



Building resilience in local communities:

The wellbeing benefits of participating in Landcare





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Foreword



Donna O'Neill

2020 was a year of extremes – drought, bushfires, floods and a global pandemic. People have been displaced, isolated, lost their loved ones, their livelihoods, and their properties. Environmental concerns and mental health challenges have never been more complex or more evident.

Federal and State Governments have invested substantially in addressing some of these issues over the past year, acknowledging the significant impact that recent events have had on our everyday lives, and the long-lasting impacts on people's psyche and the economy.

At a time of unprecedented change, it is important to recognise that it can be those micro-moments of connection that can make all the difference. Spending time with colleagues, neighbours, friends and even strangers, in a way that provides a connection to the land, can lead to emotional, and as we will read – economic benefits.

While Indigenous Australians have always understood the importance to wellbeing of connection to country, the value of community connection for everyone is inarguable. This report demonstrates that people who are well-connected are healthier and happier and have much more opportunity to lead rich, meaningful lives. A sense of belonging and social connectedness – offering extra purpose and meaning to everyday life.

An additional benefit articulated in this report is the role Landcare plays in individual and community resilience, and how that in turn helps communities recover from natural disasters. Our research shows that 46 per cent of survey respondents reported volunteering with Landcare led to an improvement in their mental resilience and ability to manage challenges.

KPMG has partnered with Landcare Australia for several years and we are delighted to build on our relationship by collaborating on this report in a pro bono capacity. At KPMG we focus our social impact investments across four pillars – Climate Action, Mental Health, Indigenous Australia, and Lifelong Learning - and this report allows us to contribute to all four.

The outcomes shared in this report remind us that we have at our disposal an opportunity to learn and to contribute, and ultimately to feel better about ourselves through volunteering. We hope reading this publication will encourage you to roll up your sleeves and contribute to this important Australian institution.

DONNA O'NEILL
Director, Corporate Citizenship
KPMG Australia

RICHARD BOELE
Partner in Charge, Human Rights & Social Impact Services
KPMG Australia



Foreword



Doug Humann AM

When the late Bob Hawke delivered his Statement of the Environment address launching the Decade of Landcare more than thirty years ago, he spoke passionately about Australian communities ‘working together’ to restore and protect our landscapes for future generations. He spoke to the enduring and unique spirit of Landcarers across the nation.

Today, our powerful movement continues to grow, with Landcarers all over Australia working together for the greater good of the environment and their communities, forging a solid connection to the landscape and each other. Healthy, productive landscapes and resilient communities represent the toil and heart of the Landcare effort.

At a personal level I have seen the level of support, comfort and connection brought to Landcare activities which together with knowledge gained and work performed on land and water, has benefitted individuals, groups, along with the community more widely, in good times and hard times.

For decades, those involved in Landcare have testified to a greater sense of self, both physically and mentally, resulting from an enhanced link with their local environment. This in turn has boosted community wellbeing and it has long been the desire of the Landcare network to quantify the significance of these benefits. This is amply done through this report and on behalf of all involved in Landcare, I would like to convey my gratitude to KPMG Australia for producing this invaluable assessment. They have created an extremely important and valuable piece of work for Landcare and I am sure the findings will help build the understanding of the Landcare movement from the outside and confidence in our directions on the inside as we collectively consider how best to benefit from them.

We have appreciated the bio-physical benefits of Landcare for decades. Now, for the first time through KPMG’s Pro Bono@KPMG program, and the partnership between Landcare Australia and KPMG Australia, we can better understand the scale of some of the social and wellbeing benefits derived from participation in Landcare; for individuals and communities, as well as for the environment and our economy.

The study demonstrates that whilst Landcare respondents to the survey were drawn consistent with Australia’s overall population, the reach of Landcare can be broadened – particularly to youth and Indigenous Australians; a feature of Landcare Australia’s recently completed Strategic Plan, and of the intent of the Landcare movement more widely. It is also noteworthy that the survey again demonstrates the high level of trust in Landcare and its contribution to rural economies as well as communities; volunteer work done by many in the Landcare movement, like volunteer work everywhere, so frequently goes under recognised and under supported.

However, not everyone always feels positive from their connection with Landcare and the corollary of a powerful volunteer movement has limitations in full time employment opportunities and pathways to employment. Government has a role to play here in ensuring commitment to building employment that contributes to healing our nation’s land and water and our rich cultural heritage.

A large number of people contributed to this study and I would like to thank the groups and volunteers who kindly gave their time to participate in the work with the KPMG team. I would like to particularly acknowledge the efforts and valuable input

of key stakeholders and case study participants. Thank you for the cooperation from members of Capricornia Catchments and Capricorn Coast Landcare Groups based in the Yeppoon Community in Central Queensland; Holbrook Landcare Network in Southern New South Wales; Landcare Broken Hill in Western New South Wales; Noosa and District Landcare in Queensland and the Northern Yarra Landcare Network in the Yarra Ranges in Victoria.

Australia was experiencing drought, bushfire and pandemic challenges as this report was prepared and the Landcare movement was present throughout. From the many interviews and surveys conducted, KPMG Australia has developed data illustrating the beneficial impacts of Landcare on healthcare, mental health, productivity and resilience to natural disasters.

Supporting Landcare across Australia has never been more important than it is now. This report clearly demonstrates that Landcare's role goes well beyond environmental benefits and that there is strong justification for the continuing and extended support for Landcare.

These findings will prove highly beneficial to that development and support and the recruitment of new generations eager to join the thousands of existing Landcare groups and networks; from Traditional land managers and sustainable farmers, to Bushcare and 'Friends of' groups, Coastcare, Dunecare and Rivercare groups, Junior Landcare and other community groups determined and committed in restoring and protecting their local environment for all Australians and the future of Australia.

DOUG HUMANN AM
Chairman
Landcare Australia





Executive Summary

Landcare has a long history of bringing volunteers and communities across Australia together to promote sustainable land management practices and environmental conservation. From modest beginnings in 1986, the Landcare sign has now become ubiquitous across a rich variety of landscapes – from farms, to national parks, to coastal walkways, to ‘pocket parks’ in cities, to waterways and more. Wherever that sign appears there is a local group of volunteers, and a small number of dedicated coordinators and staff, who are committed to improving the land, creating new conservation spaces and maintaining and improving existing ones. Across the country there are now more than 140,000 people involved in a local Landcare, ‘Friends of’, Coastcare, Bushcare, Dunecare, Rivercare, and other environmental volunteer groups.

That tangible connection to the land means that it is easy to default to considering the impact of Landcare in the same way, i.e. in terms of the impact on the land, whether that be numbers of trees planted; improvements in soil quality; hectares of degraded land restored; or threatened species protected. All of which is of immense value and importance. But what about the people and the communities that make up those thousands of different Landcare groups? What if we reverse the equation to consider not just the impact of people on the land, but also the impact of caring for the land on the people that care for it? It is that question that this project sought to understand better.

Understanding the non-environmental impacts of involvement in Landcare is a less frequently asked question, and yet anecdotally many of those involved as volunteers and as staff report individual and community benefits. Those impacts range from improvements in physical and mental wellbeing; to a greater sense of connection with the community and the environment; to relying on Landcare as a trusted source of information about the environment; through to supporting local businesses. It is these kinds of social and economic impacts that this report seeks to identify, measure and place a value on.

In order to do this Landcare Australia partnered with KPMG Australia through its *Pro Bono @KPMG* program to carry out this research project. Together, the two organisations have woven together a series of qualitative and quantitative methodologies with the objective of understanding the rich diversity of experiences of those involved with Landcare. This has been done through carrying out key stakeholder interviews; developing case studies of Landcare groups; surveying more than 1,000 Landcare volunteers and coordinators; and developing an impact framework. Taken together these approaches have enabled the research to explore the different pathways that people take into Landcare; the impacts that they experience both individually and in communities; and the potential collective economic benefit¹ derived from specific non-environmental impacts of participation in Landcare.

As Figure 1 shows, through this process of layering different methodologies, the project was able to identify a diverse range of participant experiences that flow through to five broad impact areas. Of these, three areas were included in the impact framework which was used to calculate the potential economic benefit of the non-environmental impacts of Landcare.

