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A sense of place: Ecological identity as a driver for catchment volunteering

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Abstract

This paper is based on the results of a study of individuals who volunteer for environmental organisations with a catchment focus. The aim of the study was to capture all of the ways that participants experience catchment volunteering, to gain a deep understanding of why people might undertake such work, and what the social and environmental benefits might be. Data were collected through a qualitative research approach known as phenomenography which seeks variation in the ways individuals experience certain phenomena (Marton, 1994; Saljo, 1988).

One of the major themes that emerged from this study was that developing and maintaining an ecological identity is important in sustaining catchment volunteer commitment. Results suggest that many respondents strongly identified with the physical location where the catchment volunteering took place, and that this 'sense of place' can be cultivated to foster active volunteer groups. Identity centred on a particular place can be acquired through the development of shared values, beliefs and interests of the volunteers. These are built over time through collective experiences. The paper concludes by suggesting that both a 'sense of place' and the development of an ecological identity can be a strong motivator for further volunteering.

Introduction

Australia's long-term environmental problems are serious and persistent (Sobels, Curtis & Lockie, 2001). In many parts of the landscape, environmental damage is rapid and sometimes irreversible (Yencken & Wilkinson, 2000). Across the continent, creeks, rivers and other waterways divide the landscape, moving from high country to the coasts. These natural divisions are referred to as catchments or watersheds (Commonwealth of Australia, 2002). Whole catchments can suffer deleterious effects of poor land and water management upstream. This in turn, affects the well being of local communities and natural systems. The *Australian Catchment, River and Estuary Assessment 2002* undertaken by The National Land and Water Resources Audit is Australia's first comprehensive assessment of catchments, rivers and estuaries (Commonwealth of Australia, 2002). The assessment found that over one third of Australia's rivers were in poor condition, and over 85% were significantly modified due to human activities. Further, the assessment revealed that 80% of the reaches were affected by catchment disturbance.

Clearly, human activities affecting Australia's catchments are not sustainable. A sustainable future is one where our quality of life is enhanced and natural systems are maintained (Holling, 2000). A

sustainable future could be achieved through the growth of sustainable communities- that is, places comprised of people who can adapt well to changing circumstances and live according to a collective vision of what 'sustainability' is (Cocks, 2003; Costanza, 2000; Holling, 2000).

For now at least, it seems that Australians are not sufficiently aware of their place within the landscape, historically, socially or ecologically, to know how to live sustainably within this ancient continent (Dovers, 2000). Part of the problem is that until recently, the landholder has been held solely responsible for the condition of waterways and surrounding land (Ewing, 2000). In the last fifteen years, however, numerous government-initiated, community-based environmental care groups have been established (Dovers, 2000). All are based on a model of community partnerships known as Integrated Catchment Management (ICM), which is a long-term, holistic approach considering the social, economic and ecological dimensions of a catchment (Bellamy, Ross, Ewing & Meppem 2002). ICM relies heavily on volunteers to participate in decision-making and to attend regional meetings (Bellamy et al, 2002). Community members can become involved as volunteers in integrated catchment management through a variety of programs and organizations such as *Landcare, Coastcare, Bushcare* and *Waterwatch*.

'Catchment volunteering' encompasses a wide range of experiences, as it is undertaken in rural, regional and urban settings, by a diversity of individuals for a variety of reasons. It involves activities such as water quality monitoring, tree planting, weeding, mulching, watering, and clean-up days.

It is generally place-based, where people work either on their own or with others in nature-based, outdoor settings. Informed by the work of Bates (1999) and Cordingley (2000), the following definition was adopted for the study to describe a 'catchment volunteer':

'An individual in a not-for profit group and/or program that has a catchment focus, whose activities are intended to benefit both the community and the volunteer. The volunteer undertakes the work of their own free will for no financial recompense and in a designated volunteer position exclusively.'

