



The value of Landcare to the Australian community

Landcare NSW

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Executive Summary

Landcare is a unique community-based approach to managing and restoring Australia's natural environment and improving the sustainability of agricultural activities. Established in the late 1980s, Landcare and its associated networks of community-based action have constantly evolved, responding to the opportunities and challenges posed by successive Governments' approaches to managing Australia's challenging natural environment.

Consistent throughout these past three decades has been the critical role that Landcare has played in leading Australia's approach to agricultural practices, natural resource management, environmental protection and biodiversity conservation. While these positive environmental and agricultural impacts of Landcare have been well recognised, the multiple benefits derived from the economic, social and cultural contributions of this volunteer and not-for-profit movement have not been as widely appreciated.

This Landcare NSW Position Statement outlines the extent of these economic, social and cultural benefits, highlighting the enormous role Landcare has played in building and maintaining the capacity and social cohesion of many communities, particularly in rural and regional Australia.

As this statement demonstrates, Landcare has provided a framework for land owners and managers to formally and informally recognise existing expertise and knowledge, to share information and experiences and to support further learning and communities of practice. Landcare groups and networks have also provided a foundation for intergenerational learning, particularly through its school-based activities.

Founded on the understanding that community action is required to collectively address environmental and sustainability challenges, Landcare has brought together people of different ages, cultures and socio-economic groups, positively impacting on the health and wellbeing of both communities and individuals. The volunteering aspect of Landcare has further supported individual wellbeing and mental health by helping people feel valued and part of their community.

Individuals and communities involved in Landcare have developed extensive experience and skills in working with governments, non-government organisations and businesses, in grant management, project management, financial, communication and governance systems – all transferrable experience, skills and systems which are utilised in a broad range of other social, economic and community activities.

Landcare groups, networks and programs have also provided a forum for engagement between Aboriginal and Torres Strait Islander Peoples and other Australians, and a platform for increasing the recognition of women in regional and rural communities.

On the economic front, the Landcare model has matched vast volunteer time and effort with major in-kind and financial investment in communities, resulting in significant multiplier effects for Government investment. For a relatively small investment there have been significant returns for Government and the community at large. The benefits of investment in Landcare – for instance clean water, improved health and community relations – extend well beyond the (private) individual landholder or a Landcare group, to the community at large.

In summary, Landcare has brought enormous value to Australia over the past three decades, extending well beyond its positive environmental and agricultural impacts.

Contents

Executive Summary	3
Introduction	5
What is Landcare?	5
Origins of Landcare	5
Landcare today	6
Landcare in the Australian community.....	8
A framework for information sharing and intergenerational learning	8
Scaling up/out of sustainable environmental and agricultural practices	9
Supporting biodiversity conservation and protecting threatened species	9
Building community capacity, social capital and leadership	10
Facilitating group action planning and landscape approaches	11
Supporting social cohesion and resilience of local communities	12
Encouraging investment in communities	13
Supporting the health and welfare of individuals	13
Engaging with Aboriginal and Torres Strait Islanders	15
Increased recognition of women in rural communities	16
Raising environmental awareness in the broader community	16
Climate change mitigation and adaptation	17
Providing international leadership	18
Conclusion.....	19
References	19

Introduction

What is Landcare?

Landcare is a unique community-based approach to managing and restoring Australia's natural environment and improving the sustainability of agricultural activities.

Established more than 30 years ago, Landcare and its associated networks of community-based action have played a leading role not only in Australia's natural resource management – including improving the sustainability of agricultural activities – but have led the world in developing and implementing community-based processes to shift attitudes and practices towards sustainable resource use and management at a local level (Love, 2011).

Landcare comes in many forms. Embracing Bushcare, Coastcare, Rivercare, Dunecare and Junior Landcare, the Landcare movement itself includes more than 6000 community-based groups and district, regional and national networks (Australian Government Department of Agriculture, 2014a). These groups are augmented by countless associated projects and partnerships with like-minded groups and communities, extending across Australia's vast physical environment – from the coastline and urban areas, to agricultural and remote Aboriginal lands.

Origins of Landcare

The national Landcare movement grew from initiatives in the mid-1980s which utilised community-based learning and action to address land conservation issues. The first Landcare group formed in Winjallock in Victoria in November 1986 in response to concerns about land degradation and biodiversity loss (Love, 2011). With farmers and conservationists alike appreciating the benefits of community-based action to address environmental degradation, the Landcare movement gradually expanded from these early origins to a national movement, philosophy and ethos.

