Right or responsibility? Local people as 'visitors' in protected areas on the south coast of Western Australia

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Abstract — The environmental impact of local people recreating in nature is an under-studied aspect of protected area management. A recent review of nature-based recreation was undertaken in regional south-western Australia. Surrounded by an array of protected areas — including a national park with World Heritage status — the local residents of this remote Western Australian location have relatively unrestricted access to a variety of protected landscapes. A recent mineral resources boom in Western Australia has heralded a return to mining in the area, accompanied by a considerable population increase — both as itinerant and permanent miners. For local people and environmental managers alike, this influx has raised concerns about the carrying capacity of this fragile ecosystem to sustain the wilderness recreation activities of the newly arrived mining community. This paper draws on evidence gathered from a study commissioned by the regional environmental authority and outlines the extent to which local people, both long term and recent arrivals can be considered 'visitors' to these protected places.

Index Terms — Australian protected areas, local people, passive and active nature-based recreation, remote areas.

1 Introduction

Local people have become a persistent theme in discourses on protected area management. For the past decade, social dimensions — particularly the idea or ideal of local participation and/or community involvement — have become more prominent in conservation science [1]. Likewise, there is a growing awareness that 'place' nuances the relationship between people and the landscape [2]. Importantly, literature examining local custodians and protected areas focuses on indigenous knowledge and rights as well as the traditional subsistent activities in national parks, often associated with Asian and African nations [3]. Less evident is the examination of local people as nature-based recreators in protected areas. Collecting baseline data on particular numbers of people, activities, frequencies, equipment, management regimes and, seasonal variations in particular ecosystems and environments marks an important reference point for ongoing impact assessment [4]. This paper examines the particularities of local people in nature-based recreation in a remote Australian community. Commencing with a brief overview of the place central to the discussion, the paper outlines the methodology, summary of selected results and implications.

The Shire of Ravensthorpe is 13,000 sq. km. and located 550 kilometres south-east of Perth in the State of Western Australia (WA). It sits within the Fitzgerald Biosphere Reserve (FBR) containing the Fitzgerald River National Park with World Heritage status. While characterised as agricultural heartland, the Shire has a history of mining, scaled back since the 1960s with low level mining exploration continuing unabated. One-third of the Shire's area is farming communities, predom-

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inantly broad acre farming and wool production. The remaining two-thirds of the Shire's area is set aside for nature parks and nature reserves — essentially biodiversity hotspots within what is Australia's only internationally recognized hotspot [5] — including over one hundred kilometres of coastal reserve [6]. For both locals and visitors this constellation of south coast protected areas showcases a unique yet fragile Mediterranean ecosystem. Recent land-use changes and ensuing population increases have sparked concerns about the sufficiency of protective arrangements.

A central objective of a biosphere is that people living within the reserve develop sustainable resource use practices. Complicating this objective is recent land use change, namely mining and the identified pressures arising from nature-based recreation, particularly by a newly arrived workforce. In this remote rural setting, resurgence in mining has precipitated a pull factor resulting in a significant population increase of both itinerate (fly-in-fly-out) and permanent (on-site) miners and their families. In the past three years, this has led to a 25 per cent increase in population from around 1,400 in 2001 to 1,950 in 2006 [7] and corresponding infrastructure development associated with both mining and in-migration. A common perception is that these in-migrants lack both an attachment to place and the knowledge to manage impacts of their recreational activities. Although there are landscape scale concerns about mining, long term residents and natural resource managers question the carrying capacity of this fragile environment to sustain the nature-based recreation incursion of this temporary population.

Mining in Australia is in a prosperous phase with high demand and expectations of capitalising on the mineral resources boom. To date, much of Australia's minerals exploration and mining has been at the level of 'low hanging fruit' or relative ease of access. However, as these resources are rapidly depleting, exploration is moving into more fragile and complex environments with resultant social and environmental impacts as mirrored in this study site. The lucrative nature of the mining industry lends itself to images of the 'cashed up miner' with the latest sports utility vehicle (SUV) free wheeling into unsettled parts of the Shire. Such concerns are somewhat compounded by a regional protected area management characterised as 'passive' and under-resourced, largely confined to fire regime and disease management [8] and with limited capacity to monitor visitor impacts.

This study establishes a social baseline of local people and nature-based recreation with the aim of contributing to a broader understanding of the impacts of land use change on protected area management.