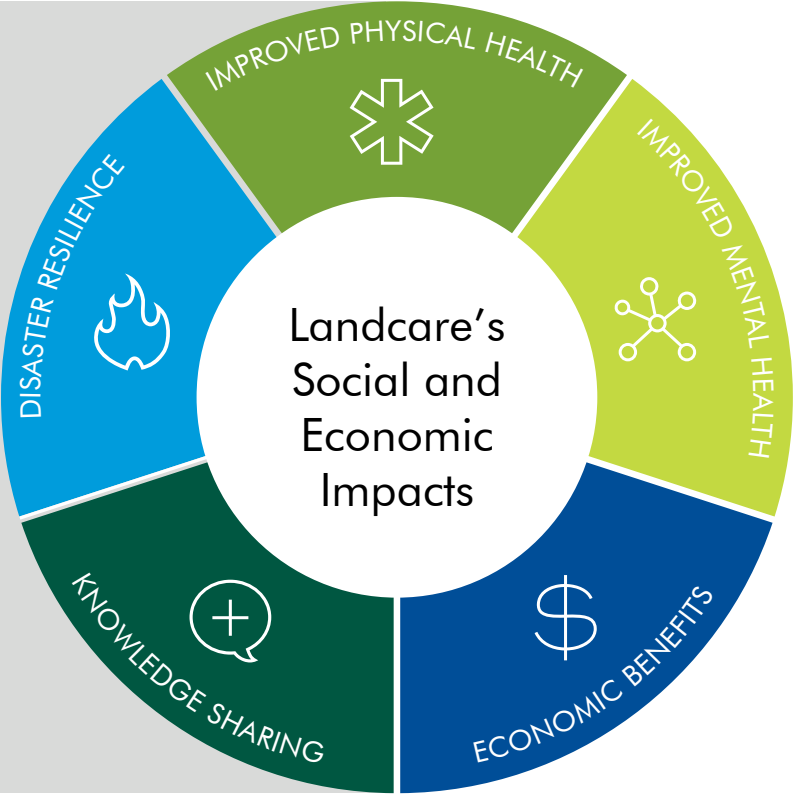
¹ It should be noted, however, that the highly dispersed nature of the thousands of different Landcare groups makes an estimate of total costs very difficult and because of that this study should not in any way be construed as being a cost benefit analysis.

Figure 1: The social and economic impacts of Landcare participation

IMPACTS IDENTIFIED BY LANDCARE PARTICIPANTS

- Improved health and wellbeing
- Sharing knowledge and support
- Connection to community
- Hands-on experience
- Connection to people
- Connection to nature and country
- Community collaboration
- Economic benefits
- Community resilience to national disasters

INFORMED



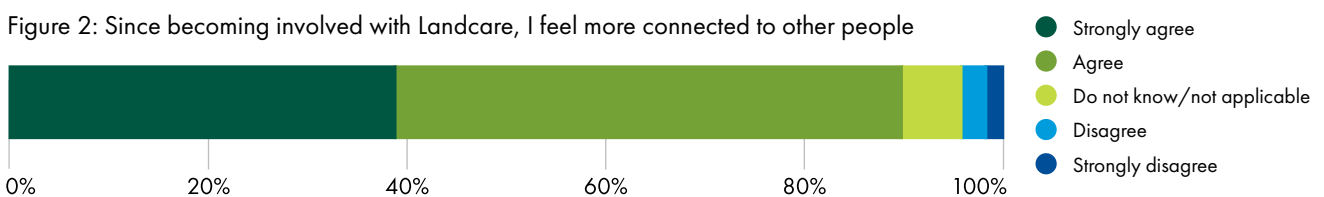
BUILDING CONNECTION IS KEY

In the survey of volunteers and coordinators, one of the most important results was the strength of the layers of connection that people experience through their involvement in Landcare: 90 per cent feel more connected to people (Figure 2); 86 per cent feel more connected to their community; and 93 per cent feel more connected to the environment. While this may seem unsurprising to those who know Landcare well, what makes this finding so important is how clearly it translates into other benefits.

There is a strong correlation between those who report an improvement in their sense of connection to others and to the environment, and improvement in their mental wellbeing. Almost 60 per cent of respondents who strongly agreed with the statement that Landcare helped them connect to other people reported an improvement in their mental wellbeing. Similarly, 54 per cent of those that strongly agreed with the statement that Landcare helped them feel more connected to their environment also reported an improvement in their mental wellbeing.

"...Landcare networks get things done. Knowing that there is somebody or a group of people who can answer any questions someone might have is really helpful for the community."

Figure 2: Since becoming involved with Landcare, I feel more connected to other people



THE MENTAL WELLBEING IMPACTS ARE CLEAR

Almost half of all participants surveyed reported clear improvements in their mental wellbeing (Figure 3). What is interesting about this result, however, is that it appears that it is the simple process of connecting to people, communities and the environment (as described above) that creates this benefit.

Those wellbeing impacts have a tangible economic benefit through a combination of avoided healthcare costs, as well as improved productivity. Conservatively, the approximate discount for avoided healthcare costs is \$57 million for the estimated Landcare population (or \$403 per Landcarer). Whilst, improved productivity is \$97 million for the same population (or \$487 per Landcarer).

- Significantly improved
- Moderately improved
- No change
- Moderately decreased
- Significantly decreased
- Do not know/not applicable

Figure 3: Since becoming involved in Landcare, has your mental wellbeing changed?



“...if I had known how much joining Landcare would help me [mentally], I would have joined much sooner...it had an instant effect on me...it was something I’d been looking for but didn’t know existed...”

PHYSICAL HEALTH AND A ‘HANDS ON’ EXPERIENCE

Another area that came through strongly during key stakeholder and case studies interviews was the importance of a physical ‘hands on’ sense of connection with the land. That connection is felt by almost all of those surveyed (93 per cent) and as noted above contributes to clear mental wellbeing benefits. A smaller number of Landcare respondents (19 per cent) reported that this had translated into a reduced use of physical health services, and this in turn contributes to a modest level of avoided healthcare costs.

- Strongly agree
- Agree
- Do not know/not applicable
- Disagree
- Strongly disagree

Figure 4: Since becoming involved with Landcare, I feel more connected to the natural environment

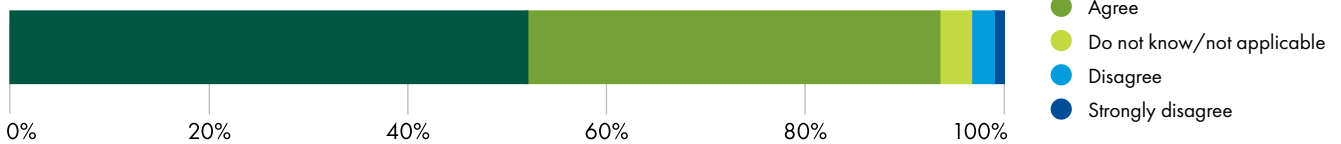


LANDCARE ALSO SERVES A CRUCIAL ROLE AS A SOURCE OF COMMUNITY INFORMATION

In addition to this clear chain of 'connection' benefits which then build improved mental and physical health, Landcare participants experience other benefits. The most positive response in the participant survey related not to a greater sense of connection, but to knowledge sharing. When asked if the advice they received through their involvement in Landcare was helpful, 93 per cent of survey respondents answered positively with 52 per cent strongly agreeing with the statement. This knowledge sharing role also came through very strongly in the key stakeholder and case study group interviews and was by far the most commonly identified benefit of involvement in Landcare by those interviewed for this project.

"...Landcare encourages people to have contact with their neighbours and communities – all the more important in the current times."