The catalyst for national action was prompted by an alliance between the leaders of the National Farmers Federation and the Australian Conservation Foundation, who joined forces in the late 1980s to lobby the Australian Government to provide leadership for an integrated national framework focused on sustainable land use management and environmental protection. Launched in July 1989, then Prime Minister Bob Hawke's Statement of the Environment 'Our Country Our Future' provided the basis for the Year of Landcare in 1990 and a decade long program, backed by administrative, infrastructure, technical and financial support of the Australian, State and Territory Governments.

From these early days, Landcare has constantly evolved, responding to the opportunities and challenges posed by successive Governments' (at all three levels) approach to agricultural practices, natural resource management, environmental protection and biodiversity conservation. The National Landcare Program of the early 1990s, through the later 1990s and early 2000s, closely aligned with the National Heritage Trust, and more recently the Caring for Our Country (see Figure 1) and Biodiversity Fund. Landcare has worked in partnership with governments at all levels, corporate and philanthropic sponsors, and non-government organisations to deliver real outcomes for Australia's environment and community.



**Figure 1: A fencing project in Walcha, NSW, funded by the Caring for our Country 2010-13 project
(photo by: Chris Whackett)**

Landcare today

Today Landcare is conceived as an approach comprising four key elements:

- A philosophy, influencing the way people live in the landscape while caring for the land – **the Landcare ethic**;
- Local community action putting the philosophy into practice – **the Landcare movement** founded on stewardship and volunteers;
- A range of knowledge generation, sharing and support mechanisms including groups, networks from district to national levels, facilitators and coordinators, government and non-government programs and partnerships - the **Landcare model** (Australian Landcare Council Secretariat, 2010a); and,
- Landcare groups and networks, which through the generation of social capital, promote positive behavioural norms, and motivate and facilitate the generation of community action and knowledge.

Landcare groups and initiatives across Australia range from small groups of volunteers with a single narrow objective, to large professional organisations delivering major projects and servicing extended communities and interests.

Landcare groups are local, community-based responses to local community problems and challenges, and as such demonstrate considerable flexibility and variation in both their programs and objectives. Landcare networks operate at a larger scale and have formed in a variety of ways including state agency intervention, collaborative non-government efforts and spontaneously through internal initiative. At both local and network levels, Landcare has a 'flat' organisation, with no complex or unnecessary hierarchy (Sobels et al., 2001). Rather than a one-size-fits-all approach to natural resource management, agricultural sustainability and environmental protection, Landcare's organisational structure reflects the organic evolution of many groups and projects, and embraces the diversity and difference of communities across Australia (Youl et al., 2006).

While there is enormous diversity in the size, types and objectives of Landcare groups and networks, a common element across all initiatives is its grassroots local nature. Landcare is an egalitarian, inclusive, democratic movement driven from and for the community, embracing localism as a means for engaging and motivating communities. Involving people of all ages and from across Australia's diverse cultural population, including Aboriginal and Torres Strait Islander Peoples, Landcare encourages tens of thousands of volunteers to actively and collectively own and address the environmental and sustainability challenges faced by Australia – in New South Wales alone there are an estimated 58,000 people involved in formal Landcare groups (Landcare Support NSW, 2014).

Landcare in NSW has a diverse range of operating structures - at the core of which are small local Landcare groups, operating on their patch, involved in activities and projects to address locally important issues. These local groups are supported by Landcare Networks, and/or local government, to provide the administrative and operational support and are a critical link to supporting the effectiveness of local volunteer action. To ensure that local and district Landcare are recognised and supported through the regional delivery mechanism of State and Federal programs, Landcare has itself developed Regional structures - both formal and informal, and Landcare NSW has representatives from each of these regions sitting on its Council, to ensure that the voice of grassroots Landcare can be taken to State level policy and programs through the work of Landcare NSW.

Undertaking projects large and small, Landcare volunteers have engaged in a broad range of agricultural and environmental activities across Australia. By developing sustainable cropping techniques, implementing drought management programs, encouraging safe chemical use and storage, and undertaking projects to manage climate variability, minimise nutrient run-off and manage groundwater and salinity, Landcare programs and communities have improved the sustainability of agricultural activities that cover around 60% of Australia's land area and create food and fibre (Hajkowicz, 2009).

