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LESSONS FROM LANDCARE AND WATERSHED COUNCILS

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SUSTAINING LOCAL WATERSHED INITIATIVES: LESSONS FROM LANDCARE AND WATERSHED COUNCILS¹

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ABSTRACT: In the last decade, watershed groups (WG) established through government initiatives have become an important part of the natural resource management landscape in developed economies. In this paper, the authors reflect upon their research and experience with Landcare in Victoria, and to a lesser extent with Watershed Councils in Oregon, to identify the principles that appear fundamental to sustaining effective WG. In the first instance, these groups must be established at a local scale using social as well as biophysical boundaries. It is also critical that WG are embedded within a supportive institutional framework that identifies realistic roles for private landowners, local organizations such as WG, and regional planning bodies. Without broad stakeholder representation, the perceived benefits of participation are quickly forfeited. It is simply unrealistic to expect an effective network of WG to be sustained without substantial investment by government to provide for program management, group coordination, and cost sharing for on-ground work. There must also be the commitment and skills within a program to establish processes that build trust and competency amongst citizens and agencies. These principles should also provide a foundation for the critical evaluation of WG programs.

(KEY TERMS: watershed management; Landcare, catchment management; policy.)

INTRODUCTION

Watershed groups (WG) established as part of government initiatives are becoming an important part of the natural resource management landscape in developed economies (Griffin, 1999; Curtis and Lockwood, 2000). In the United States (U.S.), WG are an important element of the watershed-based ecosystem management approach embraced by government during the mid-1990s (McGinnis *et al.*, 1999). There is now a growing body of literature examining the activities

and outcomes of WG in the U.S. (e.g., Duram and Brown, 1999; Kenney, 1999; EPA, 1997; Yaffee *et al.*, 1996). Notwithstanding these important efforts, given the relatively short history of WG in the U.S., much of this analysis is of a preliminary nature and has not been able to address the important issue of how to sustain watershed initiatives. For example, the State of Oregon began to acknowledge and support local Watershed Councils under the 1993 Watershed Health Program, and later through the 1997 Oregon Plan for Salmon and Watersheds. By comparison, the Landcare program has been operating across the Australian State of Victoria for 15 years since it was established in 1986 (Campbell, 1994).

There are a number of similarities between Victoria in Southeastern Australia and Oregon in the Pacific Northwest of the U.S. Europeans settled both regions about the same time for much the same reasons and using similar technology. Today, both states have considerable areas of forest and rangeland as well as highly urbanized societies that are beginning to focus on complex watershed management issues with important implications for public health and industry. These issues often involve conflict over values as the priority once given to profits and jobs associated with agriculture and forestry is challenged by those concerned about deteriorating habitat, water quality, and recreation values. In both regions there are substantial areas of public land, more so in Oregon than in Victoria. At the same time, private landholders, often with limited financial capacity, are being asked to carry much of the burden for undertaking restoration work that could result in considerable off site and public benefits.

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There are also important differences between Oregon and Victoria and between Landcare groups and Watershed Councils. Some of the important contextual differences include a more complex decision making environment in Oregon with multiple federal and state agencies responsible for natural resource management, a stronger sense of private property rights, greater recourse to the legal system to resolve conflict, and more intense scrutiny from powerful stakeholder groups. As will be explained, there are also differences between Landcare groups and Watershed Councils. As is often the case, these differences have been important in allowing us to identify important lessons from the Victoria and Oregon attempts to accomplish watershed based ecosystem management.

It therefore seems timely and appropriate to reflect upon the longer-term Australian experience with Landcare, and the fledgling efforts with Watershed Councils in Oregon. Our purpose is to examine the progress of these initiatives and identify a set of common principles that appear fundamental to sustaining effective watershed programs. In doing so we hope to invite closer scrutiny of existing systems and offer a mechanism for monitoring and evaluating outcomes.

This paper draws heavily upon our research exploring Landcare in Australia, particularly in Victoria, during the 1990s. This research effort has involved five state-wide surveys of participants and numerous regional studies that have explored program logic and effectiveness, agency and community partnerships, volunteer motivations, the impact of networks, and attrition, and burnout among participants. Although the watershed experience is much more limited in the U.S., we have drawn upon recent research on Watershed Groups (Kenny *et al.*, 2000; Cheng, 1999; McGinnis *et al.*, 1999) and other elements of ecosystem based management (e.g., Stankey *et al.*, in press; Wondolleck and Yaffee, 2000) to illuminate our discussion.