Figure 5: The advice I have received as a result of being involved in Landcare is helpful

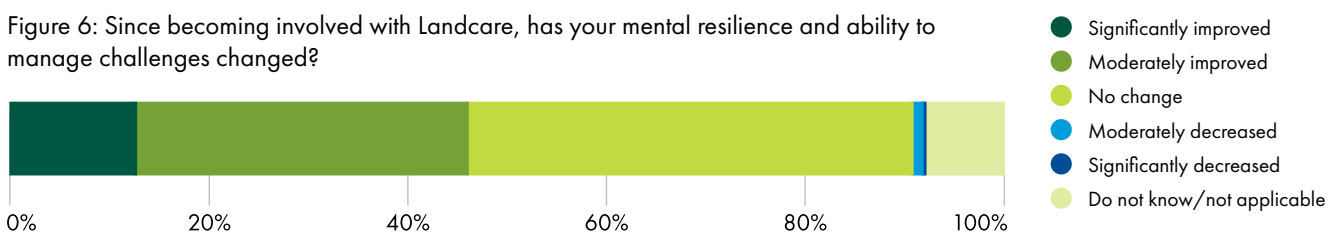


"...When locals feel helpless in times of disaster, Landcare groups experience an influx of enquiries through walk-ins, calls, and on their social media, so they serve as a source of direction and guidance."

DISASTER RESILIENCE AND RECOVERY

A final impact area that loomed large during the research was the role that Landcare plays in individual and community resilience, and how that in turn helps communities recover from natural disasters. This last impact area is a particularly relevant one – as this study began, the concern of many Australians was with the enduring effects of a devastating drought. As the early research began, that drought had, in many parts of Australia, merged with what would become a terrible bushfire season. Finally, as the interviews began, they were carried out with Landcare coordinators and volunteers who were just starting to get to grips with the challenges of the COVID-19 pandemic. As Figure 6 below shows, 46 per cent of survey respondents reported an improvement in their mental resilience and ability to manage challenges.

Figure 6: Since becoming involved with Landcare, has your mental resilience and ability to manage challenges changed?



... of those participants who reported that they spent only 4 hours or less per month involved in Landcare, 43 per cent still reported an improvement in their mental wellbeing.

... there is a \$1,347 per person per year economic benefit from participation in Landcare. When applied to the entire estimated Landcare population of approximately 142,000 people, that generates a total economic benefit of over \$191 million dollars per year.

AN ORGANISATION BORN IN REGIONAL AUSTRALIA, DELIVERING BENEFITS TO MAJOR CITIES

One interesting finding of this study is that those in major cities experienced a higher level of benefit than those in regional areas. For example, 59 per cent of those in major cities reported an improvement in their mental wellbeing, compared to 47 per cent in regional areas. Indeed, one of the recommendations of this study is that the experience of urban Landcare participants should be considered in greater depth. Landcare is strongly influenced by its 'roots' in regional Australia, and many of the case studies and interviews that informed this study were of people and groups in regional areas. Yet there are high levels of benefits being experienced in major cities.

AND IT DOESN'T TAKE MUCH

Another important result of this research relates to the level of involvement that a participant needs to have in order to experience the benefits of involvement. In those areas where there is a very strong positive impact – e.g. feeling an increased connection to community, the environment and improved mental wellbeing – those who spend more time involved with Landcare generally experience a higher level of positive impacts, but even those who spend a very small amount of time still derive an impressive level of benefit. For example, of those participants who reported that they spent only 4 hours or less per month involved in Landcare, 43 per cent still reported an improvement in their mental wellbeing.

It should also be noted that when survey responses were broken down by employment type, those groups which experienced the highest level of impacts were those in casual or part-time employment. Looking at improvements in mental wellbeing, for example, 58 per cent of those in casual employment and 58 per cent of those in part-time employment reported an improvement, compared to 43 per cent of those who were not in the workforce and 48 per cent of those who were in full-time employment.

THERE IS A TANGIBLE ECONOMIC BENEFIT

While it was not possible to find financial proxies and therefore quantify the potential economic benefits of all the different impact areas identified through this project, it has been possible to focus on the potential economic benefits delivered through improvements to mental health; improvements to physical health; and improvements to resilience and how that can contribute to recovery from natural disasters.

Of those impact areas which have been included in the final impact framework and model, the potential economic benefits are very important. Even when taking the most conservative 'low' scenario considered in our modelling, there is a \$1,347 per person per year economic benefit from participation in Landcare. When applied to the entire estimated Landcare population of approximately 142,000 people, that generates a total economic benefit of over \$191 million dollars per year. It is important to note that these numbers are based on not only the most conservative scenario, but they do not include any calculation of the environmental benefits (e.g. improved conservation outcomes, land productivity and yields). Finally, as noted above, this study clearly shows that even those who have a modest involvement in Landcare, still experience notable benefits.

Landcare's Impact on Mental Health and Wellbeing



Figure 7: Participation in Landcare and mental health



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1. Introduction and methodology

What might we discover if we consider not just the impact of people on the land, but also the impact of actively caring for the land on people that actively care for it?

1.1. PURPOSE

Landcare has a long history of working with communities across Australia and is well known for its activities to improve environmental outcomes. From modest beginnings in 1986, the Landcare sign has now become ubiquitous across a rich variety of landscapes – from farms, to national parks, to coastal walkways, to ‘pocket parks’ in cities, to waterways and more. Wherever that sign appears there is a local group of volunteers, and a small number of dedicated coordinators and staff, who are committed to creating new conservation spaces, and maintaining and improving existing ones.

That tangible and highly visible connection to the land means that it is easy to default to considering the impact of Landcare in the same way, i.e. in terms of how it changes the land, whether that be the numbers of trees planted; improvements in soil quality; hectares of degraded land planted; threatened species protected. All of this is of immense value and importance. But what about the people and the communities that make up those thousands of different Landcare groups? What if we reverse the equation to consider not just the impact of people on the land, but also the impact of actively caring for the land on the people that actively care for it? This report seeks to understand that question better.

Understanding the non-environmental impacts of involvement in Landcare is a much less frequently asked question, and yet anecdotally many of those involved as volunteers and as staff report observing positive changes. Those impacts range from improvements in an individual’s physical and mental health; to a greater sense of connection with the community and the environment; to being a trusted source of information about the environment; through to supporting local businesses. It is these kinds of social and economic impacts that this report seeks to identify, measure and place a value on.

In order to do that Landcare Australia has partnered with a multi-disciplinary team from KPMG Australia to carry out this research. Very quickly it became apparent that the diversity of Landcare groups and the types of activities they carry out would require a methodology tailored to Landcare’s diverse scope – taking in both highly qualitative social research as well as more quantitative economic research.

1.2. UNDERSTANDING LANDCARE

Landcare Australia is a national not-for-profit that works in partnership with groups and individuals across Australia sharing a vision to restore and protect the environment in their local community through sustainable land management and conservation activities.

Landcare partners with stakeholders to support the Landcare community with funding and capacity building activities for managing sustainable agricultural practices; and the environmental protection and conservation of land, water, waterways, coasts, biodiversity and landscapes.

The Landcare community is made up of approximately 6,000 Landcare, Coastcare, Bushcare, ‘Friends of’ and other community environmental care groups and 140,000+ volunteers and facilitators across Australia. Landcare encompasses sustainable farmers, Landcare groups and networks, Traditional land managers, Landcare, Bushcare and ‘Friends of’ groups, Coastcare, Dunecare and Rivercare groups, Junior Landcare (including early learning childhood centres, schools, Scouts, Girl Guides and youth groups) and other community groups involved in restoring and protecting their local environment.

Landcare Australia works with governments, corporate and philanthropic organisations and donors to facilitate funding projects that aim to improve environmental outcomes for the Landcare community. Funding and in-kind support enables the Landcare community to achieve a diverse range of outcomes. These include a sustainable approach to integrated land management, natural habitat restoration, enhancing biodiversity, building resilience in Australia's food and farming systems, and creating social cohesion and wellbeing in communities.

As every Landcare project is very different, the number of volunteers and amount of funding required per project also varies considerably.

The National Landcare Network is the peak representative body for Landcare groups across Australia. The National Landcare Network is made up of representatives from each State and Territory Landcare peak body including Landcare NSW, Landcare ACT, Landcare Victoria, Landcare Tasmania, Landcare Association of South Australia, WA Landcare Network, Landcare NT and Queensland Water and Land Carers. Many of the groups and individuals referenced and consulted as part of this report are members of the National Landcare Network and the State and Territory Landcare Peak bodies.