Landcare groups have also played a leading role in protecting, enhancing and rehabilitating the natural environment in both urban and rural areas – from collecting litter and embracing bush regeneration by planting millions of trees, shrubs and grasses, through to stabilising sand dunes and riverbanks to reduce erosion and improve water quality, protecting threatened species by providing habitat for native wildlife and repairing eroding gullies and walking tracks.

Landcare groups undertake farmer to farmer extension, developing, testing and adapting new sustainable natural resource management and sustainable agriculture technologies (Prior 2012). These local capacities are important for household and community adaptation to climate variability.

Despite the positive impact Landcare has had on the Australian community, it is an ongoing challenge to access sufficient funding to implement various activities. This is partly because in the current natural resources management policy environment, a lot of emphasis is given to investment plans that are easily implementable, quantifiable and auditable (Tennent and Lockie, 2013).

While Landcare's positive impact on Australia's rural and urban landscapes is well recognised, the multiple benefits of Landcare, and its influence and impact, has extended well beyond these environmental and agricultural achievements (GHD 2013). The most significant benefits, influences and impacts of Landcare within the Australian community are discussed in the remainder of this paper.

Landcare in the Australian community

Landcare has traditionally been focused on the management and restoration of Australia's natural environment, and improving the sustainability of agricultural practices. As such, Landcare's positive environmental and agricultural impact is well understood and documented. However, the multiple benefits of the economic, social and cultural contributions that this volunteer and not-for-profit movement has made has not been as widely appreciated. The overall value of Landcare to the Australian community is discussed below.

A framework for information sharing and intergenerational learning

By coming together at community meetings and workshops, field days, property management planning activities, and state and national forums, Landcare's community-based networks have encouraged collaboration and innovation around sustainable farming, natural resource management and programs to repair and prevent environmental degradation.

Landcare has provided a framework for land owners and managers to formally and informally recognise existing expertise and knowledge – including the cultural knowledge and 'caring for country' approach of Aboriginal and Torres Strait Islander Australians – as well as engage in peer to peer learning, to develop communities of practice and share information and experiences – as well as drive local research and development into production methods, farming systems and natural resource management.

Landcare represents a reservoir of trust and goodwill; it has helped to build connectedness between neighbours and across communities, as they talk together and work together to more effectively solve their local problems through networks and partnerships.

Landcare has also supported intergenerational learning, through group corporate knowledge, family knowledge and school activities. Activities involving school students in practical environmental projects and outdoor 'living classrooms', such as kitchen gardens and composting projects, have been particularly effective in promoting learning amongst young people (Love, 2011).

Scaling up/out of sustainable environmental and agricultural practices

As discussed above, Landcare traces its roots to the recognised need to restore Australia's natural environment and improve the sustainability of agricultural practices. Over the years, Landcare has undertaken this by promoting or scaling up new research, ideas or innovations that help to achieve greater positive impacts. This process involves the creation of institutional linkages to influence organisational and public policies, incorporation of new methods for stimulating agricultural development and transfer of methodologies that change the way institutions function.

As Landcare expanded from its origins in Victoria to the rest of Australia and even internationally, so did knowledge and innovations that had proved successful. Landcare is thus at the forefront of the geographical spread of sustainable environmental and agricultural practices, which is facilitated by knowledge and innovation exchanges; for instance between farmers, farmer groups, farmers and research and extension agencies, and agribusiness organisations and non-governmental organisations (NGOs).

Some of the landmark innovations credited to Landcare in Australia include:

- research that led to use of gypsum to control waterlogging in South Australia;
- the scaling-out of silver grass (*Vulpia* spp.) and the subsequent research, extension and monitoring;
- advancement of conservation farming technologies and minimum tillage cropping systems;
- promotion of the greater use of native and perennial grasses and the development of new grasslands with high water consumption ideal for combating dryland salinity; and
- mapping regional soil salinity in Victoria using EM 38 technology and increasing farmers' awareness of salinity (Youl et al., 2006).

Supporting biodiversity conservation and protecting threatened species

Australia's biodiversity, which is characterised by different plant and animal species, micro-organisms and their ecosystems, is fundamental to the survival of humankind and other living things. Apart from being the source of basic necessities such as food, water and fibre, biodiversity also supports recreational and cultural activities. However, Australia's biodiversity is constantly under threat such as frequent fire outbreaks, unsustainable use of natural resources and spread of invasive species.