The Landcare Program

Landcare can be viewed as part of a lengthy process where Victorians adapted emerging theories of rural development to an Australian context. A small vanguard of soil conservationists, extension agents, and farmers were attracted by the core elements of rural development theory that emphasized (1) self help supported by change agents, (2) human resource development rather than technology transfer, (3) public participation, and (4) cooperative efforts at the local community scale (Curtis, 1998). Early experience with groups in Victoria confirmed overseas evidence, including from the U.S., that participation

through local organizations could accomplish broad-based rural development (Chambers, 1983; Esman and Uphoff, 1984).

Recognizing the potential of Landcare groups as a potent force for improved natural resource management, in 1988 the federal government committed the spending of 360 million dollars (Australian) in the *Decade of Landcare* program. From a federal government perspective, Landcare was a national program intended to engage a large proportion of the rural population and produce more informed, skilled, and adaptive private resource managers. In turn, these managers would adopt a stronger stewardship ethic and increase the use of sustainable practices (Curtis and De Lacy, 1996a). The program initially had limited government funding, principally for education and demonstration activities. Establishment of the five-year, \$1.25 billion Natural Heritage Trust (NHT) in 1997 significantly altered the course of Landcare (Commonwealth of Australia, 1998). The NHT increased funding for on-ground work and employed cost sharing principles to enable community and private benefits from specific works to be identified. In 1999 to 2000 alone, the NHT funded 870 Landcare projects, worth \$71 million (Wonder, 2000).

Although the federal government has greater financial resources, natural resource management authority rests primarily with the six Australian states and the Northern Territory. By 1992, most Australian states had established regional Catchment Management Committees (CMC). In Victoria, the nine CMC are comprised of ministerial appointees from regional communities, including Landcare representatives. CMC are responsible for developing and implementing regional catchment strategies that guide the expenditure of state and federal natural resource management funds. Landcare groups have become an important delivery mechanism for CMC but they are not formally linked (Curtis and Lockwood, 2000; Ewing, 2000).

Landcare membership is voluntary and open to any local person, but most groups have developed in rural areas where most activity occurs. Groups frequently operate at catchment or subcatchment scales and are encouraged to view their activities holistically, using a systems approach. Groups are autonomous in that they are not formally linked to government and members usually determine group structures, processes, and priorities. While the focus of group activity is usually on privately owned or leased land managed by group members, groups also work on roadsides, reserves, and other public lands. Groups are involved in a variety of rural development activities across the broad spectrum of community education and on-ground restoration work (Curtis and De Lacy, 1995).

To a large extent, Landcare is seen as an Australian success story. Landcare groups have mobilized a large cross-section of the rural population. By 1998, there were 900 Landcare groups operating across Victoria with an estimated membership of 27,500. In those areas where a Landcare group operated, about 46 percent of the rural properties had a Landcare member (Curtis, 1999). Groups provide opportunities for learning by doing and through interaction with peers (Chamala, 1995). Group processes have enabled participants to discuss conflicting views in a reasonable fashion and have generally enhanced social cohesion, increased the capacity of rural communities to attract resources from governments, and better equipped them to respond to change (Alexander, 1995; Curtis and De Lacy, 1995). With strong agency commitment to participatory processes, agency staff and Landcare members have established robust, productive partnerships and avoided many of the perils of co-optation (Curtis, 1998). Landcare participation has also increased awareness of issues and enhanced landholder skills and knowledge and contributed to increased adoption of best management practices (Mues *et al.*, 1998; Curtis and De Lacy, 1996b). There are also examples where group activity has had substantial impacts on land and water degradation at the local or subcatchment scale (Commonwealth of Australia, 1997; Campbell, 1994). Recent evaluations of the NHT suggest that government investment through Landcare has been more than matched by community contributions (Hill, 2000). Landcare participants are represented on regional CMC and other important fora and are contributing to important natural resource management decision making (Ewing, 2000). By enhancing citizen competency, providing continuity of community representation, and acting as a place of retained knowledge, Landcare groups and their emerging networks appear likely to bridge the gap between the demands of adaptive management and the limitations of stakeholder participation (Curtis *et al.*, 1999).