1.3. METHODOLOGY

Developing an understanding of the potential non-environmental impacts of participation in Landcare is a challenging proposition. These challenges arise from the diversity of different organisations that make up Landcare – they can be urban and rural; in coastal areas, on farmland, or in small city parks. They range from small groups of volunteers through to large organisations with paid staff and resources. When all Landcare groups are taken together it is very difficult to precisely measure who is involved in Landcare; what the total cost of Landcare is; or what the total outputs or outcomes are. That information is available in some groups and networks of groups, or for particular funding programs to multiple groups, but it is challenging to find at a national level.

As a result of this diversity of Landcare groups, individual pathways into and experiences of Landcare are equally unique and varied. The project team was regularly struck by how many different types of Landcare groups they encountered during the research to inform the project, and the different motivations of people who had joined those groups.

Finally, added to this challenge is the fact that this project looks at social and economic impact areas less commonly recognised in association with environmental volunteering. This meant there was a lower level of existing research to draw upon.

In response to these challenges, the approach taken by this project is a joint qualitative and quantitative impact assessment. Figure 8 below shows the core elements of the methodology and the purpose of each part of the methodology. It is also important to note that these challenges do place limitations on the conclusions that can be drawn from some of this research, and these limitations are described in Appendix A.

The key stakeholder and case study group interviews had the objective of developing an understanding of Landcare; how different groups worked; the types of people who were typically involved; and the types of impacts that were experienced.²

“People want to get involved because there’s all this bad news in the world and they want to make a difference in their own backyard”.

² In some cases minor edits have been made to the quotes. Where changes have been made they have been done so only to improve readability and ensure anonymity; no edits have been made that might change the content or intent of the quote. All quotes have been anonymised, as stakeholder interviews were carried out on the understanding that any specific quotations would be depersonalised.



Figure 8: Summary of methodology and guiding questions

A full list of interviewees can be found at Appendix C. Case studies were carried out with five different Landcare groups. Those groups were:

- Capricornia Catchments and Capricorn Coast Landcare Groups based in the Yeppoon Community in Central Queensland.
- Holbrook Landcare Network in Southern New South Wales.
- Landcare Broken Hill in Western New South Wales.
- Noosa and District Landcare in Queensland.
- The Northern Yarra Landcare Network in the Yarra Ranges in Victoria.

The case study groups to be interviewed were selected by Landcare Australia, to cover a large geographic spread, represent a range of population and local economic settings, and varied recent activity, including some with involvement in recent disaster events. It should be acknowledged that the diversity of different Landcare groups means that any selection of case studies would not be fully representative of Landcare as a whole. Nonetheless, the groups selected encompassed extensive geographic diversity; types of programs offered; location of activities (e.g. farmland, public areas, waterways); and encompassed some groups which were heavily volunteer driven, through to others which had a number of paid staff.

In each group the project team interviewed someone involved in the coordination or management of the group's activities. As part of that interview they were then asked to nominate 1-2 volunteers who participated in different Landcare activities.

The project then used NVivo™ software³ to organise, store and analyse qualitative data in the form of interview transcripts with key stakeholders and members of case study groups. Through the application of advanced management and query tools, NVivo™ software enabled the identification of common impact areas identified across all the interviews.

The key themes that emerged from the interviews and case studies are outlined in Section 2.2. Subjects areas of significant benefit or impact ('impact areas') were ranked for frequency and relevance to the overall study. The collation of common impact areas enabled the ranking of impact areas in terms of the number of interviews that spoke to the relevant impact area and the identification of common impact areas most of interest to the cohort as a whole and of most relevance to subsequent project phases. This ranking was then used to design the participant survey. Combining the qualitative approach of key stakeholder and case study group interview analysis with the survey in turn reduced the risk of the study being prejudiced by preconceptions (either by Landcare Australia or in the project team) about potential impacts; testing for impacts that were not readily experienced; or missing impacts which were.

The desktop review was used to identify any additional potential impact areas, as well as research that could inform the impact model. A summary of the findings of the desktop review can be found in Section 2.1 and a bibliography is provided at Appendix B.

The final piece of qualitative analysis involved holding a workshop with Landcare stakeholders, including Landcare Australia staff, coordinators of case study groups, landcarers and representatives of government agencies. The workshop explored some of the raw survey response data, early impact modelling, as well as key themes to emerge from key stakeholder and case study group interview analysis.



³ QSR International Pty Ltd. (2020) NVivo™ (released in March 2020), <https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home>



The survey of Landcare participants consisted of an online survey that was deployed by Landcare Australia between 12th and 27th May 2020 using the SurveyMonkey⁴ tool. A copy of the survey text can be found at Appendix D.

Detailed analysis of the key stakeholder and case study group interview transcripts was undertaken in order to understand the nature of the impacts and inform the basis of the survey questions. Through use of NVivo™ software it was possible to carry out an analysis of impact areas identified through an examination of transcripts from key stakeholder and case study group interviews. Through the application of the NVivo™ software to the transcripts, impact areas were identified and catalogued, with queries enabling the prioritisation of impacts based on mention frequency across transcripts.

The survey was designed to gather information from Landcare staff and volunteers across a number of impact areas. Given the diversity of Landcare experiences it was particularly challenging narrowing down the number of impact areas to be included in the survey, and as noted in the Limitations Section of Appendix A, some impact areas were excluded from the scope of the survey so as to focus predominantly on non-environmental impacts.

The survey consisted of:

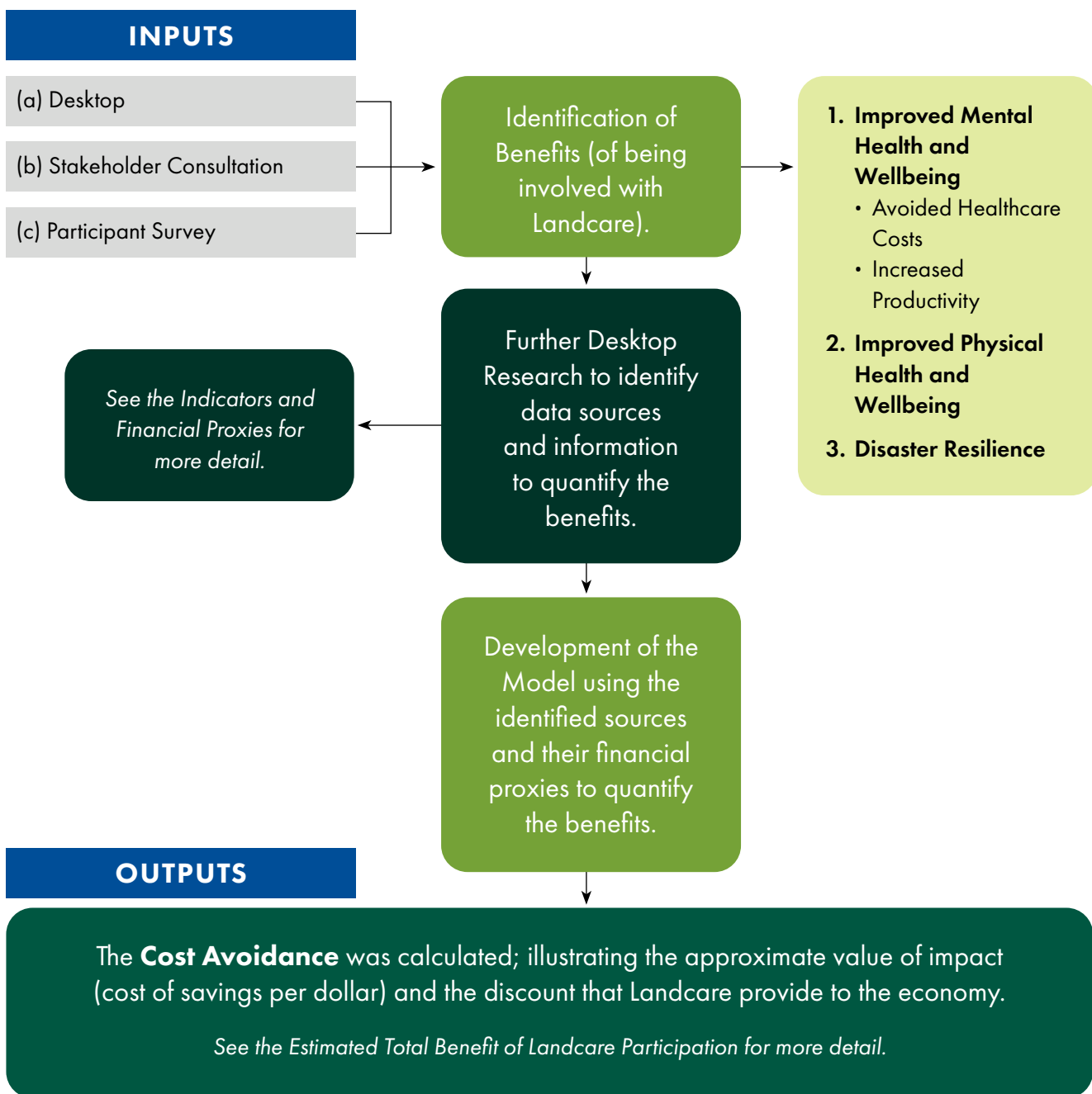
- Six demographic questions to collect information on respondents age, location, employment status, type of involvement in Landcare, length of involvement with Landcare and number of hours spent per month on Landcare activities,
- Thirteen questions related to measuring respondent experiences with Landcare. Some questions asked participants to indicate on a Likert scale (strongly agree, agree, disagree, strongly disagree, don't know/not applicable) whether they agreed with a statement that described a type of experience (e.g. whether they felt more connected to other people). Other questions asked respondents to indicate the frequency with which they experienced a particular impact – e.g. how often they were involved in hands-on conservation activities.
- One open-ended final question where respondents could write anything they wanted which they thought relevant to their experience of Landcare.

