

Keynote: Land Care In Australia

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ABSTRACT

Landcare in Australia, as a voluntary, community driven, 'middle of the road' conservation phenomenon, is a decade old. Landcare is a new -way of thinking and acting. The community, government, non government organizations and the corporate sector have created partnerships to address degradation of Australia's natural resource base: its soil, water and biodiversity. Awareness of natural resource issues and empowerment for individuals and communities to make a positive contribution to the environment has been outcomes of landcare activity. Government funding has been a catalyst for landcare projects and these works have been implemented in line with national and regional natural resource and environmental management strategies. Bipartisan political support, peak conservation and farmer group endorsement, community awareness and participation, and a national marketing and awareness campaign are the four 'pillars' integral to the success of landcare in implementing change to more sustainable natural resource use. It is a unique model for achieving positive environmental and farming outcomes - with social and economic benefits for whole communities - even nations.

INTRODUCTION

Landcare in Australia, as a voluntary, community driven, 'middle of the road' conservation movement, is now a decade old. In this paper, I will show how landcare is achieving on-ground change in natural resource management in Australia. I will highlight the common threads that account for successful landcare activities, for you to draw conclusions about their applicability to your own communities.

The Setting

Australia is the driest populated continent on earth, supporting nearly 20 million people in area only marginally smaller than the United States of America (excluding Alaska and Hawaii). Australians have enjoyed one of the highest standards of living in the world through the exploitation of our natural resources but it is only in recent years that we have begun, as a whole community, to question the sustainability of those actions.

In just 211 years since white settlement, Australia has developed and exploited its natural resources in ways that have not been sustainable. The signs of a degraded natural resource base are abundantly clear with dry land salinity, decline in water quality and quantity and loss of biodiversity only recently recognized by the community as major problems. Soil structure decline, soil erosion, acidification and introduced pest plants and animals compound these

problems. The cost in lost production and lost or still -degrading environmental resources is estimated to be 1.5 billion dollars annually.

Australia's community based landcare movement is the best hope we have of dealing with such major land and water degradation issues. For many local communities, landcare equates to a renewed hope and energy in the effort to ensure we can sustain our unique environment, standard of living and cultures.

BACKGROUND

Although landcare already existed in various guises, Landcare had its official birth in 1989. The peak farmer and conservation lobbies, the National Farmers' Federation and Australian Conservation Foundation (previously adversaries) together convinced the Federal Government to commit a decade of financial resources to rural communities, for landcare projects to restore and enhance Australia's natural resources.

The commitment from the Federal Government was tied to a detailed plan: the Decade of Landcare Plan (covering the 1990s). Each of the States and Territories comprising the Commonwealth developed their own Decade Plans with multi-agency, non-government organization (NGO), and community input. The Decade of Landcare Plan covered awareness, on-ground activity, research, education, and government commitment and support objectives. It was used as the basis for government funding of facilitation and coordination projects. These projects directly assisted landcare groups to form and become active.

Land care groups consist of farming families, local residents, students, businesses, and anybody who wants to make a positive difference to their local environment. The principal activity of groups is on-ground work (environmental restoration). Awareness raising, planning, monitoring and research across both privately and publicly owned land makes Land care far more sophisticated than Band-aid measures addressing symptoms.

Land care is promoted to all Australians, not just farmers operating on private land. For Example, Coastcare was launched in 1998 to allow seaboard communities to get involved in restoration of our coastal environment. Australia's population is largely concentrated within the coastal zone. Landcare also has issue specific funding sub-programs, such as Bushcare, Rivercare and even Officecare (supported by the corporate sector). The ultimate aim is for all Australians to appreciate the impact they have on their environment in supporting their standard of living and hopefully change the way they function in their homes, backyard and business. This can be as simple as recycling paper in the office, planting a tree in a local park or as

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radical as designing whole new farming systems for the 21st Century.

NREM Policy Framework

It is only in the last decade that Australia has established an integrated catchment (watershed) planning framework within and across State boundaries.