The Australian Government's commitment to conserve biodiversity and protect threatened species is outlined in Australia's Biodiversity Conservation Strategy 2010 – 2030 (Natural Resource Management Ministerial Council, 2016). The central theme of this strategy is to engage all Australians to take responsibility for, and become involved in biodiversity conservation. Landcare and other community-based groups are particularly important in biodiversity conservation because of their close connection with the community (Ecker, 2016). The recent review of NSW biodiversity legislation undertaken by the Independent Biodiversity Legislation Review Panel (Byron et al., 2014) recommended that the Government should supplement market-driven conservation activities with direct Government investment and encourage the involvement of community bodies such as Landcare. The recommendations of the review were adopted by the NSW Government and underpin the **Biodiversity Conservation Bill 2016** passed by the NSW parliament in November 2016 (Parliament of New South Wales, 2016). A survey undertaken by Marshall et al. (2016) to investigate collective action in invasive species control (serrated tussock, *Nassella*

trichotoma, in particular) suggested that respondents who were members of a Landcare group were more likely to participate in such a program.

Landcare also cultivates trust and good relationship with the community, which is important in addressing transboundary and complex problems such as biodiversity conservation and the protection of threatened species (Graham, 2014).

Building community capacity, social capital and leadership

With more than three decades as resourceful, self-organising groups – with extensive experience in fostering strategic partnerships and collaboratively delivering projects, Landcare programs have significantly developed the capacity of the communities in which they operate.

Landcare groups and networks have developed extensive experience in grant management, in working with governments, non-government organisations and businesses, in driving community-based research and science projects, and in managing volunteers and teams. Many groups have developed project management, financial, communication and governance systems to support their programs¹ – all transferrable skills and systems which are utilised in a broad range of other social, economic and community activities.

In addition, Landcare members have increasingly taken a leadership role in their communities. On issues extending well beyond environmental degradation and sustainable agriculture, Landcare members are representing their communities to governments on local and regional issues of importance – and engaging with other key stakeholders, including private sector and industry boards, schools and local government (Toyne and Farley, 2000; GHD, 2013). In general, farmers' participation in Landcare activities has led to: enhanced human capacity in terms of individual farmers' knowledge, understanding, attitudes and skills in sustainable natural resource management; and social capacity in terms of the quality and frequency of interactions between and within Landcare groups and other organisations that may include government agencies, the business sector and research and educational institutions (Prior, 2012).

The relationships underpinning Landcare have also contributed to the development of social capital – defined by the Productivity Commission (2003) as “the social norms, networks and trust that facilitate cooperation within or between groups.”² Landcare groups have helped build social capital by establishing trust, building relationships and social bonding amongst peers, working in partnership with government and industry, and generating developing land management norms and standards (GHD, 2013; Curtis, 2003). According to Prior (2012), groups with a high social capital are likely to: participate in networks, undertake

¹ See, for example, Landcare NSW's extensive online Factsheet series, covering issues including Running Efficient Meetings, Duties of Office Bearers, Record Retention, DGR Status, as well as information about company law, financial reviews, audits, insurance, work health and safety and social media: <http://www.landcarensw.org.au/resources.php?tid=2> (accessed 31 July 2014).

² Note that the Australian Bureau of Statistics utilises the Organisation for Economic Cooperation and Development (OECD) definition of social capital: "networks, together with shared norms, values and understandings which facilitate cooperation within or among groups": Australian Bureau of Statistics, *Measuring Social Capital: An Australian Framework and Indicators*, Information Paper 1378.0, 2004: [http://www.ausstats.abs.gov.au/ausstats/free.nsf/Lookup/13C0688F6B98DD45CA256E360077D526/\\$File/13780_2004.pdf](http://www.ausstats.abs.gov.au/ausstats/free.nsf/Lookup/13C0688F6B98DD45CA256E360077D526/$File/13780_2004.pdf) (accessed 31 July 2014).

co-learning, and knowledge sharing; express mutual relations and reciprocate; have trust amongst each other; identify issues, current or future problems affecting the community; have the ability to mobilise local resources; and engage in farmer to farmer extension and capacity development.

Social capital formation through Landcare can produce both public benefits – such as improvements in water quality and biodiversity – and private benefits – such as the personal economic benefit of a landholder who has adopted improved practices (Compton and Beeton, 2012; Curtis et al., 2014). It has also been suggested that Landcare, with its extensive local group structure and community-state partnership, has built the adaptive capacity of communities and effectively filled a void in many communities caused by economic restructuring, rural decline and the withdrawal of government services and other institutions (Webb and Cary, 2005; Besser, 2009).