The survey was promoted by Landcare Australia through an integrated communications campaign utilising the Landcare Australia website, e-newsletters and social media channels as well as existing networks within the conservation and land management sector. The total population of Landcare is estimated to be 142,000 people, this means that with a total of 1,056 responses to the survey there is a 99 per cent confidence level with a margin for error under four per cent. Details of the demographics of respondents as well as the responses is discussed in Section 2.4. All identifying data of respondents was removed prior to analysis.

⁴ SurveyMonkey Inc, San Mateo, California, USA, www.surveymonkey.com

Finally, the responses of the survey and the desktop review were used to help construct the impact framework and model. This final part of the methodology has been used to identify, measure, assess and manage the benefits of being involved with Landcare, as a volunteer, member, and/or employee; calculating the approximate value of impact (cost of savings per dollar) and the discount that Landcare programmes provide to the economy. The approach to undertaking this analysis is illustrated in Figure 9.

Figure 9: Impact Framework and Model Approach





Full details of the impact framework and model can be found in Section 2.5. It should be noted, however, that not every impact area identified in the interviews, nor every question posed in the survey, has been able to be considered as part of the impact framework and model.

The approach of layering up qualitative and quantitative tools creates some challenges. The biggest challenge is finding ways in which to translate and map impacts through the different layers of the methodology. In some cases, it was relatively easy to link how people described an impact in interviews, to a survey question, and through to the impact model. In other cases it was more difficult either because the way impacts were described in interviews did not translate into short, easy to understand survey questions; or because it was difficult to find a financial proxy in the impact framework and model to provide an economic value. Table 1 below gives examples of these ‘translation’ challenges.

Some impact areas identified during key stakeholder and case study group interviews were, for example, difficult to test through a single succinct survey question. And keeping the survey to a length that would encourage a high level of participation inevitably meant choosing not to investigate some impact areas. There were also impact areas and survey responses which were in turn difficult to map accurately into a financial impact model.

It is important to note that those impact areas which do not flow through all layers of the methodology are not necessarily weaker. Rather, it may be that they are so complex that they are easier to capture qualitatively than quantitatively. Or – alternatively – that financial proxies do exist but this research was not able to identify them within the scope and time allowed for the work.

Table 1: Examples of impacts at different stages of the research methodology

INTERVIEWS/CASE STUDIES		
Example of complete ‘translation’ of impact area through different stages of the methodology		
<p>NVivo Node – Improved mental health and wellbeing: Enabling people to participate in activities that provide feelings of empowerment, belonging and purpose, this is particularly relevant for people who are young, suffering a mental illness, unemployed, new to the area, dealing with loneliness or facing natural disasters. Landcare provides people with as much human interaction as they desire and an avenue to be in nature.</p>	<p>Survey question: Since becoming involved in Landcare, has your mental health: Significantly improved/Improved/No change/Moderately decreased/Significantly decreased/Don’t know or not applicable</p>	<p>Financial proxy #1: healthcare costs due to reduced loneliness.</p> <p>Financial proxy #2: Increased productivity and innovation.</p>
Example of incomplete translation of impact area through different stages of the methodology		
<p>NVivo Node – Sharing knowledge and support: Transfer of land management, general community and volunteering information from Landcare to community members and organisations. Also, facilitating knowledge transfer within the community, from older generations to younger generations and from established farmers to those newer to the land.</p>	<p>Survey question: The advice I have received as a result of being involved is helpful (for example, about planting and/or revegetation, animals, weed control, land management, and/or natural disaster plans): Strongly agree/Agree/Disagree/Strongly disagree/Don’t know or not applicable.</p>	<p>[No proxy found]</p>

Finally, it is important to note that the approach taken and data gathered for this research, was invariably impacted by the devastating national and global disasters that occurred during the period covered by the project (January 2020 onwards). Those included:

- Sustained drought affecting large areas of Queensland, New South Wales and Victoria until February 2020.
- One of the worst bushfire seasons in history between September 2019 and March 2020, which became known as the Black Summer Bushfires.
- The emergence and continuing impact of the COVID-19 pandemic from March 2020 onwards.

Those disasters invariably had an impact on Landcare groups, interviewees, staff at Landcare and the KPMG project team. Given the high numbers of Landcare volunteers who live in regional and rural areas outside of the capital cities, the drought and bushfires will have had a disproportionate impact on many of those involved in this research. From a methodological perspective, it meant that all key stakeholder and case study group interviews were carried out remotely, as were the majority of project meetings between Landcare Australia and KPMG.

1.4. ACKNOWLEDGEMENTS

Landcare Australia wishes to acknowledge the coordinators of the five case study Landcare groups who were generous with their time in helping the KPMG team to understand their groups and the volunteers who make such an impact on a daily basis. All of those interviewed for this report are listed in Appendix C, but it is particularly important to acknowledge the contribution of Northern Yarra Landcare Network, Holbrook Landcare Group, Broken Hill Landcare Group, Queensland Water and Land Carers, Capricornia Catchments, Noosa & District Landcare, Western Australia Landcare Network and ANU Sustainable Farms.

KPMG is committed to making sustainable, positive change in our local communities and in society at large, striving to make the world a better place. Our Pro Bono *Pro Bono @KPMG* program – through which this study was funded – is a demonstration of this commitment. The program is aligned to the firm's Corporate Citizenship framework to drive positive impacts for Indigenous Australia, Lifelong Learning, Mental Health and Climate Action.⁵

The KPMG Australia team that carried out this research consisted of Sefton Darby, Ellen Lenczner, Rachel Armstrong and Emma Dalco. We would also like to acknowledge the contribution of Richard Boele, Steven Casey, Elizabeth Clark, Sarah Hayes, Catherine Hunter, Sarah Minahan, Edwina Loxton, Daniel Golder, Jonathan Collins and Donna O'Neill.

⁵ For more information on KPMG's Corporate Citizenship program, see <https://home.kpmg/au/en/home/about/citizenship.html>





2. The impact of participation in Landcare



This Section considers each of the different methodological steps outlined in Section 1.3 above. The findings of each individual step are identified in this Section, however, the key aggregated findings are discussed in Section 3.

