informal collaboration to action implementation; Agranoff, 2006; Margerum, 2008); membership composition (e.g. government/agency based or citizen based; Moore and Koontz, 2003); and the type of governance (i.e. interagency, cross-sector or grassroots governance; Diaz-Kope and Miller-Stevens, 2015).

In this study, we explored a novel approach to support the collaborative activities of the *Consejo Municipal para el Desarrollo Rural Sustentable* (CMDRS, Council of Rural and Sustainable Development in Calakmul), a multi-stakeholder management board in the Calakmul area of Mexico. The complex socio-historical context and high biodiversity have led to a diversity of actors and approaches to environmental management and have created a number of active or potential biodiversity conflicts (Lecuyer et al., 2018). Not all collaborative approaches stem from conflicts, but biodiversity conflicts can be seen as an opportunity, creating an imperative for people to work together to manage their problems (Fabricius and Currie, 2015), and collaborative approaches have been used in conflict resolution (Butler et al., 2015). The CMDRS was created in 2005 as a state effort to facilitate cross-sector approaches to sustainability. However, since its creation, the CMDRS has struggled to develop a coherent agenda and maintain interest, participation and action (MLL, SC., BS., participant observation). Through this research, we explored with them ways to facilitate the co-management of natural resources in the region.

Initial steps of active collaboration are described as crucial moments when actors need to realize their interdependency in managing shared resources (Bouwen and Taillieu, 2004). In this study, we focus on what has been called the initiation phase of the decision process, where problems have to be identified and placed on the public agenda (Clark et al., 2001). Creating actor interaction, often targeted according to actor roles (e.g. NGO, policy maker), and identifying matters of mutual interest (i.e. common ground) are among the first challenges of collaborative strategies (Fabricius and Currie, 2015). Many studies related to government/agency-based collaboration have undertaken analyses of which actors to engage (see Reed, 2008). However, the notion of common ground, while suggested by some authors (e.g. Bouwen and Taillieu, 2004; Fabricius and Currie, 2015; Manzo and Perkins, 2006) has not been well defined and has been left open to interpretation. Often, researchers investigate the differences at an institutional, rather than individual, level (see Davies et al., 2013) and tend to assume that a lack of common ground arises from “occupational communities” (Schein, 1996), i.e., groups in which shared assumptions are typically generated by educational background and working activities. Doing so increases the risk of developing dichotomous categorizations of perspectives, which can be an obstacle to finding common ground (Flores and Clark, 2001). Additionally, focusing on a single biodiversity conflict limits the potential to discover common ground among actors.

The overarching aim of this study is thus to investigate the concept of common ground among actors and across multiple issues to seek how it can practically inform processes that support environmental management. We specifically ask the following research questions: 1) How

can common ground be defined in the context of environmental management? 2) How can common ground be identified among actors and how does it relate to group identity? 3) How can common ground be identified across multiple issues? 4) How can the exploration of common ground support collaborative approaches in environmental management in practice? We address the first question in the literature review section below, and the following questions in the case study on the CMDRS of Calakmul that follows. What we propose is a new mindset to engage people in collaborative approaches for conservation; the establishment of ground work preceding the selection of particular tools to use for decision-making or management.

### 1.1. The notion of common ground

The notion of common ground in the field of environmental management is recognized to be important, but it has not been defined or operationalized and it has been used in diverse ways as a synonym for common interest, common knowledge and common understanding (Bouwen and Taillieu, 2004; Brunner et al., 2002; Manzo and Perkins, 2006; Patterson et al., 2003; but see Flores and Clark, 2001; Bath, 2000). Meaning(s) of common ground, approaches to identify common ground, and mechanisms to support its development are thus important, but neglected elements in facilitating collaboration for environmental management. In this section, we investigate how common ground has been used and defined in other fields, and then propose a definition which enables us to explore this notion in practice.

In the context of collaboration, the definition of ‘common’ would be “belonging to or shared by two or more people” or by “members of one or more nations or communities” (Collins English Dictionary online, 2014). ‘Ground’, in this context, describes “a position or viewpoint, as in an argument or controversy” (Collins English Dictionary online, 2014). When linked together, ‘common ground’ has been defined as “shared beliefs or interests, a foundation for mutual understanding” (Ammer, 2003). Common ground thus goes beyond simple shared interest and is not a synonym for mutual understanding but rather a factor that will facilitate it. Furthermore, the regular definition of common ground omits the geographical dimension of ‘ground’. Space and place are important in the search for common ground in environmental management (Manzo and Perkins, 2006). This dimension has been investigated under the concept of place attachment, which refers to an emotional, cognitive, and functional bond with a place (Jorgensen and Stedman, 2001). Places, and ground, are then more than physical settings but also bear witness to dynamic contexts of social interaction (Stokowski, 2002). We propose in this research to define common ground as the areas of relevance underlying the suite of issues expressed by people regarding environmental management in a particular context.

Common ground should not be confused with common interest, because the latter is value-laden and the decision of who holds a legitimate interest is subjective (Reed, 2008). In adopting a definition of ‘common ground’ in the context of this study, we argue that using vocabulary focusing on interest does not foster collaboration, as it emphasizes that a particular interest is at stake and has to be defended against other interests. Similarly, we reject the term ‘stakeholder’, often defined as people having an interest or ‘stake’ in a subject, for the term ‘actor’. ‘Actor’ is particularly appropriate in describing people as an active and interactive part of a conflict, with agency for collaboration and potential to act differently in response to diverse issues and conditions.

The concept of common ground also differs from that of social capital. Social capital has been associated with collaborative processes (Pretty, 2003), since a participation process leads participants to view themselves in relation to others (Flores and Clark, 2001). Whilst it is a contested concept, social capital often refers to the social bonds, norms, and resulting benefits that can be mobilized to facilitate action (Adler and Kwon, 2002). Social capital refers then to relationships between

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