By bringing diverse communities together in formal and informal settings, Landcare involves and engages communities in a way that governments cannot. Landcare is seen by the community generally as ‘non-threatening’ and an ally – this gives Landcare a special ability to engage with a number of demographics that governments often find it difficult to communicate with. With increasing emphasis on localism, Landcare is a potentially valuable ally for governments.

Landcare groups are often well placed to be the first responders, on the ground, to natural emergencies such as bushfires – again in a manner where government agencies are sometimes more constrained. One such example was the response to the 2009 Black Saturday bushfires in Victoria, when Landcare networks were among the first to engage with the community. Building on their local knowledge and community networks, Landcare groups ran field days for affected communities, coordinated the volunteer clean-up program and provided critical communication channels, particularly around sensitive issues such as illegal clearing (Australian Emergency Management Institute, 2011). Landcare members were also instrumental in environmental management and recovery efforts in the aftermath of the fires (Roberts et al., 2011).

Facilitating group action planning and landscape approaches

Group action planning, which is basically a process whereby a group of people with a shared vision meet and jointly discuss ways to achieve their goals, is arguably one of the most important pillars of the Landcare movement. Group action planning is considered an inclusive, participatory process that allows a group to prioritise issues and ideas, identify alternative approaches, and develop practical solutions (Victorian Landcare Council, 2008).

Landcare has successfully utilised group action planning to bring about innovative and positive changes in land management practices through: building consensus amongst the Landcare Group members on priority issues; establishing specific objectives which are realistic and achievable and agreed upon by the members; identifying activities that can be undertaken to respond to these issues and objectives; agreeing on ways of implementing the plan and assign tasks to appropriate people; and communicating group ideas and needs to partners and investors (Landcare NSW, 2016).

The importance of the landscape approach is articulated by the national vision of Landcare, which is: ***“all Australians will take responsibility for the way they live in the landscape to ensure a healthy environment that supports a sustainable future”***. Landcare’s approach of encouraging groups to plan and work together and network with other groups ultimately is aimed at achieving landscape-scale multiple economic, social

and environmental objectives (Minang et al., 2015). The landscape approach is important because environmental problems such as land degradation often require concerted efforts of not only individual land owners or groups, but all the actors within the landscape and beyond. It is noted that the benefits of landscape actions such as weed control within habitat plantings may be difficult for an individual landholder to internalise. However, failure to control weeds or feral animals on the part of one landholder affects others within the landscape. Landcare has been able to drive landscape-scale changes through local-based groups networking together with other groups at the landscape, regional and national levels (Catacutan et al., 2015).

Supporting social cohesion and resilience of local communities

Landcare also positively impacts on the health and wellbeing of communities. Founded on the understanding that community action is required to collectively address environmental and sustainability challenges, Landcare brings together people of different ages, cultures and socio-economic groups.

Beyond the environmental and agricultural projects and initiatives for which the Landcare group was formed, these groups provide supportive social networks for individuals and communities – building a sense of belonging and enhancing community connectivity. These factors have a positive impact in building community resilience and adaptive capacity, supporting community harmony and strengthening social cohesion (GHD, 2013). Improved social cohesion and community resilience in turn assists rural communities, in particular, to cope with broader challenges such as drought and market pressures (Australian Landcare Council Secretariat, 2010), as well as prepare and recover from disasters (Love, 2011). In many communities, prior to the establishment of Landcare, there were few other forums that brought communities together in this way.



Figure 2: Members of the community attend a Christmas party at Black Gully, NSW, in 2014 organised by Landcare Southern New England (photo by: Michael Taylor)

Encouraging investment in communities

The Landcare approach has mobilised vast volunteer time and effort with major in-kind and financial investment by communities, resulting in significant multiplier effects for Government investment. For a relatively small investment there have been significant returns for Government and the community at large. The transaction cost of doing business through Landcare is much lower than other avenues.

The 2003 Review of the National Landcare Program report found that Program funding had been “highly successful in catalysing substantial private and community investment in Landcare projects, and further private investment on sustainable farming practices, and land, water, vegetation management and repair on farm” (Australian Government Department of Agriculture, Fisheries and Forestry, 2003). The report also found that for every Australian Government dollar spent on Landcare projects under the program, other parties have made a corresponding investment of at least \$2.60.