Perhaps the most successful of the government-initiated programs focusing on catchment care is the National Landcare Program, funded through the Natural Heritage Trust (NHT). Community Landcare refers to the network of Landcare groups comprised of individuals working together to combat land degradation across Australia (Cary & Webb, 2000). According to Byron & Curtis (2002) Landcare has burgeoned from a handful of concerned landholders and government agencies to around 4000 Landcare groups across Australia, involving more than 120,000 volunteers over a span of fifteen years.

Byron & Curtis (2002) assert that Landcare has helped build the social cohesion of rural communities, and simultaneously increased the skills of individual farmers and their likelihood to adopt best management practices.

Despite these successes, Landcare groups continue to operate under enormous difficulties, and may face an uncertain future (Curtis, van Nouhuys, Robinson, & Mackay 2000). One of the problems is a lack of staff trained in volunteer management. For example Curtis et al (2000) note that very few Landcare groups offer any induction course for volunteers, or focus on the needs of the volunteers, or recognise the valuable contributions that volunteers make to the Landcare Movement. Curtis et al (2000) believe that qualitative research investigating these issues would help to bridge this gap. It may also clarify why individuals undertake such voluntary work, and contribute to an understanding of the social and environmental benefits of catchment volunteering.

This paper discusses the findings from a qualitative study of individuals and groups associated with 'catchment volunteering'. The focus of the study was to build a picture of what individuals in catchment care groups do, and how such activities and actions contribute to the sustainability of

local environments and communities. Thus through an analysis of volunteer experiences, a richer understaning of different aspects of volunteering may become clearer. For example, by analysing experiences a greater understanding of catchment volunteer motivations may be revealed. Other questions may be answered, such as: What benefits accrue to the volunteers, their communities and to local natural resources? What barriers do volunteers face? What actions do volunteers undertake to overcome problems and tackle new issues?

Hansen (1994) an educational theorist, believes that in order to understand actions, it is necessary to begin with an understanding of experiences. Thus the research undertaken in this study focused on catchment volunteer experiences. Information was collected using semi-structured interviews within a research approach known as phenomenography, as phenomenographic studies help us to see the world as others see it (Marton, 1994; Saljo, 1988). It analyses patterns of variations in the ways in which people experience or perceive phenomena (Marton, 1994; Saljo, 1988).

Steps in conducting the study

Steps in conducting the study were undertaken in line with the phenomenographic approach, and are illustrated in Figure 1. This is a cyclical rather than a step-wise procedure, with several steps occurring simultaneously (Dahlgren & Fallsberg 1991, pp150-156; Sandberg, 1994, p86).

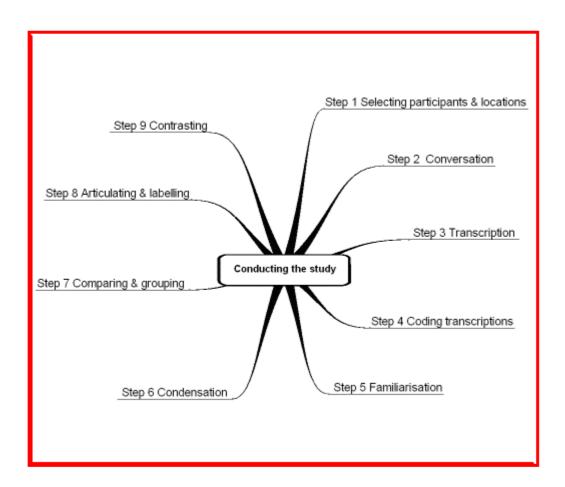


FIGURE 1: Steps in conducting the study [after Dahlgren & Fallsberg 1991; Sandberg, 1994].

Step 1 involved selecting the people and places for interviews. All participants were 'catchment volunteers' working within a recognised environmental group or program. To capture the range of variation in experiences of the participants, individuals and groups were chosen from a variety of geographical settings from Brisbane to Mossman, just north of Cairns, along the east coast of Queensland. Thirteen personal interviews were completed, and a further thirteen group interviews

were held, comprising groups of between two and ten participants. A total of 26 interviews involving 85 participants were conducted in the final study. Participants were drawn from a variety of organisations and programs including Landcare; Coastcare; Bushcare; Greening Australia; Waterwatch; tree-planting groups; and ICM's (Integrated Catchment Management Committees).