2.1 DESKTOP REVIEW

To help situate this project in relation to existing knowledge, a desktop review and critical analysis of published sources was undertaken. This research predominately focused on:

- regional and rural communities;
- climate change;
- farmers and farming;
- environmental volunteering; and
- previous research and analysis about the benefits of Landcare and similar community-based programmes and/or activities.

This desktop review provided a greater understanding of Landcare in Australia and helped to determine what had already been researched and published in the area. In many aspects these studies are able to go into much greater depth in different areas, and as such proved valuable to inform the development of the impact framework and model. Several of the sources reviewed were referred to more frequently and this included:

- GHD, *Multiple Benefits of Landcare and Natural Resource Management* ⁶
- Jacki Schirmer and Kimberly Brown, University of Canberra, *Climate Change, Drought and Regional Wellbeing* ⁷
- Australian National University, Sustainable Farms Initiative ⁸
- Hugo Ottesen, *The Value of Community Landcare: A Literature Review*, Prepared for National Landcare Network ⁹

GHD's report, is the most recent example of an impact assessment that demonstrated the social and economic outcomes achieved through Landcare's programs and projects. This report specifically focused on the impact of Landcare beyond the biophysical sphere and found that Landcare provides its participants with multiple outcomes and benefits in the social and economic domain; these cross six key categories and numerous sub-categories. The six categories include learning, awareness and practice change; social – community health and wellbeing; social – political and social capital; economic; cultural; and resilience. The report also draws out that Landcare (and Natural Resource Management) can generate an economic return in the order of 2-5 times the original benefit. This current study and analysis builds on and updates GHD's report. In addition, this new work considers and provides the approximate discount that Landcare provides to the Australian economy.

⁶GHD, *Multiple Benefits of Landcare And Natural Resource Management: Final Report*, 2013, accessed: 22 January 2020, available from: <https://landcare.nsw.org.au/wp-content/uploads/2015/11/Multiple-Benefits-of-Landcare.pdf>.

⁷Schirmer, J., and Brown, K., Health Research Institute & Institute for Applied Ecology, University of Canberra, *Climate Change, Drought and Regional Wellbeing*, 2019, accessed 22 January 2020, provided by Landcare Australia.

⁸Australian National University, *Sustainable Farms Initiative*, accessed 22 January 2020 and ongoing, available from: www.sustainablefarms.org.au/.

⁹Ottesen, H., *The Value of Community Landcare: A Literature Review*, Prepared for National Landcare Network, 2019, accessed 22 January 2020, available from: <https://bit.ly/3kmOJHH>

Climate Change, Drought and Regional Wellbeing, written by Jacki Schirmer and Kimberly Brown, emphasises the relationship between the wellbeing of farmers in NSW and the top five resilience resources as identified by a Department of Primary Industries survey, including strong social networks, being heard by local decision makers and health. Additionally, farmers identified that they had higher farm financial resilience if they engaged in drought preparation, risk strategy development and if they discussed their farm plans with others. As well, it also provides a series of recommendations for supporting those affected by drought, including “support (for) a range of organisations so they can in turn support others”.¹⁰

Australian National University’s Sustainable Farms Initiative, for the last 20 years has researched and collected data from over 300 farmers engaged in sustainable farming. The Initiative draws on research programs across the University, focussing on three key research topics: (1) Healthy Farms; (2) Healthy Farmers; and (3) Healthy Profits. The Initiative is now able to use these findings to help all farmers and land managers to better manage the balance between agricultural production and long-term sustainability.

Lastly, a *Literature Review* on the value proposition of Landcare in Australia, over the last 35 years, was recently authored by Hugo Ottesen. Ottesen emphasises the strength of Landcare in the way it respects local knowledge, while also acting as a channel and instrument for the dissemination of new knowledge and research; the social capital that Landcare helps build and maintain which allows communities to identify and solve their own problems; and how it supports and protects the country’s economy and wellbeing by fostering care for one of its most valuable assets: natural capital.

These four pieces of literature provide key insights into the contribution that Landcare makes. See Appendix B for a detailed list that includes all the documents that were referred to in the main body of this report and/or reviewed in order to inform the report and its conclusions. Building on these sources, this report attempts to provide a different perspective on the non-environmental impacts of volunteer and member involvement in Landcare.

2.2. STAKEHOLDER CONSULTATION INTERVIEWS – IDENTIFYING AREAS OF IMPACT

Connection to community

The interview aspect of this initial phase sought to identify the nature of the impacts experienced by people involved in Landcare.

The questions asked of interviewees were informed by discussion with the Landcare Australia team both during and subsequent to project scoping, the KPMG social research methodology and the insights revealed from the preliminary desktop review. Key stakeholder interviews were conducted with individuals who had undertaken academic research related to Landcare’s activities and those who had an extensive lived experience with Landcare.



“A sense of buoyancy individually that comes from tackling a problem successfully and Landcare Groups acts as the mechanism for this outcome.”

¹⁰ Jacki Schirmer and Kimberly Brown, Health Research Institute & Institute for Applied Ecology, University of Canberra, *Climate Change, Drought and Regional Wellbeing*, 2019, accessed 22 January 2020, provided by Landcare Australia.



Case study groups were selected in order to understand different groups' experiences with Landcare, with a focus on identifying as many benefits of being involved with Landcare as possible. Proximity from major cities, impact of natural disasters and group longevity were all considered to be determinants of group experiences and considered in the selection of the case study groups. The first person interviewed for each case study group was nominated by Landcare Australia and subsequent interviewees for that case study group were nominated by the first person interviewed in light of their understanding of the project.

The top three impacts as identified during the interviews were sharing knowledge and support, connection to community and hands-on-experience. Detail on these impacts and the additional six areas of impacts, in order of the number of interviews that identify the impact area, are included below, accompanied with quotes from the interviewees describing the impacts. Once the interview transcripts had been coded using NVivo, it was possible to identify the impact areas that were nominated by the most number of stakeholders, and these are shown in Table 2. A summary of each impact area is provided below.

Table 2: Top impact areas from key stakeholder and case study group interviews

Rank	Impact area	Total interview count
1	Sharing knowledge and support	12
2	Connection to the community	11
3	Hands-on experience	10
4	Connection to people	9
5	Connection to nature and country	9
6	Community collaboration	8
7	Economic benefits	7
8	Community resilience to natural disasters	7
9	Improved mental health and wellbeing	7

Interestingly there was considerable cross over between impact areas with many participant experiences falling into more than one impact area. For example, Landcare's support of community members in preparation for and recovery from natural disasters, including droughts and bushfires, had impacts regarding sharing knowledge and support; disaster resilience and improved mental health and wellbeing.

Also, interesting to note is that although disaster resilience and improved mental health and wellbeing were hypothesised during project scoping to be some of the biggest impacts of being involved with Landcare, areas such as sharing knowledge and support were commonly mentioned in the interviews and survey responses.

Sharing knowledge and support¹¹

Sharing knowledge and support for the transfer of information on land management, general community and volunteering within Landcare to community members and organisations also includes facilitating knowledge transfer from older generations to younger generations and from established farmers to those newer to the land.

Groups of neighbours get together and talk about what their fire plans are and what they can improve around properties and know what each other's escape plan is.

To do it on your own is far too hard – the support provided by Landcare helped me when I was setting up my farm.

Connection to community

Landcare groups foster a sense of community. This is achieved in many ways, for example, through newsletters and events, acting as a hub for the community, creating communities of interest and enabling people to get involved in the community through creating a safe space and an opportunity to connect.

Landcare is situated within a community hub and is utilised by locals for environment-related enquiries, but also provides an outlet for volunteers and people to connect socially in a safe place.

The Landcare newsletter language/content is such that it feels relevant and personalised to the community. Communication is important and the community really values Landcare and appreciates the safe space and information/support that it provides.

Hands on experience

Hands on experience encompasses experiences that enable people to get into nature and make a tangible and worthwhile difference to the environment. The personal and environmental benefits were also seen to be a motivator and kept participants involved with the group.

Volunteers and Members need to have an outlet where they can tangibly respond to and feel like they're doing something to help.