Despite these impressive achievements, there have been concerns about Landcare program logic and implementation (Lawrence, 2000; Curtis and De Lacy, 1996b; Curtis, 2000). We will draw on these critiques in our later discussion of the five principles for sustaining WG initiatives.

Oregon Plan

In response to concerns about endangered salmon habitat and deteriorating watersheds, the Governor's office crafted the 1997 Oregon Plan for Salmon and Watersheds to foster good land stewardship and

restore natural systems across the state. An alternative to most natural resource recovery plans, the Oregon Plan is similar to the Landcare program in that it relies on the coordination and cooperation of landowners rather than on regulation (State of Oregon, 1997). Although Oregon is comprised of large tracts of public land [mostly federal designations under Forest Service or Bureau of Land Management (BLM) jurisdiction], designers of the plan also recognized that much of the state's streamside land is in private ownership. Because of these mixed ownership patterns the plan calls for coordination among local, state, and federal agencies as well as conservation activities by communities and private landowners. It emphasizes cooperation among parties by incorporating citizens' ideas and values along with more traditional agency management and scientific concerns. In 1998 the program won further public approval when voters approved increased state funding for the Oregon Plan.

An outgrowth of the Oregon Plan was the recognition of local Watershed Councils. A state agency, the Oregon Watershed Enhancement Board (OWEB), was formed to promote and fund voluntary actions that aimed to enhance the state's waterways and provide support to an organized network of 150 Watershed Councils statewide. Most Councils have some level of paid staff (coordinators and/or office support), regular meetings, and a network of stakeholders who are seeking more community control of resource management decisions (Griffin, 1999). OWEB now awards over \$20 million in state grants to help fund Council administration, restoration projects, education and outreach, and monitoring activities. As program partners, the Forest Service and the BLM have provided an additional \$1.5 million in technical support and for cooperative projects. It is these on-the-ground projects that are the most important outcomes for Council members (Kenney, 1999), and are often the primary reason for citizen participation (Shindler, 2000).

Two important characteristics of most Watershed Councils is their reliance on voluntary, community-based action and an expectation that decisions will be the result of a consensus-based process. Many scholars, resource professionals, and elected officials see the grassroots Watershed Council movement as the solution to the citizen involvement dilemma of how to bring citizens together and enable them to have a voice in managing resources that are important to them (Wright and Shindler, 2001; Getches, 1996). In an assessment of the potential for watershed initiatives in the western U.S., Kenney *et al.* (2000) cite Oregon as the state with the most sophisticated level of coordination, administration, and state involvement. Thus far, however, research evaluating Oregon's experiment with Watershed Councils has been preliminary in nature.

PRINCIPLES FOR SUSTAINING WATERSHED GROUPS

The following set of principles derived from an assessment of research and management experience with Landcare in Victoria and Watershed Councils in Oregon. Our goal in this analysis is threefold. First, we hope to strengthen the conceptual foundation of these initiatives through an improved understanding of the complex socio-political processes involved in multi-partner land and water management. Second, by identifying five guiding principles we endeavor to help structure citizen-agency interactions for sustaining watershed groups over time. Third, we intend for this analysis to provide a basis for critical evaluation of ongoing watershed programs in both countries. In this era of distributed knowledge and shared decision making, a mutual understanding of the basic questions is essential to program success.

Establish Local Groups Using Social as Well as Biophysical Boundaries

From the public's perspective, the future of social systems related to watershed resources (e.g., employment and economic opportunities, maintaining a rural lifestyle, and localized decisions) are just as important as the biophysical components (Shindler, 2000). Ewing (1995) found that community cohesion and sense of purpose were stronger where Landcare groups were established on social and not just watershed boundaries. This experience is consistent with Cheng's (1999) finding that small scale, close-knit relationships among Watershed Council members provided a better community connection regardless of differences that may exist.

The work of Uphoff *et al.* (1998) and Devine (1986) suggests that there are limits to the number of people who can be linked effectively by local organizations. Indeed, most Landcare groups have a membership of between 20 to 30 people living in small communities with somewhere between 200 and 1,000 rural residents. Experience suggests that where Landcare groups have attempted to work with larger populations they have been less effective in that they have failed to attract a substantial proportion of residents as members and have had little impact on most landholders. There have also been a number of examples where groups covering larger populations have agreed to split to form subgroups or establish new groups based on local community boundaries. The new structure has invariably been more effective in mobilizing participation and satisfying participant needs.