Step 2 comprised the interviews. All interviews (both group and personal) followed the same semistructured format, with a basic set of questions to be answered in a particular format. The exact wording varied with each interview, and occasionally other questions were added to follow-up on particular points.

Steps 3 to 9 comprised the manual processes of data analysis, including listening to audio-tapes for errors in transcription and for consistent, emerging themes; transcribing each audio-taped interview word for word; using coloured pens to highlight similar ideas within each transcription (tagging); coding key ideas and topics of conversation; grouping similar ideas and understandings of experiences under appropriate labels; and finalising conceptions.

A number of broad conceptions emerged from the data. This paper focuses on one of these, that of *developing and maintaining identity*, and the related issue of identification with a specific place. This conception was held by almost all of the participants to a greater or lesser degree. Some volunteers spoke of their experiences almost entirely in terms of their identity, and the consequences (both positive and negative) of being identified in certain ways by members of their group or by parties external to their group. Through friendships developed while working, and through regular visits to the same locations, many volunteers developed a strong affinity with the land or waterway where their work continues to be undertaken.

Many referred to a sense of place, related to the development of localized social capital and social learning. Some respondents volunteered because they already had an affinity with a particular place, others developed attachments to places through their volunteering efforts. Identification with a particular place was closely related to the development of local knowledge or ecological literacy. Others also focused on developing a deeper ecological consciousness. Some volunteers took on a more general ecological identity, linked to common group values and to caring about the landscape. To some, this had an almost religious intensity.

A Sense of Place

Many interviewees identified strongly with the places where catchment volunteering experiences took place. The biophysical and social settings (the places) and the activities undertaken in them, constituted the experience. Some participants expressed a deep and personal connection to the places where they volunteered. A couple of people became volunteers because they wanted to get to know certain places better. The following quotation captures some of the ways that participants experienced particular places:

This is a lovely little community you know, it's a great sort of place to do this sort of thing [catchment volunteering], lots of families and all that sort of stuff and people who are interested because it is their place that they want to be at (Female 2, mixed rural group, Landcare and Coastcare members, group interview, Interview No. 14).

During each interview, participants were asked what triggered their initial interest in their voluntary activities. Over half of the respondents talked about their attachment to their local area as being the prime motivator. In some cases, this attachment apparently grew over several years. As one respondent explained:

Well, first I think having used this creek system as a child, as a recreation area or facility then immediately followed with...many years involving bush walking (Male 5, urban ICM group interview, Interview No. 1).

Emotional attachments to one site may transfer to emotional attachments to new areas. One respondent became increasingly disappointed with the condition of her local creek, in particular, the polluted water, and weed infestations. The strong feelings that she felt for her local waterways motivated her to form her own urban Bushcare group:

I realised that where I was born was once one of the most beautiful areas for rainforests along the coast of New South Wales, and it was all gone by the time I got there. By the time I was born, there was very little of it left. But that's where I started to get an appreciation of bush, was from being there, you know, roaming through what bush was left there (Female, urban Bushcare group, personal interview, Interview No.5).

Attachment to a particular place is often referred to as a 'sense of place', defined by Carr (2002, p28) in the following way:

Sense of place creates both a oneness or connection with the environment and with the people and local organisations who inhabit those places. It is not something, which is acquired when you move into a new area or suburb, it has to be cultivated. Like culture, sense of place is changing and adaptive, not primordial and fixed. And just as sense of place is not temporarily confined, so it is not geographically limited to any specific rural or urban landscape. It has to be built in the minds of the beholders and the dwellers in a particular place, and it has to be built over time.