Many of the benefits at an individual level come down to the 'doing' of the activities, such as planting trees, weeding, land care management, whereas other benefits stem from being part of a Landcare Group.

Connection to people

Landcare groups play a role in creating a space for people to meet and connect with other likeminded individuals, both those in urban and rural settings. This enables new people to meet established members of the community and provides opportunities for all members of the community to connect.

Farmers love to look over the fence to know what others are doing, and Landcare provided an avenue for people to see and speak to each other which builds one's own knowledge and capability.

Landcare encourages people to have contact with their neighbours and communities – all the more important in the current times.

'When locals feel helpless in times of disaster – flood, cyclone, fire, pandemic – Landcare groups experience an influx of enquiries through walk-ins, calls, and on their social media, so they serve as a source of direction and guidance'

¹¹ In some cases minor edits have been made to the quotes. Where changes have been made they have been done so only to improve readability and ensure anonymity; no edits have been made that might change the content or intent of the quote. All quotes have been anonymised, as stakeholder interviews were carried out on the understanding that any specific quotations would be depersonalised.



‘Landcare networks get things done. Knowing that there is somebody or a group of people who can answer any questions someone might have is really helpful for the community.’

Connection to nature/country

Landcare groups facilitate the sense of connection to nature and country for individuals through providing opportunities for people to experience nature and understand their connection to country.

Looking into my accountabilities, and the influence of custodianship, I was motivated to move back to work on country to make those connections, prior to this I had always said I loved the country, but I wasn't doing anything.

Holbrook Landcare has helped in the creation of 'farm-forestry plots' where anyone from the community can go to and walk, unwind, to take a time-out.

Community collaboration

Landcare groups play a role in building community cohesion by collaborating with other organisations (e.g. other community-oriented local businesses and national businesses with a local presence as well as local councils) to tackle community wide problems collectively.

Landcare is a source of advocacy for Broken Hill with their leadership team able to tap into wide professional networks to share information and create partnerships with like-minded organisations to assist in the preservation and land regeneration efforts in Broken Hill.

Landcare provides people with the ability to tackle community-wide problems collectively, for example, locating ground water together to provide to other farmers who are in need.

Economic benefits

Landcare groups often also have an economic impact in their communities. In some cases that impact comes from being an employer, from using local suppliers, and from drawing people into town where they also visit local stores. Landcare groups are also able to draw in funding from the private sector and helps communities band together to develop low cost solutions. Advice from Landcare was also regarded by interviewees to increase the profitability of landholdings (e.g. through improved soil quality or reduced weeds), and beautiful public spaces were regarded as being more inviting to locals and tourists.

Landcare was able to reach an arrangement with an energy company to provide them with free electricity for their new hub on land that was donated to them, and that company has since provided Landcare with funds to use as they like (e.g. for purchasing plants) as an act of good faith until the hub is opened.

Landcare has been around for a long time and does work that, in Broken Hill at least, could generate economic activity by boosting visitation from tourists but also attracting people to live and stay in the town.

Disaster resilience

Community connectedness enables networking for the purpose of planning and recovering from natural disasters. Landcare groups also provide guidance and support through public meetings and private enquiries, including around seeking and utilising disaster relief funding.

Enabling individuals and communities to connect to country has shown better responses when facing natural disasters, challenges, or traumas.

In November/December most significantly, with the severity of the bushfires, I noticed a huge increase in demand for guidance from Landcare from concerned locals.

Improved mental health and wellbeing

Enabling people to participate in activities that provide feelings of empowerment, belonging and purpose, this is particularly relevant for people who are young, suffering a mental illness, unemployed, new to the area, dealing with loneliness and facing natural disasters. Landcare provides people with as much human interaction as they desire and an avenue to be in nature.

We have had 3 people who came along for their Centrelink obligations who have bipolar, and I was pleased to see how they became more relaxed and confident with working with others over time.

I've noticed that Landcare really shares knowledge and equips people to get involved in activities that make them feel a sense of belonging and purpose.

Broader interview findings

Interviewing people involved in Landcare was a unique process in and of itself, insofar as new impacts were still being identified relatively late in the interview process. Just when the project team thought they'd heard of every possible type of activity, program or impact, a new interview raised a potentially new line of inquiry. This diversity of experience reflects the huge variation in Landcare groups and individual experiences, and because of this it is important to note that there were some themes that emerged from the interviews which provide useful insight into Landcare, even if they do not map clearly to an impact area. Those themes are as follows:

No 'average' Landcare: The experiences of the Landcare groups interviewed in different parts of Australia varied considerably, and thus the impacts they experienced and delivered were quite different as well. Each group has come into existence responding to different concerns and ambitions; focused on different types of programs; and delivered by different types of people. Some operate in remote areas of Australia; others in and around regional centres. Some were formed to respond to a single urgent issue, others to address a wide variety of environmental challenges and opportunities.

No common pathway: The reasons people come to Landcare are also extremely varied. Some joined their local group for mainly social reasons, and out of a desire to have connection with others in the community. Others, however, joined specifically to be involved in environmental and conservation work. For these participants, increased social connection was a side-benefit, or in a small number of cases, a distraction from their core focus on natural resource management activities.

“Landcare is a good mix of people of all ages and from all walks of life who come together to work for, and share in, a beautiful future.”



Not just an individual impact: The majority of interviewees highlighted that Landcare has had an important positive impact on their community as a whole in a variety of ways including encouraging community connection, empowering positive change and knowledge sharing.

Improved resilience: Interviews for this project took place early in March and April 2020, relatively early in the lockdown related to the COVID-19 pandemic. That crisis came off the back of one of the worst ever bushfire seasons in Queensland, New South Wales and Victoria, which had in turn come during a period of sustained drought. It is unsurprising, therefore, that many interviewees highlighted the benefits their Landcare group provided in relation to increasing the resilience of communities and individuals, often when under stress.

A mix of impacts: Because of the diversity of group and individual experiences with Landcare, it is not surprising that the types of impacts identified varied considerably and cut across a range of environmental, economic and social impact areas. Indeed, this created a methodological challenge for the project team when it came to narrowing down the impact areas to investigate, and this is discussed further in the sections below relating to the participant survey (Section 2.4) and impact model (Section 2.5) that were developed.

2.3 STAKEHOLDER WORKSHOP

A workshop was held to ensure that the nature of the impacts identified through the key stakeholder and case study group interviews, and the extent of the impacts identified through the survey questions, were reviewed and critiqued by a panel of informed and interested Landcare stakeholders, prior to project finalisation.

The stakeholders selected to participate in the workshop were presented with the survey results and draft impact framework and model and asked to consider the preliminary findings in the context of their involvement with Landcare and their awareness of issues important to the stakeholders that support and fund Landcare.

During the workshop, attendees were introduced to the impacts identified to date. Although all the findings were touched upon, several areas of focus emerged during the conversation, specifically with regards to the benefits for the youth, Indigenous people and disaster affected, and the flow-on effect of these benefits for mental resilience.

Youth

Participants reflected that although the vast majority of respondents were older, the benefits of Landcare to young people could not be underestimated and included engaging young people, who sometimes feel disconnected or experience poor mental health, and providing employment opportunities as well as support for young farmers. With employment opportunities and support also being highlighted as a benefit for people of all ages. Unfortunately only 3% of survey respondents were under the age of 30, and therefore it is difficult to analyse their experience of Landcare. Based on that very small sample it appears that younger Landcarers do experience more benefits than older ones, though more research would be done to confirm this, and this is discussed further in Section 3.

Indigenous people

Participants also raised the benefits of Landcare's role in supporting Indigenous young people to get back on country, and the related mental health benefits for Indigenous people, particularly in terms of mitigating social disconnection and the risk of suicide.

Due to the need to keep the survey a manageable length, demographic questions on gender and ethnicity were not included, so it is not possible to report on the level of participation by Aboriginal and Torres Strait Islander people.