Many Watershed Councils in Oregon have been established at the regional or basin scale rather than local community scale. Although they perform important functions, most Councils have not mobilized widespread participation and have had little impact on landholder understanding or behavior. In part, the limited impact of Councils can be attributed to the relatively short time they have operated (Shindler and Wright, 2000). It also seems that part of the explanation is that many Councils are operating at the wrong scale. This assessment is supported by McGinnis *et al.* (1999:9) who concluded from their review of watershed organizations in California and the Pacific North West that "The lack of a sense of community may be the single most important barrier to successful long-term watershed planning." In the case of the McKenzie Watershed Council in Oregon, Cheng (1999) found that the smaller subcatchment organization in the Mohawk had established much stronger ties to the local community and was more effective in mobilizing landholder participation in community education and restoration work.

Embed WG Within an Institutional Framework That Identifies Realistic Roles for Landowners, Local Organizations, and Regional Planning Bodies.

Along with the need to establish local relevance, we recognize that resource management increasingly involves regional issues and there needs to be some regional organization that undertakes regional planning and implementation.

With the Victoria Landcare groups, and their emerging networks and the community-based regional CMC, strong community driven organizations appear to have emerged at both the local and regional scales (Curtis and Lockwood, 2000). Articulating distinctive roles for these organizations has been a vital element in developing a supportive institutional framework in Victoria. Clearly defining the respective roles can avoid competition and conflict between different organizations and enables stakeholders to make decisions about participation with knowledge of the amount of power offered and the level of commitment required. As Ewing (2000) observed, in Victoria this process has largely occurred by trial and error and has generated considerable angst on the part of Landcare participants concerned about perceived threats to group autonomy. To the credit of the lead agency, there has been considerable preparedness to learn from experience.

The Victorian experience suggests there are four important roles for regional organizations: (1) to aggregate and express regional needs, (2) to establish

priorities for allocation of government resources, (3) to provide accountability for expenditure of public funds, and (4) to link and support independent local groups.

We also need to establish realistic expectations of what WG can accomplish in an environment where they are relying on volunteer efforts, are working with limited resources and knowledge, and are attempting to address difficult and complex problems that often require long time frames for visible improvement. Landcare participants know they are being asked to undertake work that has community benefits in terms of biodiversity conservation, improved public health, and protecting export income (agriculture and tourism). They also understand that some of the problems they are being asked to address have resulted from previous government policies. Establishment of the NHT was in part an acknowledgment of the legitimacy of these arguments. At the same time, NHT funding has geared up Landcare group activity to the extent that many groups are operating at historically high levels of activity that appears to be unsustainable (Curtis, 2000). It seems that the most important roles for local groups are therefore: (1) to mobilize participation, (2) to initiate and support learning, (3) pull down resources to support local efforts, and (4) to undertake on-ground work to the extent that resources are available. Of course, it must also be understood that levels of group activity will vary from group to group and over time.

In an era of two income families and considerable off-property work, it is unreasonable to expect landholders in developed economies to take leading roles in administering grant projects or implementing large WG projects. They simply do not have the time. On the other hand, we can expect the following from individual landholders: (1) to participate in group activities, (2) to establish community priorities, and (3) to undertake work on their properties or those of others as time permits.

Watershed Councils in Oregon are attempting to perform functions similar to both the regional CMC and the local Landcare groups in Australia. This includes such diverse activities as: (1) fostering cooperation among all interests, (2) encouraging local landowners to comply with existing regulations, and (3) preparing and implementing a watershed action plan that includes basinwide monitoring of activities (Wright, 2000). Asking any volunteer organization to operate across these scales is likely to lead to frustration and failure. While Watershed Councils have enjoyed modest achievements, early success has often been linked to the capacity of coordinators to redefine the roles of agencies and citizens and establish workable partnerships (Rickenbach, 1999).

We acknowledge that it will be difficult to restructure existing institutions in Oregon to create both

local community groups and regional planning bodies along the lines of the Victorian model. If this proves to be impossible, one option would be to enable Watershed Councils to establish autonomous local community organizations to conduct outreach activities and implement on-ground projects while Councils adopt a more strategic planning and coordination role.