Relph (1976, cited in Carr, 2000) explains that particular physical settings focus our experiences and intentions, becoming profound centres of human experiences, filled with meaning and emotions. This attachment to place, manifesting itself as caring and identifying closely with a particular location, was certainly an important motivator for many of the volunteers in this study. One respondent explained how he felt about the river where he worked everyday:

The river gives me so much, I like to give something back to it. So I get a warm fuzzy feeling because I can give something back to the river that gives me so much. So I get enjoyment out of doing it [water quality monitoring]... I don't actually collect water samples for a living, but I'm out in the environment every day. I work seven days a week.... It's part of my life anyway (Male, Rural Waterwatch group, personal interview, Interview No.26).

Results of this research confirm Bell's (1999) assertion that 'sense of place' fosters authenticity, as experiences pertaining to specific places accrue to individuals, and are talked about with other people. Many of the interviewees spoke of working with people who held the same values as themselves and meeting 'like-minded' people through volunteering. As one respondent said:

I just enjoy working with people who have got such great ethics, you know, the people here just all believe in the same sorts of things and there's no great conflicts (Female 1, regional Landcare, small group interview, Interview No.7).

'Sense of place' is not just experienced by people becoming attached to their biophysical surroundings, but also extends to emotional attachments to social communities, again built through familiarity and spending time in one place (Bell, 1999). Spending time in one place and maintaining social contacts helps build social capital, a phenomenon comprising trust, reciprocity, norms, values and networks (Putnam, 1993). According to Baum, Modra, Bush, Cox, Cooke, & Potter (1999),

social capital is characteristic of healthy, thriving communities and is strengthened through voluntary activities and organisations. From studies that they conducted in South Australia, Baum et al (1999) concluded that volunteers were more likely to have more informal social contacts, and to be involved in a range of social activities, than individuals who didn't volunteer. Thus the social fabric of a place can be reinforced through the development of social ties created through voluntary work. Cattell (2001) asserts that individuals with many informal networks are less likely to suffer ill health, as these provide support, enhance self-esteem, clarify personal identity, and enable citizens to feel 'in control' of their lives. These comments reinforce Cheng, Kruger & Daniels (2003, p90) assertion that places inform who we are and define how we behave and hold to the maxim, 'to be somewhere is to be someone'.

Some of the respondents in this study described their dedication to particular places as a religious experience, ritualistic, simple and meditative:

There's a commonality, it's quietly religious, I suppose, even to some people. It is to me, it is sort of, it's like a religious, it's like a religious activity so you share a common bond in, it is a little bit mundane, people do really want to spend most of their time planting trees, and nothing else.... A person's really go to have it from deep within, that sort of commitment, I suppose (Male, urban Landcare, personal interview. Interview No.3).

Thus communal, mundane activities centred on a particular place can have deep, significant meaning to the participants, once again strengthening social ties. The quotation above reinforces the notion that land stewardship is linked to the spiritual dimension of many volunteers' lives (Carr, 2002). Bell (1999, p31) also notes that volunteering often has spiritual roots including Christianity, Buddhism, and even paganism among indigenous peoples struggling to protect land, sea or animals.

Creating a 'sense of place'

It is possible that a 'sense of place' can be consciously created, and at least one participant believes that cultivating a 'sense of place' based around the community centre would serve to build a more active community group:

This centre here I think is crucial...I foresee that this place will get nowhere unless we develop an ambience with that... because I believe that most people out in the community are alienated.... Having a one-stop position that they can come to, and information is presented at their level and I stress at their level, by that you are trying to develop an ambience of where they feel that, hey there is something here that they can learn, something here that they can contribute and I think the ambience of the place, everybody has got something to contribute, some form or other and is welcome and of course they are wanted and I see those going hand in hand (Male 2, urban ICM group interview, Interview No. 1)

Many respondents moved from a sense of a local place to a broader idea of bioregionalism (Carr, 2002; Milbrath, 1989). The central idea of bioregionalism is that each region would be generally self-sufficient and there would be less emphasis on national identity, much more on a local 'sense of belonging,' and 'sense of place' (Milbrath, 1989). As one participant suggested, this involves building social capital with like-minded people in other groups:

Catchment volunteering...may be a new movement towards people who have a sense of regionalism. And a sense of developing a sense of place through their bioregion which always encompasses the catchment, whatever creek they're living in, so there's a strong sense of identity, I suppose, with people living the same, on the river, on the creek (Male, urban Landcare, personal interview, Interview No.3)

The comment above reinforces the findings of Sobels, Curtis & Lockie (2001) who note that Landcare networks comprised of groups working together can facilitate social capital accumulation through collective learning and together these processes can develop a regional sense of 'community'.

Transforming landscapes

The results of this study confirm Carr's (2002) and Schama's (1995) contentions that history associated with particular locations brings certain emotions that influence the level of attachment to that place. This study revealed that families who had lived in the same area for several generations had formed inordinately strong connections to particular land. Images of what an area was like when interviewees were children or previously were drawn upon in interviews focused on land management issues. Even vague notions of what the landscape used to be like can drive the agenda of a volunteer program. The perceptions held about what the land may have been like in some unspecified past appears to motivate volunteers in particular directions. The creation of particular images of land, accompanied by corresponding values, mobilize the community to become involved in catchment care in specific directions:

We try and restore it to something like it was before. It can't be put back the way it was before white settlement, but something like it was and take out some of the feral weeds that are doing damage all over the place and that's probably why we are very, why I am very keen on staying in that sort of volunteer, type of work (Female, urban Bushcare group, personal interview, Interview No.5).

As illustrated above, ecological consciousness can be created through experiences associated with voluntary work, and through stories about the landscape, repeated over time and shared among volunteers. The extent to which we are collectively aware of our surroundings, in turn, can shape a landscape. As Schama (1995) observes, descriptions of landscape handed down from one generation to another may lose some of their precision over time, and so current stories or myths about a landscape can be a powerful force in subsequently transforming and shaping the future landscape. For people who have lived in one place all of their lives, history includes both lived experiences, and experiences held in memories and books, translated and interpreted over time. This sense of place can be very strong such that it leads to the building of local knowledge around an area. One Waterwatch coordinator spoke of knowledge that members of her group gained by living beside the river:

Everyone who lives on the river has got such a wealth of knowledge about the river. I went to Maria's place and they were telling me about the fish that live there in the waterhole down from, you know, all the stuff about the river that I wouldn't have any idea about. I'm really a foreigner to this area, strictly speaking, and so many locals have this wealth of knowledge about the history and the different land-uses through our time (Female 4, Rural Waterwatch, group interview, Interview No.13).

The importance of such localised ecological literacy to natural resource management is increasingly being recognized (Irwin, 2001; Fischer, 2000; Allen, 2001). Bosch, Allen, Williams, & Ensor (1996) note the volume of farmer knowledge attained through many years of experience and experimentation, and suggest the development of an online database for capturing this valuable local knowledge. By combining local knowledge with other sources of information, a comprehensive system can be built to achieve natural resource management goals. Via the internet, an extensive knowledge-base can be built and shared among different sectors of the community (Bosch et al, 1996).

Thomashow (1995, p.175) explains that ecological literacy complements ecological identity so well because both are based on the places 'where people learn about nature, the importance of direct experience, the clarity of a reflective orientation'.

Integral to ecological identity is a deep caring for landscapes and a sheer sense of wonder and delight gained from nature-based experiences (Thomashow, 1995). As early as 1949, Aldo Leopold observed that people working closely with nature develop particular convictions and values with respect to the land, phenomena described as a 'land ethic'. Seeing the ecological identity of their area destroyed is especially painful for some of the interviewees, particularly if they care deeply for a specific environment. One person articulated these feelings and explained why, in his experience; environmental volunteering differed from other voluntary work:

Bush care work, you can work for ten years, you can do fantastic work and it's very hard work and on a hot windy day a nice scumbag will come along and burn the lot. And you must be prepared that that can happen, and not let it destroy you.... But that is the difference; someone in the community can willfully undo all your years and years of work. And I think that's different to most volunteering, that's one aspect you have to, you can suffer, and it's very, ah, you do suffer (Male, urban Bushcare group, personal interview. Interview No.6).