The 1989 Catchment Management Act was established by the NSW Government to allow more involvement of communities in decision making and planning at local and regional levels. Government agencies, NGOs, farmers and environmental interests comprise the Catchment Management Committees (CMCs). NSW presently has 42 committees and three Catchment Management Trusts. These CMCs are responsible to a State Catchment Management Coordinating Committee for overseeing the implementation of Natural Resource and Environmental Management (NREM) strategies. It is landcare groups who do the physical work of implementing the strategies.

Landcare's Success

It is difficult to drive across central western New South Wales without noticing 'the caring hands', symbol on yet another landcare project.

The growth in community (rural and urban) awareness of Landcare has climbed to 81% nationally in the space of nine years. This is undoubtedly a marketing triumph.

Since its official launch, landcare has continued to grow unchecked. There has been a quiet revolution in land management action, research and extension in Australia.

Australian farmers involved with landcare are now better equipped to adopt more sustainable land management practice. Only the current poor rate of economic return from agriculture detracts from more rapid implementation of change to more sustainable systems of production.

There were 4,511 registered landcare groups across Australia by June 1998. In my own local government area, there are 21 landcare groups managing 720,000 hectares of land, which represents 40% of the Parkes Shire. In April 1999, there were 26,437 registered members of landcare groups in NSW.

The critical developments contributing to landcare's success have been:

- The establishment of a cost sharing funding program (Natural Heritage Trust) that provides support to community group
- Projects that are developed at the 'grassroots' level to address local conservation/productivity issues;
- An alliance between the peak conservation group (Australian Conservation Foundation) and the National Farmers' Federation to support landcare;
- Genuine long-term bipartisan political support and partnerships between the Federal and state agencies to facilitate the development of a landcare movement; and
- The establishment of Landcare Australia Limited (Landcare Australia), a not-for-profit company (and fundraising Foundation) that undertook a national marketing campaign using corporate sponsorship to raise awareness of landcare

- Issues in rural and urban communities and drive participation in the landcare movement.

The growth of involvement in landcare beyond awareness can be explained by several factors. There are now many successful completed projects and success builds on success. Growth is fostered by communication of landcare achievements through State and National Landcare Awards, and there is simply the satisfaction that people get from actively engaging in improving their environment.

Evaluation of Success

One of landcare's biggest challenges is to improve evaluation of its successes. Because of its grass roots 'bottom-up' structure, there are few national mechanisms for measuring or collating on-ground outcomes. Evidence of landcare's success is mostly gained from case studies and surveys into behavior and awareness.

Some of the indicators of performance that are used to measure landcare's success are:

Adoption of Sustainable Practices

The Australian Bureau of Agricultural and Resource Economics (ABARE) quantified the adoption of sustainable farming practices in a landcare survey in 1998. This most recent survey showed that:

- I. Landcare members are 50-70% more likely to adopt sustainable farming techniques
- II. Approximately 61% of broad acre and dairy farmers now maintain vegetation on drainage lines to minimize erosion and exclude stock from degraded areas as part of normal farm practice
- III. 73% of farmers who are landcare members preserve or enhance areas of conservation value on their farms

Growth of landcare groups -- In 1989 a target of 2,000 groups by the year 2000 was set. However, we will achieve 5,000 landcare groups by the end of the Decade of Landcare. Each State and Territory has a registration mechanism for groups.

Case studies

Landcare Australia and other landcare organizations gather and disseminate case study materials through the *Australian Landcare* magazine, conferences, publications, web sites and videos. Case studies, such as National Landcare Award winners, Tom and Sue Loughridge of Victoria, give anecdotal evidence of the potential of improving productivity through landcare practices. Since 1982, the Loughridges retired 15% of their farm to areas of revegetation. They were able to increase their dairy herd from 160 to 230 cows and production per cow rose by 25%, demonstrating the 'bottom line' benefits of conservation.

A Queensland farm belonging to the Shane Joyce, under drought conditions, has achieved a 3% increase in return on capital in addition to improved soil fertility by integrating nature conservation (wide corridors of remnant vegetation) into his cattle and cropping country.

