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Do regional natural resource management leaders reflect the attitudes of the landholders?

Darla Hatton MacDonald[a,*], Mark D. Morrison[b], John R. Ward[c], Andrea MacRae[d]

[a] CSIRO Ecosystem Sciences, PMB 2, Glen Osmond, SA 5064, Australia
[b] Faculty of Business, Charles Sturt University, Panorama Avenue, Bathurst, NSW 2795, Australia
[c] CSIRO Ecosystem Sciences, 41 Boggo Road, Dutton Park, QLD 4102, Australia
[d] Discipline of Anthropology and Development Studies, University of Adelaide, North Terrace, Adelaide, SA 5005, Australia

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ABSTRACT

In the South Australian Murray Darling Basin Natural Resource Management (NRM) region, our case study site, decision-making and implementation of state NRM policy rests with a relatively small number of NRM leaders, advisors and support staff. In this paper we explore whether these community NRM leaders reflect the values and attitudes of landholders in the wider region. Our interest in the potential for shared values derives from NRM and the wider literature of the importance of shared values for driving institutional trust and NRM outcomes. A set of scales was used to measure key values and attitudes which shape participation in NRM programs. Data were collected from community NRM leaders and landholders from across the region. Through statistical testing, this study demonstrates that the values of the community NRM leaders differ to those of landholders on four out of the six values and attitudes examined. Landholders are more economically motivated, have a stronger sense of tradition, are more capital constrained and have a different set of environmental attitudes than community NRM leaders. Alternatives for building trust, given significant differences in shared values, are discussed.

Introduction

Degradation of landscapes is widespread worldwide and the flow of human activity has been detrimental to many natural resource management goals (Reyers et al., 2012). Since the introduction of European agriculture in Australia, there has been an extensive loss of biodiversity, dryland and irrigation related salinisation, invasive weeds and pests, soil erosion and water quantity and quality problems (Roberts and Pannell, 2009). Regulations have been insufficient to halt degradation. Landholders have been unwilling to undertake substantial private investments in revegetation with local native species due to the initial cost and long-term loss of revenue, compounded by natural resource management (NRM) benefits predominately accruing off-farm to the wider community (Connor et al., 2008).

Despite varied public investment strategies of national, state and local agencies, the lack of participation by landholders has been difficult to address (Lockwood et al., 2010). In addition to the investment of public funds, Commonwealth and State governments in Australia have also been committed, in principle, to notions of local involvement and devolved a degree of power to more local and regional institutions in natural resource management (Hajkowicz, 2009). The Council of Australian Governments (2000) put forth a national action plan which identified a role for the community in NRM planning and implementation of NRM programs. However, the development of effective partnerships with landholders and other stakeholders remains a central challenge for natural resource management (e.g. Reed et al., 2009). Previous studies have demonstrated that the likelihood of people engaging in pro-environmental behaviours, such as those involved in natural resource management, is influenced by their values. These studies by Stern and Dietz (1994) and de Groot and Steg (2008), which are based in the environmental psychology literature, demonstrate the existence of three values – egoistic, altruistic and biospheric – that influence pro-environmental outcomes. In the context of natural resource management, egoistic values are equivalent to landholders being solely motivated by increasing profit, altruistic values are related to concern for social mores and the greater good, while biospheric values are related to concern for the environment. In addition, de Groot and Steg (2007) examined the influence of these three values on planned environmental outcomes within the framework provided by the Theory of Planned Behaviour. They found that egoistic, altruistic and biospheric values (which they also describe as attitudes) were the most important factors in explaining behavioural

* Corresponding author. Tel.: +61 8 8303 8660; fax: +61 8 8303 8601.
E-mail addresses: Darla.hattonmacdonald@csiro.au (D. Hatton MacDonald), mmorrison@csu.edu.au (M.D. Morrison), j.ward@csiro.au (J.R. Ward), andrea.snowden@gmail.com (A. MacRae).

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intentions, but that subjective norms and perceived behavioural control were also important drivers of behavioural intentions. Thus there is evidence that individual values, subjective norms and perceived control all influence environmental outcomes.

While there is evidence in the literature that individual values and attitudes influence environmental outcomes, there is also increasing recognition of the importance of shared values to the development of effective partnerships, including in NRM, as opposed to individual values. (Morgan and Hunt, 1994, p. 25) defined shared values as, "the extent to which partners have beliefs in common about what behaviors, goals and policies are important, unimportant, appropriate or inappropriate, and right or wrong." Shared values influence relationship performance (Okafor, 2008) because of the influence of shared values on trust and commitment (Morgan and Hunt, 1994; Tonkiss and Passey, 1999), organizational culture and management practices (Jarratt and O'Neill, 2002) and human resource management outcomes (Watrous et al., 2006).