This type of suffering is well known among traditional custodians of the land as Yunupingu (1997, pp 2-3) explains:

In the early 1960's, I saw bulldozers rip through our Gumatj country in north-east Arnhem Land. I watched my father stand in front of them to stop them clearing sacred trees and saw him chase away the drivers with an axe. I watched him cry when our sacred waterhole was bulldozed. It was one of our Dreamings and a source of our water. I saw a township wreck our beautiful homeland forever. I saw my father suffering physically when this was happening. I can never forget that. This land is something that is always yours; it doesn't matter what nature or politics do to change it. We believe the land is all life. So it comes to us that we are part of the land and the land is part of us. It cannot be one or the other. We cannot be separated by anything or anybody.

According to Young (1991), in societies where the relationship of people to the land is strong, there is also great importance placed on social obligations, kinship, ancestral ties and concern for children who will become the local, knowledgeable custodians of the land. Profound commitment to the environment may be what transforms an area into a 'landscape'. Seddon (1997) and Schama (1995) both believe the people who live there create a landscape. For Seddon (1997, p111), nature provides the raw materials that are transformed through the experiences, memories and actions of the human community....to transform it [an environment] into landscape demands the powers of the seeing human eye and the loving human hand

As revealed by participants in this research, identity can be built through memories, story-telling, local knowledge (ecological literacy), sharing values, reflection, and imagination. According to Williams & Sutherland, (2000), environmental care groups allow individuals to re-imagine themselves in the landscape, and create a vision of the future, with a prevailing view of the landscape at the centre of the vision. Imagination is formed partly by our belief systems, '...which guide, create, and pull us along with our culture, into the future' (Milbrath, 1989, p379). As revealed by this research, visions or stories of the landscape as it once was, help to motivate some of the volunteers in this study. Such stories are valuable in contributing to a community's ecological literacy, and in creating resilient sustainable communities (Berkes & Folke, 2002). Thus, through catchment volunteering, individuals, groups and communities can develop a deep understanding of their place within a landscape, helping us all to live within our ecologically sustainable limits.

Conclusion

Catchment volunteering is an 'ethical' enterprise in the sense that it is undertaken by people with thought and reflection about the consequences of their actions. A 'sense of place' and feelings of belonging to a particular place through the development and maintenance of social contacts, helps facilitate voluntary work. Many of the participants in this study derive their identity from their ecological surroundings, and this is further strengthened by their voluntary activities. This study revealed that having an ecological identity can be a strong motivator for further volunteering.

Creating a 'sense of place' and fostering ecological identity can be one way of building on the existing positive impacts of catchment care groups, and encouraging long-term volunteering in local areas. Focusing activities on specific local places of interest and creating opportunities for learning about the local environment and its ecology are important in generating a sense of place among local people. Groups can work to promote the natural beauty and biodiversity of specific places, and can be compelled by images of the land in a former "natural" state. This image-making can be accelerated and cemented by local people contributing their memories and historical artefacts associated with an area. In turn, this knowledge can be used to feed into broader natural resource management policies and issues, and help solve environmental problems. An effective way of utilising the knowledge gained in catchment groups may be through the development of an online database accessible to all members of a community.

Furthermore, this study suggests that having a central meeting place or community centre can help bring people together who share a common land ethic. Catchment groups attract individuals who share common convictions and values in relation to the land, yet may otherwise be very diverse. From this study, it is evident that members of catchment groups should spend time in developing group goals, so that they can share ideas, as well as opportunities for learning about their local environment. The study shows that catchment groups can provide a vehicle for effectively directing the energies of people who care passionately about specific environments and for the enhancement of ecological consciousness.