2 Methodology

Data were collected using a community-as-researcher methodology, an approach that recruits local people to assist in the design and delivery of a community survey. This was undertaken from November 2007 to January 2008. Informed by a participatory action framework, this approach — known as the Balingup model — incorporates a group of locally identified people who undertake training to administer a survey to fellow community members [9]. A key component of the model is the role these local researchers play in the development of the survey instrument, ensuring input of local knowledge and context. Community researchers agree to survey a quota of respondents representing a cross section of key stakeholder interests. This sampling method, described as respondent driven or social networks sampling [10], captures the views of local people broadly and includes identified stakeholder groups, for example, farming, mining, off-road trail bike riding or tourism. Table 1 (below) provides an overview of these stakeholders. Importantly, this type of sampling approach serves as a 'snapshot' of a selection of the community.

TABLE 1

SUMMARY OF STAKEHOLDERS AND ACTIVITIES

Local residents - Geographical areas specifically targeted include: towns, smaller townships and farming communities within Ravensthorpe Shire.
Active wilderness recreational groups – horse riding, formal and informal motor bike riding, 4WD driving, camping and mountain biking.
Passive wilderness recreational groups – wildflower viewing, bushwalking, bird watching, photography and botanical study.
Tourism – local businesses, local promotion group, tour operators and geological excursions.
Economic interest groups – local businesses, farming, mining and apiarists.
Environmental interest groups – Flora and fauna groups, Friends of the Fitzgerald, NRM networks and scientific community.

Source: Williams et al 2008 [11]

3 RESULTS

This section includes a summary of findings relating to relationships with the environment, range and frequency of both passive and active wilderness activities, associated values, threats and possible impact mitigation.

One hundred and eighteen respondents completed the survey, representing ten per cent of the Shire's overall population. Of interest, twenty seven per cent of this sample have moved into the area within the past three years. These respondents chiefly describe their occupation as mining or mining affiliated. When the top three occupational classifications — agriculture (18%), mining (13%) and natural resource management (NRM) (12%) — form part of a cross sectional profile, including length of time in the area, what emerges are some distinct differences particularly in the domains of relationships, attitudes, activities and actions in the natural environment.

The survey instrument contains a list of statements about relationships with the natural environment. Not surprisingly, agriculturalists figure dominantly in statements around management and livelihood relationships associated with the land. However, this group also highly rate statements such as 'I see myself as a custodian or a carer of the environment', 'I study the natural environment' and 'I appreciate the natural beauty'. Survey respondents working in NRM also rate their role as 'custodian or carer' highly. The statement, 'I recreate in natural areas' is the strongest relationship identified by the mining sector.

Questions about activities establish the type, scope and frequency of local residents' nature recreating within the Shire. These are separated into passive and active activities due to impact factors (see Table 1). Ranked passive nature recreation activities are wildflower viewing, bush walking, visiting the National Park and bird watching. These activities are most commonly undertaken in protected areas, although bushwalking and bird watching are reported in various landscapes. The identified frequency of passive recreational activities is regularly (daily or weekly). For active recreational activities, four wheel driving (4WD) and off-road motor biking are the most frequently identified, followed by camping. Importantly, access into many protected areas in the region is via unsealed roads necessitating off-road vehicles usage irrespective of season. Likewise many beaches in the area are accessible by 4WD only and in some locations this includes driving on the beach. Off-road motor biking and 4WD are generally undertaken often (fortnightly to monthly) while camping occurs occasionally (annually). In assessing the activities by length of time in the Shire, for newly arrived residents wildflower viewing is the lead passive activity, while 4WD is the dominant wilderness activity and visiting the beach, the leading coastal activity. For longer term residents, bushwalking is the highest ranked passive activity, while the dominant terrestrial activity is camping and coastal activity is visiting the beach.

Values associated with the environment within the Shire are grouped into four categories i.e. natural, visual, social and economic aspects. All survey respondents prioritise

natural values over the remaining categories. Significantly, recent arrivals assign as their highest values 'unlimited recreational opportunities' followed by 'future mining discoveries' while for longer term residents the values of 'personal connection to the area' and 'childhood memories' dominate. This finding suggests that for new arrivals the natural environment has a consumable quality, while for longer term residents its significance is more intrinsic.

Perceived threats to protected areas vary depending on the length of time respondents have lived in the Shire. Short term residents consider the greatest threats to the environment to be 'farming', 'land clearing' and 'lack of environmental management'. 'Overuse' is considered the greatest threat by longer term residents, followed by 'increased traffic' and 'too many tourists'. Interestingly, the exercise of prioritising threats to the environment reveals the under-lying tension and divisiveness linked to land use and land use change for this community.