In 2008, Landcare Victoria and Department of Sustainability and Environment found that every dollar that is invested in Landcare leverages 2-5 times that amount through contributions towards labour, equipment, voluntary expertise, and often additional donations from landholders and businesses (Department of Sustainability and Environment, 2008).

Other analyses have suggested that the economic benefits derived from such investment could be even higher, particularly when volunteer time is adequately accounted for. This ‘value add’ is particularly evident where governments have invested in Landcare coordinators and facilitators. The importance of coordinators in effective volunteer groups has been acknowledged in the context of Landcare, where coordinators have been identified as important in facilitating action planning, stimulating knowledge exchange and accomplishing group goals (Sobels et al., 2001; Prior 2012). Coordinators play a critical role in the education and capacity development of Landcare groups, in the linking of groups to technical knowledge and research and extension services, in facilitating adaptive local research and farmer to farmer extension, and in building the immensely valuable social capital in Landcare groups (Prior 2012). Effective coordinators help groups challenge themselves to learn, to evolve and to take on new landscape challenges.

Built on a foundation of volunteerism, Landcare facilitates some of the estimated \$200 billion economic contribution made each year to Australian society by volunteers (University of Adelaide, 2012). Other economic benefits attributed to Landcare include direct financial returns, increased access to financial resources, and training to improve farming and management techniques (GHD, 2013).

Supporting the health and welfare of individuals

Research suggests that involvement with Landcare activities can have positive impacts on individual health and wellbeing through the spiritual, physical and mental health benefits arising from connection with country, clean air and water (GHD, 2013).

General findings about the beneficial impact of interaction with the environment on health and physical and mental wellbeing have been reflected in specific studies of activities similar to those undertaken by

Landcare³. For example, a 2010 Health Impact Assessment undertaken into the Southern Rivers Catchment Management Authority's extension work with farmers in southern New South Wales found positive effects of the Authority's service on the health, wellbeing and empowerment of landholders. These impacts resulted from biophysical changes to the landscape following the adoption of positive land management techniques, and from interpersonal contact with the Authority's officers (Greater Southern Area Health Service, 2010).

Similarly, the 'Feel Blue, Touch Green' pilot project – which specifically examined the mental health impact of work on a range of environmental activities on residents of the Geelong and Surf Coast districts in Victoria who may experience stress, anxiety, depression or social isolation – found that participants with the community conservation group ANGAIR (the Anglesea and Airey's Inlet Society for Protection of Flora and Fauna) experienced many health and wellbeing benefits from their involvement. These included developing ongoing social links, learning social, environmental and personal development skills and gaining increased confidence. The authors of the final report concluded that these findings suggested that involvement in conservation and nature-based activities not only benefited the environment but also enhanced community cohesion and improves mental health and wellbeing (Ebdon and Townsend, 2006).

Landcare groups have often taken a proactive approach to tackling mental health issues experienced by farmers, particularly during times of drought and flood, when the challenges of living and working on the land are exacerbated (Figure 3). As the Australian Framework for Landcare has acknowledged, "Communities have understood the benefits of joint action to analyse and solve local problems, including many that are beyond the capacity of individuals to solve. This has been vital in providing social cohesion and support structures in rural communities struggling to survive in the face of drought and market pressures. In this sense, the Landcare approach has contributed to the health and welfare of local communities." (Australian Landcare Council Secretariat, 2010b).

³ For example, a 2008 Deakin University review of relevant literature (Maller et. al., 2008) about the health benefits of contact with nature in a park context concluded that being in a natural environment positively affects people's health, particularly their blood pressure, cholesterol, outlook on life and stress-reduction. The report also noted that 'green nature', can reduce crime, foster psychological wellbeing, reduce stress, boost immunity, enhance productivity, and promote healing.

Similarly, Beyond Blue has commissioned research into the links between mental health and well-being and contact with nature, finding that there are a range of psychological benefits for people who visit and spend time in green, open spaces like parks, forests and woodlands (Townsend and Weerasuriya, 2010). These benefits include improved mood, lower levels of anxiety, lower stress levels, lower levels of depression and increased physical activity. The report further found that participating in health-promoting group activities such as gardening also had a range of benefits for psychological well-being, such as alleviating anxiety, depression and sleep disturbances and minimising feelings of isolation and vulnerability.



