



## Research article

# Understanding local community's values, worldviews and perceptions in the Galloway and Southern Ayrshire Biosphere Reserve, Scotland



Maya I. Hernes<sup>\*</sup>, Marc J. Metzger

<sup>a</sup> The University of Edinburgh, School of GeoSciences, 1 Drummond Street, Edinburgh, EH8 9PX, United Kingdom

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## ABSTRACT

Biosphere reserves have been studied around the world, but methods to elicit community's values, worldviews and perceptions are missing. A greater understanding of these can help avoid tension and improve successful management. This paper used a mixed-methods survey to elicit local community's environmental values, ecological world views and perceptions of the Galloway and Southern Ayrshire Biosphere Reserve (GSABR). Over three weeks, forty participants from three communities of the GSABR responded to a semi-structured mixed-methods survey. The survey revealed that residents of the GSABR greatly value wildlife and beauty of nature, and that the majority of the respondents showed concern for the environment from an ecocentric worldview. Results also revealed that the most influential tested socio-demographic characteristic affecting people's relationship to their environment is their professional affiliation. Tourism and recreation were seen as major benefits of the recent biosphere designation. Results did highlight contrasting benefits from the designation for different stakeholder groups, which could potentially lead to tensions and should be considered in the reserve management. Given the community's supportive world views and perceptions, greater participation in the biosphere's management is likely to be welcomed and should be used to avoid or mediate any conflicts. The mixed-method survey developed for this study, proved successful in eliciting these themes in the GSABR. We recommend other biosphere reserves replicate this research, to gain better understanding of local communities and increase their support and participation in reserve management.

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## 1. Introduction

There is an increased consensus that the effectiveness of protected areas and natural resource management is affected by ways in which local communities relate to their natural environment (Karanth et al., 2008; Wallner et al., 2007). Understanding how people relate to nature by evaluating values and worldviews provides a deeper understanding of perceptions and behaviours towards conservation (Gagnon-Thompson and Barton, 1994; Schwartz, 1994). Consulting local communities, and understanding their views, therefore plays an important role in achieving public acceptance of protected areas, and ultimately in the conservation success (Wallner et al., 2007). As such, a 'bottom up' approach is important to increase the environmental, social and economic sustainability of a locality (Frost, 2001; Wallner et al.,

2007). The importance of considering local communities' relationship to their environment is reflected in the causal relationship between values, worldviews and perceptions (Fig. 1).

This paper contributes to the study of environmental values, ecological worldviews and public perception of the recently established Galloway and Southern Ayrshire Biosphere Reserve (GSABR). However, the research methods and findings have wider relevance that can help other biosphere reserves and conservations areas to include community values, worldviews and perceptions in their management plans. Specifically, this paper addresses the following research questions (Fig. 1):

Which attributes of the environment do local communities value the most?

What are the local community's ecological worldviews?

What are the local community's perceptions of the biosphere reserve designation?

<sup>\*</sup> Corresponding author.

E-mail addresses: [maya.hernes@banksgroup.co.uk](mailto:maya.hernes@banksgroup.co.uk) (M.I. Hernes), [marc.metzger@ed.ac.uk](mailto:marc.metzger@ed.ac.uk) (M.J. Metzger).

We chose the GSABR for its explicit aim to foster relationships between humans and nature with consideration to economic, social and ecological development (GSABR, 2015). Indeed, this was central to establishing the ‘biosphere reserve’ concept in 1974 (Frost, 2001; Price, 2002; Price et al., 2010), as part of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Man and the Biosphere Programme (MAB).

Over three weeks, 37 face-to-face interview and three email correspondence interviews were undertaken in three towns located in South West Scotland. The study was carried out using a mixed-method format to assess local communities' relationship to the environment and their views on the newly designated biosphere. Values, ecological worldviews and expectations were then statistically compared to socio-demographic variables, while attitudes were analysed through inductive qualitative content analysis.

## 2. Theoretical background

### 2.1. Values, ecological worldviews and perceptions

Values are guiding principles in life, and generally act as the prerequisite to any human action (Gagnon Thompson and Barton, 1994; Lynam et al., 2007; Schwartz, 1994; Spini, 2003). Although categorized and theorized in different ways in social sciences (Hitlin and Piliavin, 2004; Rokeach, 1973; Stern and Dietz, 1994), Schwartz (1994) identified ten basic human values that are motivationally distinct, and hence can be used to understand human actions: achievement, benevolence, conformity, hedonism, power, security, self-direction, stimulation, tradition and universalism. The latter relates most to environmental values, which aim at fostering ‘understanding, appreciation, tolerance, and protection for the welfare of all people and for nature’ (Schwartz, 2012).