RESEARCH

Various organizations and universities carry out regular qualitative and quantitative research into awareness of landcare and changing behavior of landcare members.

Awareness and Education Activities

Landcare activities are now entrenched in school curricula across Australia. Children are involved in recycling, revegetating school grounds, bug watch and water quality surveys in local waterways and general monitoring of their environment. Environmental education in schools has expanded exponentially during the Decade of Landcare and the product is a more environmentally aware youth - the decision makers of tomorrow.

Databases of project reports are being established at State and National levels, but few of these have been analyzed to show what has been achieved to reverse the decline in the country's natural resources. It is difficult at this point in time to say, at a national level, just how many trees have been planted, how much remnant vegetation has been fenced for conservation purposes or to what degree dryland salinity is being arrested. It is also difficult to determine the impact of landcare on rural community health and Australia's environmental and economic indicators.

My personal experience is that landcare is having a profound impact on many farmers in our district. Landcare has been highly successful in catalyzing fundamental change in the way we regard our natural resources and manage our agricultural production systems.

Focus on Local Action

I would like to present three examples of how local landcare action has had widespread benefits for land stewardship. The first is my own landcare group. The second is a Western Australian catchment project with several local foci and generous corporate sponsorship. The third is a national Olympic Landcare catchment rehabilitation project, climaxing on a single day, but drawing on community and corporate partnerships over a full year to raise landcare awareness.

Genaren Hill Land care Project (Local Level Land care)

The Genaren Hill Landcare Group consists of 14 farming families in the Bogan River catchment in central western New South Wales, in the heart of the wheat /sheep belt. Like many others, our district has been highly modified from its original woodland state. Only 5% of the remnant vegetation still exists in discontinuous or isolated remnants on farmland.

Our group formed in January 1992 at community meeting with a focus project in mind. There was consensus within the group that productive agricultural systems require surrounding healthy ecosystems to function sustainably. We decided our priorities were soil structure decline (caused by 80 years of inappropriate farming techniques), loss of biodiversity, loss of farm trees, gully erosion, feral animals and introduced weeds.

Farm planning is the key to many land care activities and as a group; we are able to see how each other's actions affect

our neighbor's property. As a group we are able to plan our land care activities to strategically enhance the condition of our whole landscape even though it is just part of the catchment. Farm planning workshops were held using new aerial photographs of individual farms.

As a group we are able to attract extension professionals, both government and non-government who would usually be unable to justify one-on-one extension. The National Landcare Program (under the Natural Heritage Trust) provided additional resources for the increase in demand for farm planning.

A lot of landcare activities sound like mere common sense but it is remarkable how isolated farmers can become. All of us had worked hard on our individual properties and talked to each other occasionally about new technologies or niggling problems, but only through land care did we start learning about local planning issues together. We dug soil pits and got our hands dirty as a group in order to identify soil types, soil structure and land use capability. After standing in a neighbor's open field on a freezing windy winter's day we sheltered in one of his innovative tree corridors. As we warmed up in the protection of the trees we realized the benefits of tree lines to stock and to ourselves. This sort of learning opportunity had never really occurred before.

On our own farm, we now continuously crop in rotations using minimum till/direct drilling technology on our most robust soils.

Duplex soils, which tend to be slightly sodic, are improved by direct drilling winter active legumes into summer active native perennial grasses. Some areas of our farm have been designated for grazing only with management of native vegetation influencing grazing strategies.

Land care, by its very nature, supports innovative projects that were once inconceivable. On our own property with assistance from the rest of the group, we developed a 390 hectare area of the farm purely for nature conservation. Community and government assistance was obtained to erect an 8.4 km long fox/cat proof fence around an area of good quality remnant native vegetation. All livestock and introduced predators (foxes and cats) were removed and two marsupial species have since been reintroduced to the area - the threatened brush-tailed bettong (*Bettongia penicillata*) and the endangered bridled nailtail wallaby (*Oryzogalea fraenata*). Australia has the dubious record of the most mammal extinctions in the world over the past two hundred years and these species have been extinct in NSW since the 1920s.