In addition to studies conducted in the marketing, management and community development literatures, there is also recognition of the importance of shared values from an NRM perspective. In this context, the term "shared values" refers to whether individuals consider that an "agency shares similar goals, thoughts, values and opinions" (Vaske et al., 2007, p. 224) and is termed "salient value similarity". Indeed, studies have demonstrated that the perception of shared values influences trust, which in turn influences acceptance of proposed NRM activities (Cvetkovich and Winter, 2003; Vaske et al., 2007 and Needham and Vaske, 2008). Trust in these studies is described as social trust following Siegrist et al. (2000), although it is effectively a form of institutional trust (e.g. trust in institutions such as the US Forest Service). These studies hypothesised a link between shared values and social trust which was based on the findings of a series of earlier studies that found strong relationships between trust and shared values (e.g. Siegrist and Cvetkovich, 2000; Siegrist et al., 2000). Similarly a link between social trust and acceptance of management actions was hypothesized based on the findings in previous studies that social trust has consistently been either the equal or most important predictor of the acceptance of proposed management plans or actions (Cvetkovich et al., 1995; Winter et al., 1999). It is important to note, as suggested by Needham and Vaske (2008, p. 200), that the link between shared values and trust is due to people basing their trust on "perceived similarity rather than carefully reasoned attributions of trust or direct knowledge of the managing agency". This is suggestive of an emotional form of trust in people (see Johnson and Grayson, 2005), rather than a cognitive form of trust as examined in the management and marketing literatures. Furthermore, these studies have only measured perceptions of shared salient values, without identifying which critical values might in fact be shared.

In the NRM literature, where participation by landholders has lagged despite evidence of a clear win–win for the environment and for the landholder, trust may be an issue (Reyers et al., 2012). For example, Breetz et al. (2005), in a comprehensive investigation of 12 point–nonpoint source trading programs in the USA, found that issues associated with trust and communication barriers were creating challenges with landholder participation in almost all programs. They concluded that landholders "initial willingness to discuss trading . . . [is] conditioned by the degree of trust in program administrators" (p. 187), suggestive of an institutional form of trust. Qualitative research has confirmed that this is a cross-cultural issue (e.g. Wossink and van Wenum, 2003). Quantitative studies have confirmed that trust in program providers is consistently a significant and important predictor of landholder participation in natural resource management programs (Ducos et al., 2009; Morrison et al., 2012).

Thus, there is growing recognition in the literature of the importance of institutional trust and the role of shared values in influencing outcomes, including in the NRM literature. However, fewer studies have investigated which individual or shared values might be critical in generating trust and hence for improving environmental outcomes. One study by Devos et al. (2002) from the psychology literature examined 10 values originally identified by Schwartz (1992). They found that the values with the highest positive correlation with institutional trust were tradition, conformity and security, while those with the highest negative correlation were self-direction, universalism and hedonism. A few of these are consistent with the values and attitudes Stern and Dietz (1994) and de Groot and Steg (2007, 2008) identified as being important for influencing environmental outcomes. Specifically, universalism refers to "understanding, appreciation, tolerance and protection for the welfare of all people and nature", which is consistent with both altruistic and biospheric values, while conformity refers to adherence to social norms. However, Devos et al.'s (2002) analysis suggests the importance of two other variables which are likely to be relevant in an NRM context: tradition and self-direction. Self-direction, which refers to independent thought and action, is consistent with the innovativeness construct previously used in the NRM literature (Morrison et al., 2012). It is likely that these individual values that are highly correlated with institutional trust and/or environmental outcomes will be those of greatest importance when considering which shared values are critical for driving improved NRM outcomes, although further research will be needed to confirm this.

The focus of the NRM literature to date has been on the identification of differences in the overall perception of shared values from the perspective of landholders and has not assessed differences in the types of shared values identified by Stern and Dietz (1994), de Groot and Steg (2007, 2008) and Devos et al. (2002). Further, there have been no studies investigating both sides of the dyad about whether these shared values exist, for which specific values there are divergences, likely consequences and what might be done to reduce these.

Recognising the importance of shared values in creating trust and improving relationship outcomes, we use a mixed methods research design to investigate whether NRM Board members, advisors and key staff and landholders for a particular NRM region in Australia have shared values, which values are shared, and the reasons for divergences. Based on the studies reviewed in the literature, we investigate salient values likely to be of relevance in the NRM context including: egoistic/hedonistic, altruistic/social and biospheric concerns as well as tradition, conformity (responsiveness to social norms) and self-direction (innovativeness). Given the results from de Groot and Steg (2007), we also investigate similarities on two attitudinal constructs related to perceived behavioural control. We find that for a majority of the values and attitudes examined there are significant differences between the values and attitudes of community NRM leaders and landholders. Given this finding, we discuss potential strategies for addressing differences in shared values, and building trust.

The case study area

The South Australian Murray Darling Basin (SAMDB) (Fig. 1) covers an area of 5.6 million ha and has been subject to land clearance and agricultural development for more than 80 years. Almost half the land area in the region is dryland (2.3 million ha) and irrigated (102,300 ha) agricultural production. Dryland agriculture includes cereal and cropping/grazing rotation in the south and modified and natural pastures in the arid north. Irrigated agriculture is dominated by perennial horticulture (viticulture, citrus, stone fruit and almonds) and improved pasture for dairy. Land, water and biotic resources have been heavily impacted by development, especially