Maintain Broad Stakeholder Participation in Watershed Organizations

Without strong stakeholder representation the perceived benefits of public participation are likely to be forfeited. Urban interests, including rural towns, have been underrepresented on CMC in Victoria, as have women and Aboriginal interests. The exclusion of conservation interests from CMC meant that biodiversity issues were poorly represented in regional catchment strategies and NHT funded projects. Although key stakeholders are represented on Watershed Councils in Oregon (Kenney *et al.*, 2000) and Councils appear to be performing an important role as fora for sharing information, Councils need to expand their outreach efforts and involve a broader sector of citizens (State of Oregon, 1999). Thus far, few Oregonians understand the Oregon Plan; even landowner awareness of local Watershed Councils is low (Wright and Shindler, 2001). The effectiveness of Oregon's Watershed Councils has also been undermined by the noncooperation of owners of adjoining land thwarting collective restoration efforts (Rickenbach, 1999).

Understanding volunteer motivations is fundamental to sustaining broad stakeholder participation. Landcare participation has been motivated by the desire to work locally on national issues, to effect improvement in environmental conditions through on-ground work, for the benefit of social interaction, and to learn about land and water management (Curtis and Van Nouhuys, 1999). Volunteer literature emphasizes that social interaction is the most important factor in retaining members. WG experience in Victoria and Oregon suggests that it is also important to establish group protocols and norms that encourage broad stakeholder representation. These approaches include: encouraging membership from urban residents in nearby towns; demonstrating an inclusive approach to membership by allowing people to "come when they are ready;" rotating leadership positions; identifying and making personal approaches to potential members; and making efforts to retain members, including direct personal contacts to follow up on absences. On-ground work is also an important part of the learning process, both in terms of how to organize a group and to restore degraded areas. Experience with Landcare suggests that it is important for

groups to undertake a variety of activities and work across a range of topics to cater for the different interests of participants. In Oregon, where government agencies have traditionally taken the lead on land use policies and practices, citizens must be made to feel that they have a meaningful role in restoration efforts (State of Oregon, 1999).

Substantial Investment Required by Government

Despite the rhetoric of Landcare as a "grass roots" development, government (and bipartisan) support has been critical to Landcare success. Much of the early success of Landcare was due to the energies, commitment, and expertise of state agency staff. Among other things, government support has enhanced Landcare credibility, funded facilitation and coordination by agency staff, provided important communication links between groups, and through cost-sharing arrangements has funded much of the community education and on-ground work of groups. State and federal government support for arrangements establishing regional CMC has also facilitated regional planning and improved linkages between Landcare groups. In Victoria, higher Landcare group activity is strongly linked to higher levels of government funding and to higher levels of contact with government support staff (Curtis, 2000). In Oregon, where funding is sparse and little time has elapsed for adequate evaluation, preliminary research suggests the same is true (Rickenbach, 1999; State of Oregon, 1999).

While the mean value of funding per Landcare group has increased significantly under the NHT, most groups still receive small amounts of government funding. Indeed, a third of all Victorian groups received less than \$2,000 in 1998 and a majority of groups said the funds they received were inadequate to address problems in their area. Rising levels of dissatisfaction with government commitment to Landcare reflect, at least in part, increased awareness of the extent of cuts to state government expenditure in rural areas over the past decade (Curtis, 2000).

Many Victorian groups need assistance with leadership succession planning, with priority setting and catchment planning, and with member recruitment and retention (Curtis, 2000). In the most recent Victorian survey a majority of respondents said that leadership issues were an important factor affecting the level of their group's activity. Further investigation established that most groups did not have an established process for leadership succession (Curtis, 2000). Successful volunteer organizations have strong induction programs and management styles that reinforce the worth of volunteer contributions (Pearce,

1993). Volunteer literature also emphasizes that it is more efficient to devote resources to retention than to attracting and inducting recruits (Curtis and Van Nouhuys, 1999). Around 40 percent of Victorian groups had not adopted approaches likely to enhance membership retention in that group leaders did not follow up with members when there was a pattern of absence and had not publicly acknowledged the contribution of individual members to projects or administration (Curtis, 2000). Priority setting is also linked with more effective WG (Selin and Myers, 1995; Curtis, 2000). However, about half of the Victorian groups were not involved in catchment planning and where they were, there was often no documented outcome of planning processes (Curtis, 2000).

