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‘Wildlife officials only care about animals’: Farmers' perceptions of a Ministry-based extension delivery system in mitigating human-wildlife conflicts in the Okavango Delta, Botswana

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ABSTRACT

It is widely recognised that government intervention in development issues can shape people's perceptions and experiences. This study examined the influence of a Ministry-based extension system on community-based, problem animal control and perceptions among local arable farmers at the eastern Okavango Panhandle in northern Botswana. Using a survey of 388 arable farmers and key informant interviews, our results showed that participation of local people in the implementation of the participatory project was vital for improving people's perceptions and gaining adoption of the innovations, and significantly contributing to project outcomes. Lack of people participation in decision making, the extent to which farmers perceived extension agents as trustworthy, the number of extension agents and extension delivery methods were found to be important factors explaining farmers' perceptions and adoption decisions. Analyses also indicated that knowledge development alone (which is a form of community empowerment) was not enough to encourage participation and innovation adoption. Village project committee (VPC) members' and farmers' remarks about their socioeconomic hardships suggested that they preferred economic incentives over any other incentives. This suggests that community's immediate needs for livelihood and food security are among the locally pressing needs that should be addressed to drive people's commitment to the project. From a policy perspective, our results underscore the need to implement comprehensive interventions that address wildlife management and community development, and actively involve local people in management and decision making to achieve sustainability in human elephant conflict management. There is need, therefore, for government (particularly the wildlife departments) to provide an institutional structure for supporting community-based governance for the purpose of ensuring effective and sustainable wildlife management and conservation.

1. Introduction

For a considerable period of time, problem animal control (PAC) has been exclusively under the responsibility of wildlife authorities, whilst local communities and farmers rely on them for help. However, due to the centralised nature of PAC activities and limited resources (both financial and human) (Osborn and Parker, 2003), and its biased focus on wildlife protection and conservation (thus lacking attention for human needs) (Packer et al., 2013; Pooley et al., 2017), the approach has yielded little results in terms of reducing the problem and of finding long-term solutions. But when wildlife authorities fail to stave off the problem or to respond to farmers' reports of raiding incidences, it often results in anger and resentment among members of a community who live with wildlife (O'Connell-Rodwell et al., 2000). If left unaddressed, it poses a serious threat to the long-term survival of wildlife (Parker et al., 2007). This realisation has led to an interest in devising a broad-based (social, economic and institutional) human-wildlife conflict (HWC) management that account for the role of conservation organisations and social processes (Redpath et al., 2013, 2015; Linnell et al., 2015). Essentially this perspective advocates an approach to conjoining biodiversity protection with the aspirations of the rural poor as part of the larger conservation agenda. To achieve this, researchers have

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stressed the involvement and active participation of local people in finding solutions to matters that affect them (Osborn and Parker, 2003; Tanguilig and Tanguilig, 2009). This way, concerns and values of the local community can be identified as well as establish a common understanding of the challenges and opportunities associated with the mitigation initiative to build consensus (Reed, 2008; Ansell and Gash, 2008), which helps prevent and minimise the negative effects of conflict situations.

In response to the shift in HWC management (and environmental governance in general), community-based approaches are increasingly receiving attention both from researchers and practitioners (Fungo, 2011; Berkes, 2013). Yet the approaches may as well not lead to the desired results if governance responsibilities and resources are not significantly devolved to lower-level governing systems, such as community-based groups (Meynen and Doornbos, 2004). According to Lewis (1996), a stakeholder's decision about how they respond to shared responsibilities, such as HWC management, depend largely on how they perceive the power possessed by them and the power balance among the various stakeholders. Extension agencies may apply statutory or prerogative power bestowed upon them to control and influence decisions on resource governance (Buckles and Rusnak, 1999). But some researchers have argued that when power is redistributed as promised or intended, it builds ownership and mutual responsibility between and among a multiple stakeholder group to implement and manage any proposed mitigation measures (Reed, 2008; Zimmermann et al., 2009).

Usually, power relations intersect with other kinds of relations. As Lewis (1996) put it, “People want to be involved in decisions when their interests are at stake, they want to have their opinions and ideas heard and valued, and they want to be respected as individuals” (p. 4). In other words, genuine participation also means trusting the people and committing to a more egalitarian collaboration that would ensure multilateral and consensus-oriented decision-making processes. This underscores direct involvement of all concerned stakeholders in decision-making, which goes beyond a mere consultation (Ansell and Gash, 2008). As involvement and participation of local communities are viewed to be pivotal in creating sustainable conservation systems, so should be the perceptions of the affected local people (Jeffery et al., 2008). Thus careful consideration of the perceptions of local communities when planning how to manage HWC is required in order to secure their support on the proposed solution (Mulwa, 2004; Nazneen, 2004; Mohammad, 2010).