References

Allen, W.J. (2001) *Working together for environmental management: the role of information sharing and collaborative learning.* PhD (Development Studies), Massey University. Available from: http://nrm.massey.ac.nz/changelinks/thesis_contents.html accessed on 13th March 2003.

Bates, J. (1999) *Access and pathways: volunteering in Queensland. A contribution to the discussion surrounding the development of a Queensland community services industry plan* Research Paper. Volunteering Queensland Inc. Available from: http://www.volunteeringqueensland.org.au accessed on 2nd February, 2002

Baum, F., Modra, C., Bush, R., Cox, E., Cooke, R., & Potter, R. (1999) Volunteering and social capital: an Adelaide study. *Australian Journal on Volunteering* February, 1999, pp. 13-22.

Bell, M. (1999) Volunteering: underpinning social action in civil society for the new millennium. In *Civil society at the millennium* [contributors, Marcus Akuhata-Brown, et al]; published in cooperation with CIVICUS. Kumarian Press, Inc., Connecticut, USA. pp.27-41.

Bellamy J., Ross, H., Ewing, S., & Meppem, T. (2002) *Integrated catchment management*: Learning from the Australian Experience for the Murray-Darling Basin Executive Summary January 2002 CSIRO Sustainable Ecosystems, Canberra. Available from: http://www.mdbc.gov.au/naturalresources/planning/icm/ICMx_Exec_Summary.pdf accessed on 22nd March 2003

Berkes, F. & Folke, C. (2002) Back to the future: ecosystem dynamics and local knowledge. IN: Gunderson, L.H., & Holling, C.S. (eds), 2002. *Panarchy: understanding transformations in human and natural systems* Island Press, Washington. Covelo. London. pp 121-147

Bosch, O., Allen, W., J.M. Williams, J.M, & Ensor, A.H. (1996) An integrated approach for maximising local and scientific knowledge for land management decision-making in the New Zealand high country *The Rangeland Journal* 18(1) pp.23-32.

Byron, I. & Curtis, A. (2002) Maintaining volunteer commitment to local watershed initiatives. *Environmental Management* 30(1) pp.59–67.

Carr, A. (2002) *Grass roots and green tape: principles and practices of environmental stewardship* The Federation Press, Leichhardt, NSW.

Cattell, V. (2001) Poor people, poor places, and poor health: the mediating role of social networks and social capital, *Social Science & Medicine*, 52 (10) pp1501-1516

Cary, J. & Webb, T. (2000) Community Landcare, the National Landcare Program and the Landcare movement: the social dimensions of Landcare. Social Sciences Centre, Bureau of Rural Sciences. Canberra

Cheng, A., Kruger, L. & Daniels, S. (2003) "Place" as an integrating concept in natural resource politics: propositions for a social science research agenda. *Society and Natural Resources*, 16 (2) pp.87–104.

Cocks, D. 2003. *Deep futures: our prospects for survival*. University of NSW Press. Sydney. McGill Queens Unviersity Press, Canada.

Commonwealth of Australia. (2002) *Australian catchment, river and estuary assessment 2002* - a report of the National Land and Water Resources Audit (Audit). Volumes 1 and 2. National Capital Printing. Canberra. Available from: http://audit.ea.gov.au accessed on 24th March 2003

Cordingley, S. (2000) The definition and principles of volunteering: A framework for public policy. In: Warburton, J., & Oppenheimer, M. (eds) (2000). *Volunteers and volunteering*. The Federation Press. Sydney, NSW.