These program management deficiencies reflect the absence of a coherent and determined approach to the management of Landcare as a volunteer organization. The reality is that Landcare in Victoria has been run with small budgets and limited numbers of personnel, has very few senior staff directly involved in program management, and a limited number of managers with specific knowledge of volunteer management.

The management issues identified above have been linked to burnout among volunteers in a range of settings (Maslach and Leiter, 1997). The core elements of burnout are emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach and Jackson, 1981). In response to community and agency concerns about the phenomena, a pilot study was undertaken in Victoria to assess the extent of burnout and identify factors contributing to higher burnout (Byron *et al.*, 2001). At present only a small proportion of individuals appear to be experiencing high levels of burnout. At the same time, many respondents were experiencing low levels of personal accomplishment and higher burnout was linked to the Landcare group management issues identified above, suggesting that burnout may become an important issue. One approach to the management of burnout is to hold workshops to raise awareness of burnout and explore management strategies in a constructive manner. It would be unreasonable to expect groups to develop and undertake such sophisticated management practices without substantial assistance from trained support staff.

It seems that in both Victoria and Oregon there has been the assumption that, over time, WG would become independent of government funding. This is unrealistic for most groups given the amount of time people have available for volunteer activities, the low profitability of many on-property enterprises, the scale of problems faced, and the extent that there are large public benefits from on-property work. Recent experience in Victoria and Oregon suggests there are three different areas where governments need to

invest in WG. First, there needs to be state-wide coordination of a program that provides for the facilitation of groups as they are established and the training of coordinators and group leaders so they can address critical group management issues.

Second, governments need to provide funds to employ WG coordinators who can facilitate meetings, coordinate watershed planning, prepare funding bids, contribute to community education, and harness local resources for restoration projects. Until very recently, the assumption was that Landcare groups could be "kick-started" by government funding of a coordinator, but over time they would become largely independent of funded coordination. This approach fails to acknowledge the growing weight of Australian (Campbell, 1992; Curtis, 1999) and overseas (Brudney, 1990; Pearce, 1993) evidence highlighting the critical role of group coordination in volunteer programs. Experience with Landcare suggests a minimum of one full-time staff person is needed per Watershed Council or CMC and a shared person between four or five local community groups. Again, these coordinators need to be part of a team that operates within a coherent state-wide program that provides training for coordinators and a systematic process for implementing the monitoring and evaluation of WG health and outcomes.

Finally, as part of the mix of policy options supporting change in management practices, there should be some form of cost sharing for work on private property where there are identifiable public benefits. In some cases it may be necessary to go to 100 percent cost sharing for restoration work and to make stewardship payments for maintaining the new management regime over time. Cost sharing for work on private property has a much shorter history in the U.S. than in Australia. But even these programs have helped reveal potential shortcomings in multi-partner cooperation. In a recent example in Oregon, a 250 million dollar volunteer incentive program to improve riparian management met with low levels of acceptance (State of Oregon, 1999). It was suggested that the low acceptance rate was due to a lack of public knowledge about the program and landowner concerns about their loss of private property rights. Australian landholders are also suspicious of government and jealously guard their private property rights. Experience with Landcare, including the fencing of riparian corridors, suggests that WG operating at the local community scale can build the understanding, trust, and reciprocal relationships needed to surmount some of these issues.

Establish Processes That Build Trust and Competency Among Citizens and Agencies

Establishing trust between agency staff and citizens is fundamental to getting long-term change in watershed condition. This is particularly true where collaborative decision making and management is required across multiple ownerships and where resources are limited and stakeholders are unsure about what to do. Citizens often have difficulty judging the accuracy of information and the level of trust they have for the information provider often shapes their judgments. In comparing case studies in the U.S. and Australia, Moore (1995) noted the importance of trust in both personnel and organizations. She found that trust in individuals most often derived from interpersonal attributes like honesty and reciprocity that fostered productive planning environments and that organizational trust stemmed from decision making processes that participants perceived were fair.

Not only is trust important in building relationships, it is a primary ingredient for building competency. Jamieson (1994) noted that citizens do not come with a ready made ability to engage in constructive, deliberative discussions and that management agencies should contribute to developing the competency of those with whom they engage. Behn (1997:74) went straight to the heart of the issue in saying: "In this age of citizen cynicism, having a reputation for knowing how to run the place is a prerequisite for actually doing it. To accomplish anything, public agencies first need a reputation for competence."