However, based on Pannell et al. (2006) perspective, much of extension work is centred on the assumption that end-users need the change that is being pushed to them. This is partly because extension work (including those addressing the mitigation of HWC) is mostly within the public extension service, which is highly bureaucratic in nature, thus hampering the full realisation of their potential (Webber et al., 2007; NPR, 2007; Zimmermann et al., 2009). In Botswana, the Government through the Ministry of Environment, Natural Resource Conservation and Tourism (MENT) and its Department of Wildlife and National Parks (DWNP) has continued to implement various initiatives that aim to achieve long-term biodiversity and livelihood goals. The DWNP is charged with the responsibility of facilitating the implementation of the Northern Botswana Human Wildlife Coexistence Project (NBHWCP) in HWC hotspot regions of northern Botswana, which include the Okavango Delta. The NBHWCP was a World Bank-funded project aimed at improving the livelihoods of rural people by proactively mitigating HWC in the Project areas (World Bank, 2009). An example is the eastern Okavango Delta Panhandle (ODP), which experiences relatively high incidences of HWC particularly those involving subsistence arable farmers and elephants (NPR, 2007; Songhurst, 2012).

The project adopted a community-based approach for the delivery of HWC management strategies in which village project committees[1] (VPCs) in all the affected communities were established. The VPCs acted as a mobiliser and link between local people and DWNP. Specifically, they were actively involved in disseminating the mitigation measures to other segments of the farming communities through face-to-face communication. Their diffusion roles come to bear after receiving training meant to ensure that they are conversant with the intricacies involved in the adoption process. In addition, VPC members and some farmers were provided with implementation resources, although the resources were either very much limited or not fitting into local context (see Noga et al., 2017). Among the various HWC mitigation strategies implemented under decentralisation initiatives through the VPCs, chilli pepper and beehive fence (together referred to as elephant crop-raiding deterrent innovations, ECDIs in this paper) meant to prevent crop-raiding elephants from entering crop fields were not sufficiently adopted by the subsistence arable farmers, especially the beehive fence innovation (Noga et al., 2015, 2017). This is despite the strategic relevance of local communities in the dissemination and adoption process of the ECDIs. Although various reasons have been generally adduced for the poor adoption (see Noga et al., 2015; Noga et al., 2017), the significant question is how the institutional approach of implementing a community-based governance of the project have impacted local perceptions of the DWNP (and its personnel) in the discharge of their statutory extension duties. In relation to the foregoing, this study, therefore, addresses four major questions: (1) What is the extent to which local communities have been involved in the intervention project? (2) How did farmers' perceptions on the sufficiency of extension agents affect their adoption decisions? (3) How did farmers' perceptions of the credibility of extension agents influence their adoption decisions? (4) How have the extension delivery methods used influenced farmers' likelihood of innovation adoption?

2. Theoretical framework

The paper applied institutional theory to examine the central role played by institutional arrangements in influencing participatory wildlife management (such as the management of HEC in the eastern Okavango Panhandle region) and perceptions and behaviours of target local communities. Institution here refers to “any standing, social entity that exerts influence and regulation over other social entities as a persistent feature of social life, outlasting the social entities it influences and regulates, and surviving upheaval in the social order” (King et al., 1994, p. 141). Based on this definition, other social institutions external to that which is engaged in fostering and promoting a particular change can be used to drive and support delivery of its institutional agenda. In this context, change agencies can establish partnerships with concerned stakeholders, such as local communities, to enhance their credibility and legitimise their work by demonstrating a need for change (Rogers, 2003). Thus, in decentralised diffusion systems, local people can be used to serve as opinion leaders to influence the decisions of their near-peers and gain adoption of new solutions, such as ECDIs (Rogers, 2003; Dearing, 2009).

While Ostrom (1990) believed that resource users can develop effective self-governing institutional arrangements to resolve particular problems (such as HEC) with little or no assistance from the government, she, however asserted that self-governance is not a full panacea and government has a role to play in the process (Ostrom, 2007). Accordingly, some scholars have opined that governments can work with

[1] Village Project Committee (VPC) consists of 6–10 members who are elected by the community. The committee comprises a balanced number of youth and community elders. On the one hand, youthful members who are literate and able to educate and guide other farmers are elected as members. On the other hand, elders are expected to provide guidance and encouragement (wisdom). The election to the committee is open to any resident member of the community and is facilitated by community members. Government officials, including DWNP officers and village chiefs are members of the village extension team (VET) and ex-officio of the VPCs. The election, composition and duties of the VPCs are described in detail in the Social Action Plan of the DWNP-World-Bank Human-Wildlife Coexistence Project.

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