Costanza, R. 2000. Visions of alternative (unpredictable) futures and their use in policy analysis. *Conservation Ecology* 4(1): 5. Available from http://www.consecol.org/vol4/iss1/art5 accessed on 3rd February, 2003

Curtis, A., van Nouhuys, M., Robinson, W. & Mackay, J. (2000) Exploring Landcare Effectiveness Using Organisational Theory *Australian Geographer* 31(3) pp. 349–366

Dahlgren, L., & Fallsberg, M. (1991) Phenomenography as a qualitative approach in social pharmacy research *Journal of Social and Administrative Pharmacy* 8(4) pp150-157

Dovers, S. (2000) Beyond everythingcare and everythingwatch: public participation, public policy, and participating publics. International Landcare 2000: Changing Landscapes, Shaping Futures, Melbourne. Conference proceedings. Available from: http://www.nre.vic.gov.au/ accessed on 25th March, 2003

Ewing, S. (2000) The place of Landcare in catchment structures. International Landcare 2000: Changing Landscapes, Shaping Futures, Melbourne. Conference proceedings. Available from: http://www.nre.vic.gov.au/ accessed on 25th March, 2003

Fischer, F. (2000) *Citizens, experts and the environment: the politics of local knowledge*. Duke University Press, Durham and London.

Hansen, H. (1994) School health profiles and health education. In B.B Jensen & K. Schnack (eds) *Action and action competence as key concepts in critical pedagogy*. Studies in educational theory and curriculum Volume 12. Royal Danish School of Educational Studies 1994. Copenhagen. pp99-110

Holling, C. S. 2000. Theories for sustainable futures. Conservation Ecology 4(2):7. available from http://www.consecol.org/vol4/iss2/art7 accessed on 3rd February, 2003.

Irwin, A. (2001) Sociology and the environment: A critical introduction to society, nature and knowledge Polity Press and Blackwell Publishers Ltd, Cambridge, UK.

Leopold, A. (1949) A sand county almanac Oxford University Press, New York

Marton, F. (1994) Phenomenography/ In T.Husen & T.N. Postlethwaite (eds) *The international encyclopedia of education* 2nd edition, Vol 8, pp 4424-4429. Available from http://www.socscinet.com/isbn/0080410464/ accessed on 23rd March, 2003

Milbrath, L. M. (1989) *Envisioning a sustainable society: learning our way out* State University of New York Press, Albany, USA

Putnam, R. D. (1993) The prosperous community: social capital and public life. *The American Prospect*, 4 (13) Spring, 1993. Available from: http://www.prospect.org/print-friendly/print/V4/13/putnam-r.html accessed on 15th March, 2003

Saljo, R. (1988) Learning in educational settings: methods of inquiry. In P.Ramsden (ed.) *Improving learning: new perspectives.* Pp.32-48 Kogan Page. London

Sandberg, J., 1994. *Human competence at work: an interpretive approach*. Goteberg: Bas. Sweden Schama, S. (1995) *Landscape & Memory* Harper Collins, London

Seddon, G. (1997) *Landprints: reflections on place and landscape* Cambridge University Press, UK Sobels, J., Curtis, A. & Lockie, S. (2001) The role of Landcare group networks in rural Australia: exploring the contribution of social capital. *Journal of Rural Studies* 17 (3) pp265-276

Thomashow, M. (1995) *Ecological identity: becoming a reflective environmentalist* Massachusetts Institute of Technology, USA

Williams, C., & Sutherland, M. (2000) Farmers, biodiversity and Landcare landscapes: the case of the Genaren Hill Landcare Group, NSW. *International Landcare 2000 Changing Landscapes* ~ *Shaping Futures*, Melbourne, Victoria, Australia 2 - 5 March 2000. Conference proceedings. Available from: http://www.nre.vic.gov.au/ accessed on 25th March, 2003

Yencken, D, & Wilkinson, D. (2000) Resetting the compass: Australia's journey towards sustainability. CSIRO publishing, Victoria, Australia

Young, J. (1991) Sustaining the earth: the past, present and future of the green revolution NSW University Press.

Yunupingu, G. (1997) From the bark petition to native title. In: Yunupingu, G., (ed.). 1997. *Our land is our life: land rights – past, present and future* University of Queensland Press, St Lucia. Australia. pp.1-17.