A good way to begin building competency and trust is through the involvement of agency staff in WG strategic planning processes as facilitators and co-learners. In Victorian, Landcare participants consistently report very high levels of satisfaction with agency staff working with groups in terms of their communication skills, technical knowledge, and the level of respect agency staff show towards community participants (Curtis, 2000). With strong agency commitment to participatory processes, agency staff and Landcare members have generally established robust, productive partnerships. Oregon Watershed Council participants also value these attributes highly, but have provided less positive assessments of the quality of their interactions with agency personnel. Oregon participants often raise the concern that agency managers pay lip service to community interests by favoring technical factors over public deliberation (Shindler, 2000).

Achieving broad scale trust and competency is a tall order and may mean considerable changes in the way agencies do business. The potential of poor program management to affect Landcare outcomes was highlighted by the significant decline in on-ground work in Victoria in 1998 that followed delays of up to nine months in receipt of NHT funding by groups (Curtis, 1999). Failure by government to deliver NHT funds on time was perceived as a breach of trust that contributed to growing disillusionment about government commitment to a Landcare partnership. Curtis and Lockwood (2000) argued for the simplification of the NHT funding process by removing some of the layers in the assessment process and for the devolution of greater power to regional communities so that they could manage their own budgets to achieve outcomes identified in their regional catchment plans.

However, trust is fragile and can easily be lost. In Oregon, distrust has surfaced where participants thought their ideas and concerns were not given adequate consideration. Alternatively, trust is more likely to be established and maintained where agencies articulate their reasons for involving landowners and then make good on their commitments (Shindler *et al.*, 1999). The experience with Landcare suggests that problems have arisen where governments ignored community priorities, mismanaged funding processes, attempted to co-opt Landcare by siphoning off Landcare funds to state agencies, or have expected groups to carry out work that is really a government responsibility (Curtis, 1998).

CONCLUSION

As a program that involved only limited funding of a community development process, Landcare has probably exceeded any realistic goals established at the start of the Federal government's Decade of Landcare in 1989. Much the same can be said about the short life of Oregon's Watershed Council movement. In varying degrees, both programs can claim considerable accomplishments including mobilizing a large cross section of the rural community, increasing awareness of issues, enhancing the knowledge and skills of resource managers, increasing adoption of best practices, and contributing to improved environmental conditions in some smaller catchments. The rapidly increasing number of watershed networks provide another tier of local organization likely to improve communication between groups and enhance the capacity of groups to address regional problems, pull down resources from cooperating agencies, and shape natural resource management policy.

We have also raised a number of critiques of the WG initiatives in Victoria and Oregon, but it is probably poor program management at state and federal levels that has had greatest impact on outcomes. Participants in both countries say they need more support in terms of government funding for on-ground work; better support for group administration, particularly in terms of funding of coordinators; and training for group leaders. In part, these management deficiencies reflect the absence of a focused and determined approach to the management of WG as volunteer organizations. Many groups are not effectively managing leadership succession, priority setting and catchment planning, or member recruitment and retention. Landcare is only loosely coordinated at state and regional levels and there are few staff dedicated to providing that support. Initial reports suggest that Watershed Councils in Oregon suffer from poor program recognition and a lack effective community outreach.

Australia has a tradition of strong government intervention in economic and social affairs and this may explain why a program such as Landcare might take hold more readily in Australia than elsewhere. It is also important to remember that Landcare emerged over time as part of an iterative process in which sound rural development theory and practice was adapted to Australian contexts. Landcare, therefore, offers a powerful example of how to establish effective local organizations across a range of jurisdictions and issues.

Reflecting on the experience with Landcare in Victoria and with Watershed Councils in Oregon we have identified five guiding principles that appear fundamental to sustaining WG initiatives over time. In the first instance, these groups must be established at a local scale using social as well as biophysical boundaries. If these local organizations are to be sustained, it is critical that they are embedded within a supportive institutional framework that identifies realistic roles for private landowners, local organizations, and regional planning bodies. Without broad stakeholder representation, the perceived benefits of participation are quickly forfeited. It is also unrealistic to expect an effective network of local groups to be sustained without substantial investment by government. There must also be the commitment and skills within a program to establish processes that build trust and competency among citizens and agencies. These five principles should also provide a foundation for the critical evaluation of WG programs in Australia and the U.S.

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