Figure 3: Participants attend a Drought Management Workshop held in Walcha, NSW in 2014 (photo by: Michael Taylor)

The volunteering aspect of Landcare also supports individual wellbeing and mental health by helping people feel valued and part of the community. For example, a 2010 study examining volunteers in a marine natural resource management program found that their volunteering in the program made them feel good emotionally and mentally, and generated personal satisfaction through their contributions, and connecting with others (Koss and Kingsley, 2010).

Engaging with Aboriginal and Torres Strait Islanders

Landcare groups and programs have also provided a forum for a range of benefits for Aboriginal and Torres Strait Islander Peoples.

Aboriginal and Torres Strait Islander Peoples' unique understanding of the Australian environment is informed by their deep spiritual, cultural and economic connections to the land. Aboriginal and Torres Strait Islander communities are involved in 'caring for country' on their own lands, as well as sharing their knowledge about the land and its care with other Australians.

While there are Landcare care groups associated with Aboriginal Land Councils and communities, many other Aboriginal and Torres Strait Islander Peoples participate in, and contribute to, Landcare through on the ground projects and provision of advice (Australian Government Department of Agriculture, Fisheries and Forestry, 2008; GHD, 2013). These Landcare connections have provided a basis both for Aboriginal people to reconnect with country, and for better integration between Aboriginal 'caring for country' and European land management cultures (GHD, 2013). These relationships have also been identified as a means to access and preserve traditional customs, knowledge, language and medicines, and protect cultural heritage sites (McTernan and Scully, 2010).

As for other Australians, there are significant potential physical and mental health benefits for Aboriginal and Torres Strait Islanders connecting with, and working in, the natural environment. There is also mounting research evidence specifically linking the health and wellbeing of Indigenous peoples with contact with nature, in terms of traditional lands and seas (Burgess et al., 2009). An Australian study found that Aboriginal “caring for country” was associated with better nutrition, more frequent physical activity, and fewer chronic disease risk factors and diagnoses (Burgess et al., 2009). Other research suggests that embracing cultural practices, such as Aboriginal land management, can promote the spiritual, emotional and physical aspects of indigenous health and wellbeing (Townsend and Weerasuriya, 2010).

There is potential for the engagement of Aboriginal and Torres Strait Islanders in Landcare to be expanded further. To date Aboriginal and Torres Strait Islander involvement in Landcare has been limited for a variety of reasons, including marginalisation of groups and communities, communication challenges, differing expectations, and difficulties experienced by Indigenous communities in making use of mainstream natural resource management project development (Youl et al., 2006; McTernan and Scully, 2010).

Given the acknowledged benefits of Landcare in building social capital and social cohesion, greater engagement of Aboriginal and Torres Strait Islanders in Landcare holds potential for expanded cross-cultural partnerships and understanding – factors contributing to reconciliation between Aboriginal and Torres Strait Islanders and other Australians.

Increased recognition of women in rural communities

Women’s participation in Landcare, particularly in rural and regional communities, has been recognised from the outset. A 1997 report found that, while their experience varied considerably, Landcare had been a positive experience for most women (Curtis et al., 1997). The report found that women were concerned, knowledgeable and influential land managers, and looked to Landcare as a forum to give their knowledge credibility (Curtis et al., 1997). It also found that women – estimated at that time to be 29 per cent of Landcare members – were undertaking important Landcare work as participants and leaders – particularly using their administrative and organisational skills in critical coordination and administrative roles in community groups. Other reports during this period suggested that Landcare was more inclusive of women than any other farm-based organisations (Lockie, 1998) and had helped to raise the profile of the role of women in agricultural family businesses (Hogan and Cumming, 1997). Most of the Landcare regional coordinators in NSW are young women, many of whom have young families, live in rural and regional areas and wanting part-time engaging work in their communities.

This recognition of women in Landcare has continued to the present day, with the Department of Agriculture’s Recognising Women Farmers initiative (2009-2012), which “supported activities that built the leadership and representative capacity of women in primary industries – to strengthen primary industry productivity and build rural, regional and remote community resilience to a changing climate”, awarding grants to several Landcare projects (Australian Government Department of Agriculture, 2014b).

Raising environmental awareness in the broader community

As has been long acknowledged, Landcare has been successful in moving community attitudes towards sustainability, in providing information and stimulating attitudinal change (Toyne and Farley, 2000).

Through broad scale community involvement, Landcare and its associated networks of community-based action have increased understanding of the causes and symptoms of environmental degradation and the impact of inappropriate resource management practices – as well as encouraged broader community awareness of Australia’s current and emerging environmental challenges, such as sustainable resource use and conservation, climate change variability and food security (Love, 2011).