The final aspect draws on the survey's qualitative responses to investigate ways to ameliorating environmental impacts. Responses range from maintaining the status quo to imposing restrictions on access and activities as a measure of protection. Strong concern is expressed by local people to the possibility of being 'locked out' of protected areas. This is contrasted with high levels of agreement for minimising, controlling and monitoring visitors in particular areas — in essence a 'them' and 'us' binary. A middle road is to educate people while introducing reasonable measures to minimise impact such as limiting access during the rainy season to prevent the spread of fungal dieback (*Phytophthora Cinnamomi*). Dieback is a soil-borne pathogen chiefly spread through transport of infested soil which adheres to vehicles and heavy machinery [12].

Evident is a concern for workable solutions involving the community, just as local people don't want to be shut out of the park they don't want to be excluded from consultation. As Bushnell (2003) [13] argues, denying use of resources and avenues of participation to local people severely reduces their incentives to conserve.

4 Conclusion

The results of the study confirm an active recreating community participating in and deriving pleasure from an array of nature-based pursuits. There is considerable evidence to confirm anecdotal claims that the newly arrived population is highly engaged in both passive and active activities, taking advantage of few restrictions on access to protected areas. What is less clear is their understanding of the environmental affects of recreating and their willingness to increase their awareness. While longer term residents claim a stewardship role of the natural environment, they too are engaged as nature recreators, albeit in chiefly low impact activities. There does appear, however, to be an under-reporting of active wilderness activities, especially four wheel driving, which may in part be due to the normalising of off-road transportation rather than a form of recreation. If there are established rules and norms about exploring the local environment these do not appear to have been communicated to the newer members of the community. On the surface, long-term residents appear to opt for the status quo, when they could play a crucial role in imparting local knowledge about sustainable recreational practices.

References

[1] K.B. Ghimire and M.P. Pilbert, "Social change and conservation: An overview of issues and concepts," *Social change and conservation*, K. B. Ghimire and M. P. Pilbert, eds., London: Earthscan Publications Pty Ltd, 1997.

[2] J.G. Cantrill, "The environmental self and a sense of place," *Journal of Applied Communication Research*, vol. 26, 1998, pp. 301-318.

[3] E.H. Zube and M.L. Busch, "People-Park Relationships: An International Review," *Landscape and Urban Planning*, vol. 19 1990, pp. 117-131.

[4] R. Buckley and N. King, "Visitor impact Data in

a Land Management Context," *Nature-based tourism, environment and land management*, R. Buckley, C. Pickering and W. B. Weaver, eds., Oxen, U.K.: CABI Publishing, 2003, pp. 197-208.

[5] R. Harris, J. Majer, C. Williams, A. Buckley and D. Stehlik, "Ravensthorpe Range and Overshot Hill - An Overview of Biodiversity Values, Threats and Conservation", Working Paper Series, Issue 12, Alcoa Research Centre for Stronger Communities and Department of Environmental Biology, Perth: Curtin University of Technology, 2008.

[6] Shire of Ravensthorpe, "Consolidated Annual Report 2006-2007," 2007; http://www.ravensthorpe.wa.gov.au/shire_publications/annual.

[7] Australian Bureau of Statistics, "2006 Census Community Profile Series: Ravensthorpe (S) (Local Government Area)," 2007; http://www.censusdata.abs.gov.au.

[8] K. Bradby, A Park in Perspective: A report on the past, present and future of Fitzgerald River National *Park*, Western Australia: Fitzgerald River National Park Association, 1989.

[9] D. Stehlik and A. Buckley, "Participative inquiry using a community-as-researcher approach: The Balingup Model", Working Paper Series, Issue 9, Alcoa Research Centre for Stronger Communities, Perth: Curtin University of Technology, 2008; http://strongercommunities.curtin.edu.au.

[10] C. Williams, A. Buckley, D. Stehlik, J. Maher and R. Harris, "Community Stakeholders Values and Resource Use Attitudes and Perceptions Study", Working Paper Series, Issue 13, Alcoa Research Centre for Stronger Communities and Department of Environmental Biology, Perth: Curtin University of Technology, 2008.

[11] M.J. Salganik and D.D. Heckathorn, "Sampling and Estimation in Hidden Populations Using Respondent-Driven Sampling," *Sociological Methodology* vol. 34 no. 1, 2004, pp. 193-240.

[12] Department of Environment and Heritage, Government of South Australia, *Phytophthora cinnamomi* causing dieback in plants, 2004; http://spatialinformationday.org.au

[13] R. Bushell, "Balancing Conservation and Visitation in Protected Areas," *Nature-based tourism, environment and land management*, R. Buckley, C. Pickering and W. B. Weaver, eds., Oxon, U.K.: CABI Publishing, 2003, pp. 197-208.

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