Australia has a very poor history of conservation outside of the National Parks system. The Genaren Hill Landcare Project has demonstrated that nature conservation can be incorporated with agricultural production. A Voluntary Conservation Agreement and accompanying Plan of Management was signed by the NSW Environment Minister and us to manage the Genaren Hill Sanctuary in perpetuity for its scientific, conservation and education values.

Recently our group purchased an air photo mosaic (1:25,000 scale) to assist in the strategic protection and revegetation of a 50,000 hectare area, which contains

properties that do not presently belong to the landcare group. Between 1998-2000, our group will erect an additional 85km of fencing and plant 35,000 trees. The fencing and planting will strategically link areas of existing remnants and recreate corridors for wildlife. Property Management Agreements will be negotiated with the Department of Land and Water Conservation (DLWC) to enhance the value of the fencing and revegetation projects.

Landcare has enabled our group to establish partnerships with research institutions and agencies such as the Department of Land and Water Conservation (sodic soils), Charles Sturt University (re-introduction biology), CSIRO (woodland ecology) and Land and Water Resource Research Development Corporation and University of Melbourne (ethnographic evaluation and environmental history). There has been a real shift in the way traditional extension and research has focused since the emergence of landcare with a captive audience through which two-way dissemination of ideas can flow.

We know that the wider community is being influenced by our local action because other farmers want to join the group and further afield, groups are emulating our successes.

Swan-Avon Catchment and Alcoa (Catchment Level Landcare)

The Alcoa Landcare Project is a partnership between the mining company, Alcoa of Australia, the National Landcare Program and community landcare groups.

In the Avon catchment of Western Australia (an area larger than Tasmania), six catchment groups form the heart of the Alcoa Landcare Vision Project. While they perform vital rehabilitation work in their own right, they have a more important role as full scale demonstration models of 'landcare in action'.

The Landcare Vision farmers have undertaken one of the most intensive catchment planning and works programs in Australia. Each of the six participating groups conducted extensive catchment planning including maps of soils, land management units, land degradation hazards and existing remnant vegetation works. Information from these plans was combined with technical expertise from Agriculture WA to develop long-term flexible catchment plans.

Group members are demonstrating and encouraging the use of earth works; working on the contour; alley farming; wildlife corridors; applying lime, potash and gypsum; using no-till seeding techniques; and protecting and enhancing remnant vegetation.

Thanks to help from Alcoa, the WA Department of Agriculture and the National Landcare Program, the farmers have planted over one and a quarter million trees and fodder shrubs, put up nearly 1,000 kilometers of fencing treated over 700 specific sites and revegetated 500 kilometers of creek banks in the past five years.

In their role as major demonstration projects, the groups host hundreds of visitors through tours each year. It is estimated that more than 100 catchment groups have formed around the six original Landcare Vision members.

Olympic Landcare -National Level Landcare

A few years ago, a Tasmanian landcare coordinator and an artist were discussing how to raise awareness about landcare. They came up with the idea of finding a prominent dead tree beside a highway and painting it red.

The concept of using the artistic symbol, a gold-painted dead trees has been carried through to Olympic Landcare - a major three-year project that aims to plant at least three million trees across Australia and take the "Green Olympics" out to the nation in the lead up to the Olympic Games.

Olympic Landcare is a partnership that involves Landcare Australia as the overall coordinating organization, endorsement from the Sydney Organizing Committee of the Olympic Games (SOCOG), and participation from Federal and State Governments, NGOs and landscapers everywhere. It is funded by Olympic sponsors; BHP, Fuji Xerox, Telstra and Westpac; as well as the Federal Government's Natural Heritage Trust.

Every State and Territory selects a major planting area in a catchment near their capital cities. Local community based steering committees manage the projects and hundreds (eventually thousands) of volunteers travel out to help locals with a special planting event that supplements more long-term work.

Lithgow, near Sydney, was chosen for a 1998 Olympic Landcare Project. This city is in the catchment that drains to Sydney's water supply and is under heavy environmental pressure. A 'Green Corps' team of trainees and about 700 school children joined in the preparatory work for the main event in September.