Climate change mitigation and adaptation

Climate change presents serious challenges to the management of natural resources resulting from impacts such as increased temperature, decreased air quality, changes in the salinity of soil and water, and increased incidences of bushfires and negative effects on biodiversity. Among the public benefits of the high social capital that exists within Landcare groups is helping the Australian community to mitigate and adapt to climate change. While mitigation is about the reduction of harmful effects of climate change, such as greenhouses gases (for example through carbon sequestration), climate change adaptation focuses on helping communities to cope with the changing climate. Landcare brings people together and facilitates formal and informal discussions on topical issues such as climate change (Brown et al., 2016).

In particular, Landcare enables communities to identify local climate change impacts, especially impacts on local livelihoods – that governments are unable to – and reach agreement on appropriate adaptation strategies; identify disadvantaged and vulnerable groups and for such groups to be given a voice in decision making, and for climate impacts on them to be articulated, and; ensure policies, investments and programs by government and NGOs are more effective. It is also important to note that, for instance, the benefits of providing clean water to a community as a climate change adaptation strategy extend well beyond that particular community.



Figure 4: An agroforestry field day held in Kentucky, NSW, in 2015 (photo by: Michael Taylor)

Providing international leadership

Landcare has positioned Australia as a world leader in community-based approaches to sustainable resource management. By the early 2000s, at least 20 countries – including New Zealand, South Africa and the Philippines – had adopted the Landcare approach into parts of their environmental programs, (Love, 2011) and in 2008 Australian Landcare International – a not-for-profit organisation aiming to use its members collective Landcare experience in Australia to help people in other countries manage their land and water resources – was established (Australian Landcare International, 2014).

The Landcare network now operates in Germany, Iceland, New Zealand, Tonga, the Philippines, Sri Lanka, Indonesia, Bangladesh, Fiji, USA, Canada and 12 African countries (Australian Landcare International, 2014). South Africa and the Philippines have been particular exemplars of the international Landcare approach (Prior 2012). While these countries have adapted Landcare to meet their local needs and circumstances, it has been recognised that the common thread is community empowerment to identify, plan and act holistically on environmental problems (Youl et al., 2006). Sponsored by the Australian Crawford Fund, International Landcare Masterclass trainings have been conducted in Melbourne in 2006 (for 12 countries from the Asia-Pacific, Africa and the US), in Uganda in 2012 (for six East African countries), and in Malawi in 2013 (for seven Southern African countries).



Figure 5: Participants and trainers in the East Africa International Landcare Masterclass in Mbale, Uganda, in 2012 (photo by: Julian Prior)

Conclusion

As a volunteer, community-based, not for profit movement, Landcare has had a demonstrably positive impact across Australia – not only in “raising awareness, influencing farming and land management practices and delivering environmental outcomes across Australian landscapes” (Australian Landcare Council Secretariat, 2010a) – but also in the broad economic, social and cultural contributions it has led in Australian communities.

Today, many of the rationales for the establishment of the national Landcare movement more than three decades ago remain challenges: the adverse effects of settlement and development on Australia’s biodiversity, the continuing sustainability of our agricultural activities, soil erosion and acidity, food security for Australia’s growing population, and adapting to the impacts of climate change.

To continue its vital work across the Australian landscape, and to sustain and further develop its positive impact in communities across Australia, the Landcare movement requires continuing support and investment from everyone in the Australian community (Australian Landcare Council Secretariat, 2010a). Governments at all three levels need to commit to the development of a suitable institutional and legislative framework to provide a basis for the Landcare community to operate effectively and to coordinate national, state/territory and local government efforts (Australian Landcare Council Secretariat, 2010a). Enhanced partnerships with governments, industry associations, businesses, philanthropists and other stakeholders are required to complement these efforts, to harness financial and human resources, and enable Landcare volunteers and groups to continue their critical efforts throughout Australia.

Landcare has brought enormous value to the community and environment over the past three decades. Although individual landholders benefit from both on-farm and community Landcare activities, significant benefits accrue to the community at large. This is because the value of the investment in time and money leads to clean water and air, biodiversity conservation and protection of threatened species, carbon sequestration, landscape amenity, and improved health and community relations. This provides a powerful justification for a policy rationale leading to government intervention and support, as well as solid backing from across the Australian community at large.

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