Ecological worldviews are an individual's value system in relation to the environment, which constitute one's beliefs regarding the environment (Brackney and McAndrew, 2001; Dunlap et al., 2000). Gagnon-Thompson and Barton (1994) suggested the distinction between two ecological worldviews: ‘ecocentrism’ and ‘anthropocentrism’. Ecocentric people value nature for its own intrinsic value,

whereas anthropocentric people value and wish to protect nature for its positive effects on human lives (Gagnon-Thompson and Barton, 1994). Identifying ecological worldview helps understand why people value the natural environment. Ultimately, this can provide clarity on the reasons for human attitudes and behaviour (Dunlap et al., 2000; Gagnon Thompson and Barton, 1994).

Perceptions are beliefs or opinions that are often held by many people and based on how things seem (Cambridge Dictionaries, 2015). Here, the term perception is used to describe a local community's attitudes towards biosphere reserve designation. Attitudes are different from values in that they can be positive or negative, and can be used to describe something rather specific, like objects, situations or living things (Dietz et al., 2005). Perception is also used to understand a local community's expectations of biosphere management and planning. Evaluating these expectations towards a protected area's management and planning is important to its success, as it can bring insight into the array of existing opinions and ideas related to the scheme (Lynam et al., 2007).

### 2.2. Biosphere reserves development

Over the past 40 years, the purpose of the MAB programme has gradually evolved beyond conservation aims to establish areas or regions that foster learning, with consideration of environmental issues and integration of environmental sustainability approaches (Habiba et al., 2013). A major shift happened in 1983 at the First International Biosphere Reserve Congress, Minsk (Ishwaran et al., 2008) when the ‘Action Plan for Biosphere Reserves’. Recommendations were adopted for the protection of ecosystems and sustainable use of resources, as well as the development of three distinct areas (UNESCO, 2014): core areas, which are legally protected and primarily dedicated to conservation; buffer zones, where human activity such as recreation and research take place; and transition zones, where sustainable resource management practices are encouraged and implemented.

Another key event was the Seville International Conference on Biosphere Reserves in 1995, resulting in the creation of the Seville Strategy for Biosphere Reserves. It highlighted the importance of

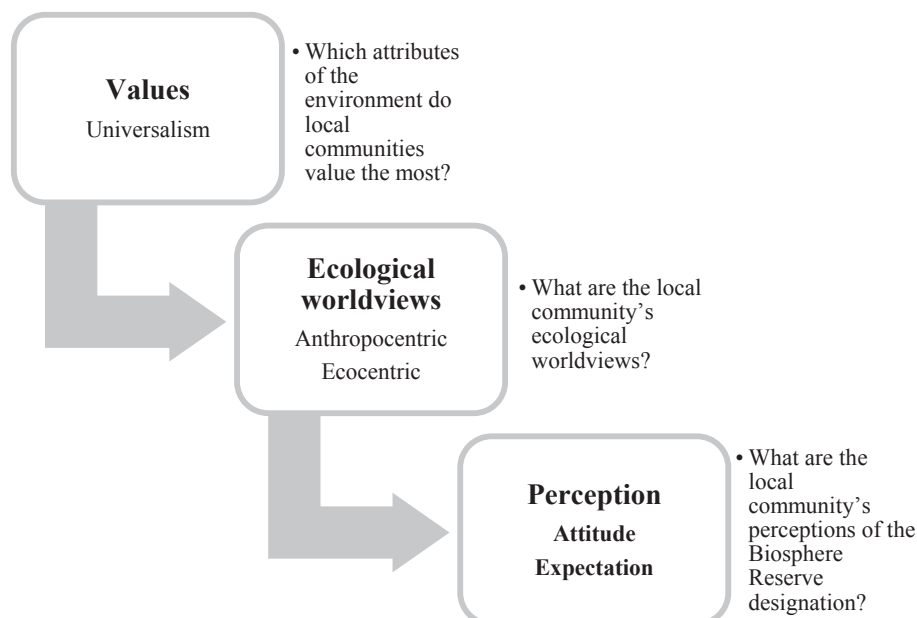


Fig. 1. Representation of the four research questions, reflecting the connections between values and decisions. Arrows represent the causal effect between the variables.

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