



## Perspective

## Non-material costs of wildlife conservation to local people and their implications for conservation interventions

Gladman Thondhlana<sup>a,\*</sup>, Stephen Mark Redpath<sup>b</sup>, Pål Olav Vedeld<sup>c</sup>, Lily van Eeden<sup>d</sup>, Unai Pascual<sup>e,f</sup>, Kate Sherren<sup>g</sup>, Chenai Murata<sup>h</sup><sup>a</sup> Rhodes University, Department of Environmental Sciences, P.O. Box 94, Grahamstown, South Africa<sup>b</sup> Institute of Biological & Environmental Sciences, University of Aberdeen, Aberdeen AB24 2TZ, UK<sup>c</sup> NINA-Norsk, Norwegian University of Life Sciences, Biørn 3802, N-1432 Ås, Norway<sup>d</sup> School of Life and Environmental Sciences, The University of Sydney, Camperdown, NSW 2006, Australia<sup>e</sup> Basque Centre for Climate Change, University of the Basque Country-Konstituzioen Parke UPV/EHU, Building Eudeka E-1, 1st Floor, Barrio Sarriena s/n, 48900 Leioa, Spain<sup>f</sup> Barcelona, Basque Science Foundation, Márquez de Hinojosa 2, 48012 Bilbao, Spain<sup>g</sup> Islandia for Resource and Environmental Studies, Dalhousie University, 4100 University Avenue, Halifax, NS, B3H 4K2, Canada

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## ABSTRACT

In assessment of costs (and benefits) of wildlife conservation, conventional economic valuation frameworks may inadequately address various non-tangible values and neglect social, cultural and political contexts of resources and their use. Correspondingly, there is a need to seek more focus on quantifying the economic, material benefits and costs of wildlife conservation than the non-material aspects that also affect human well-being. In addition, current research on the costs of wildlife conservation tends to be discipline-focused which constrains comparability, often causing conceptual ambiguity. This paper is an attempt to address this ambiguity. While there is growing acknowledgement of the material costs of wildlife conservation, we contend that employing a broader, composite social well-being approach may provide better conceptual insights on—and practical options for—managing various non-material impacts of wildlife conservation for local people. Non-material impacts such as negative physical or psychological experiences, trauma, feelings of fear and anxiety cannot directly be measured by economists to assess but such impacts still lead to human ill-being. Thus, taking these impacts into account is critical for the broader sustainability of wildlife conservation, making understanding and addressing them a key socio-ecological issue.

## 1. Introduction

Managing and distributing various costs and benefits of wildlife conservation to enhance the welfare of local communities is widely recognised as a priority for conservation planning (Polasky, 2008; Nielson et al., 2006; Dickson et al., 2011; Armaroli, 2014). Costs loosely refer to valuable goods or services expended or foregone due to a process or event. If unmanaged or uncompensated, these costs can be a source of human-wildlife conflicts (HWC) that can divide conservation authorities and local communities (Thondhlana et al., 2011, 2016; Vedeld et al., 2012; Thondhlana and Gaddi, 2017). Beyond direct human-wildlife interactions, HWCs can also emerge when actors perceive that one group of actors is imposing its interests, values and priorities on others or when one group might disproportionately receive benefits from conservation (Redpath et al., 2013, 2015; Madden and

McQuinn, 2014; Thondhlana et al., 2015, 2016). Further, actors may experience the costs and benefits of wildlife conservation differently, which may yield different relationships among actors and their perceptions of wildlife conservation (Gleisch et al., 2011; Gaddi et al., 2017; Thondhlana and Gaddi, 2017; Jordan et al., in press). If not managed appropriately, wildlife conservation may create economic, social and other burdens on local communities, fueling conflict. At present, mitigation efforts typically focus on the material costs and benefits of human-wildlife conflict. However, for conservation authorities to be able to address the full effects of wildlife conservation on human communities, there is need for approaches that can identify and estimate the scope of non-material costs so that these also can be included in the decision making and design of intervention programs. While we recognise that conservation actions can result in both costs and benefits to different conservation constituencies, we focus our

<sup>\*</sup> Corresponding author.E-mail address: [G.Thondhlana@ru.ac.za](mailto:G.Thondhlana@ru.ac.za) (G. Thondhlana).

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