The big event dawned with poor weather, but that did not deter the 700 volunteers from all over Sydney. They joined the Olympic Landcare Express train, which had entertainment, food, drink, games and a landcare facilitator in every carriage to help participants feel part of the team. Around 500 locals and representatives from the Wiradjuri community turned out at the Lake Lyell site to work alongside the city visitors to get the day's tree target in the ground.

Despite the weather, 17,000 native trees and shrubs were planted during the day at Lithgow and the Gold Tree by the lake remains a talking point to this day. Around 280,000 trees were planted nationally while volunteers got a taste of landcare and had a great day. Sponsors received good return on their investment through physical involvement and positive publicity. The media attention inspires others to become involved and support landcare.

In the year 2000, Olympic Landcare will culminate in the planting of one million trees to help reverse land and water degradation, reduce greenhouse gasses and leave a positive environmental legacy from the Sydney 2000 Olympic Games.

Transferability of Landcare's Success

Landcare has recently been established in the Republic of South Africa and New Zealand and there is inquiry from other countries. While the form that landcare takes in other locations and cultures will undoubtedly vary, its major principles are transferable to many other communities.

One of the features that makes landcare so successful in Australia is the recognition by the whole community that we need to strive for more sustainable uses of our finite natural resources. Land degradation is not just a problem for farmers to solve but rather the whole of society needs to take responsibility. Until the whole community embraces the need for change, it will not occur. Government policy and financial assistance reflects community expectations and a framework of integrated catchment management exists across Australia.

Landcare Australia's role in developing a visually powerful logo (the caring hands around Australia) and promoting the ethic and logo to the whole community has been important in getting both rural and urban people behind the need for landcare. The urban population's support for their taxes being spent on reversing land and water degradation has reinforced successive governments' commitment to landcare.

Corporate involvement in landcare, through sponsorships, is a model that could be easily adapted to many countries. The United States is known for the generosity of its philanthropic society and Landcare Australia has demonstrated the potential of the Australian corporate sector to become involved in landcare, with more than 500 landcare groups receiving funding since Landcare Australia began fundraising.

International Landcare

The Australian and Resources Management Council of Australia and New Zealand (ARMCANZ) and Landcare Australia are hosting an International Landcare Conference 6-9 March 2000 in Melbourne. The conference will set the context for community-based sustainable resource management programs. It will explore the global issues and link these to local actions. It will trace the path from policy development to on-ground implementation. Training workshops will be held for six countries interested in finding out more about Australian landcare. Pre and post conference tours will travel from all corners of the country taking in the unique Australian landscape and the diversity of landcare activity.

CONCLUSIONS

There are still communities and regions of Australia where landcare has not been embraced. With 35-40% of farmers in Landcare groups to date, there is still a lot of work to be done. Australians also need to focus more attention on sustainable farming systems rather than individual commodity production. Using Australia's mega diverse, native flora and fauna in Australian agricultural production systems is only just emerging as an alternative to imported systems.

The key supporting mechanisms and factors that sustain landcare in Australia are:

- Government commitment to Ecologically Sustainable Development (ESD),
- Increasing community awareness of environmental costs of unsustainable development and willingness to participate in solutions,

- Landcare is inclusive of all people (urban and rural) of all ages and backgrounds,
- Landcare has bipartisan political support as well as from farmer and green groups,
- Groups and communities are planning at farm, sub-catchment and catchment level to comply with regional planning objectives, which have been developed with community input,
- In a period of difficult socio-economic conditions across rural Australia, Government investment in on-ground projects has provided a catalyst for change,
- The partnerships that have been created between government, NGOs, corporate sponsors and communities to implement projects,
- An integrated catchment management framework to support on-ground and policy strategies and,
- A National marketing and corporate sponsorship campaign.

As somebody who has been involved with landcare for eight years, I can personally testify that the landcare phenomenon has transformed the way that my family and our community manage our natural resources. Our actions I feel confident are pointing us down the road to sustainability.

Landcare in Australia is a good model for achieving positive environmental and farming outcomes --with social and economic benefits for whole communities - even nations.

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