Disaster affected

The benefits of Landcare for those affected by natural disasters was also raised by the panel, specifically with regards to reducing isolation, improving mental health resilience, encouraging community participation and providing avenues to mental health care, social support and funding. The panel also highlighted the benefits Landcare provided for communities affected by natural disasters in terms of recovery, with those supported by Landcare groups reported to recover much faster. Given the period of time over which the research took place, it is worth noting that the impact of multiple disasters was not raised to the extent that one might expect.

“With the severity of the bushfires, I noticed a huge increase in demand for guidance from Landcare from concerned locals.”

2.4 PARTICIPANT SURVEY – UNDERSTANDING EXTENT OF IMPACTS

A brief discussion of the survey design and deployment process (as described previously in Section 1.3), is followed by three categories of survey results:

Demographics: The first section provides details of the demographics of survey respondents based on responses to questions related to location (by state and remoteness), age, type of involvement in Landcare, length of involvement with Landcare, the average number of hours per month spent on Landcare, and the respondent’s employment status;

Impact Areas: The second section provides details of survey responses based on three groups of survey questions related to:

- Connection with people, environment and community;
- Economic and community impacts; and
- Physical and mental health impacts.

In this section results are presented based on the total response rate – i.e. there is no specific breakdown by different demographics; and

Demographics and Correlation of Impact Areas: This final section then brings these two layers of results together and provides analysis on where there are notable variations in how impacts are experienced by different groups of survey respondents.

Survey design and completeness

One of the biggest challenges in developing the survey was striking the right balance between questions that provided insight into the types of people who volunteer and work for Landcare, and questions that sought to understand the different types of impacts experienced as well as the need to keep the survey short enough to ensure a high response rate. Needless to say, there are many other demographic questions (e.g. gender, ethnicity) that could have been included, as well as other impact areas which could have been considered, but which were omitted in order to keep the survey a relatively brief one.

As with all surveys, there was some degree of survey fatigue evident as respondents worked through the survey, which suggests that a longer survey would have risked a lower response rate. While all 1,056 respondents completed the upfront demographic questions (1-6), 3 per cent of respondents skipped questions 7-11, and 9 per cent skipped questions 12-19. 486 respondents (46 per cent) provide a written comment to question 20 which is an excellent response rate for an open answer question.



Survey results: Demographics

In addition to questions on the impact areas, a number of questions on the demographics of the respondents were included in the survey. These questions were included so as to ascertain which cohorts were experiencing benefits and the extent of the benefits experienced. The demographics questions specifically targeted respondent age and location amongst the questions as these demographics were identified to be of specific interest and relevance to Landcare.

Location

Survey Question: What is your Landcare or other environmental community group's location? Please include your postcode.

Table 3 below shows the total number of survey responses and then compares the number of responses to the estimated Landcare population and the Australian population as a whole. The main conclusions that can be drawn from this are:

- In both the ACT and NT the survey response rate was in line with the estimated Landcare population for both territories, although for both territories this is lower than the overall population as a percentage of the Australian total.
- The survey response rate for WA is much closer to the state's overall percentage of the Australian population, which suggests that the current number of Landcarers in the state may in fact be much higher.
- In both Tasmania and NSW there was a strong survey response rate, and this is in line with their estimated Landcare populations which are higher than the respective states overall percentage of the Australian population.
- Responses in Queensland, South Australia and Victoria were all fairly closely aligned with the estimated Landcare population as well as the overall Australian population.

Table 3: Distribution of survey responses by state and territory

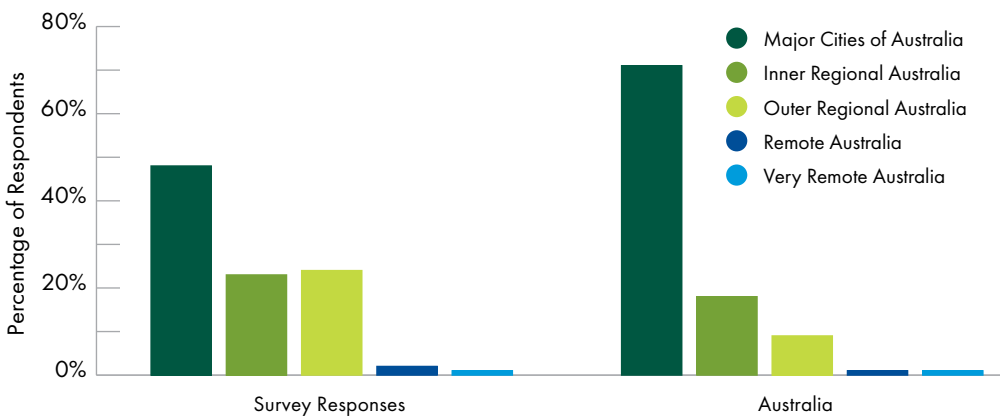
Location	Total Survey Responses	Survey Population (%)	Estimated Landcare population ¹² (%)	Australian Population ¹³ (%)
ACT	13	1.2	1.3%	1.7
NSW	373	35.3	42.2%	31.9
NT	4	0.4	0.4	1.0
QLD	174	16.5	22.1	20.1
SA	74	7.0	6.3	6.9
TAS	42	4.0	5.5	2.1
VIC	274	25.9	21.1	26.1
WA	93	8.8	1.2	10.4
Unknown	9	0.9	n/a	n/a

¹² A more detailed estimate of the total Landcare population is contained in Section 2.5, from which these numbers are drawn.

¹³ Population data from Australian Bureau of Statistics, '3101.0 – Australian Demographic Statistics, Dec 2019', published 18 June 2020, accessible at <https://www.abs.gov.au/ausstats/abs@.nsf/mediareleasesbyCatalogue/CA1999BAEAA1A86ACA25765100098A47>

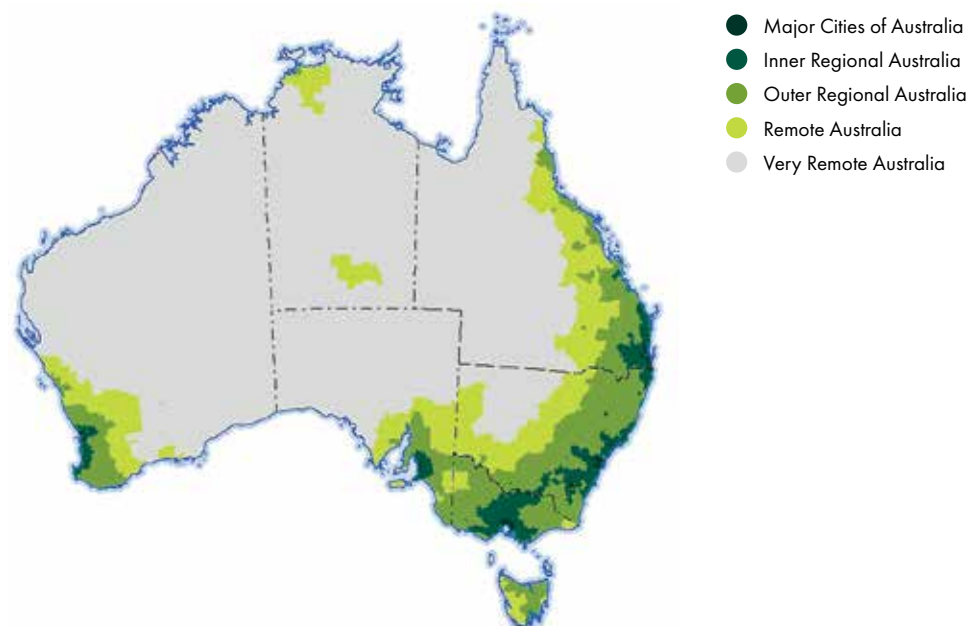
When one looks at where within states respondents live, a very different distribution relative to the Australian population as a whole is presented. As Figure 10 below shows, there was (when compared with the population as a whole), a lower level of respondents from major cities (48 per cent of respondents compared to 71 per cent of the population) and a much higher level of responses from inner and outer regional areas (47 per cent of respondents compared to 27 per cent of the population). Whilst there were less respondents from major cities than the Australian population, it is interesting to note that almost half of the respondents were from major cities indicating that although Landcare began in regional Australia, Landcare is now prominent in both urban as well as regional and rural contexts.

Figure 10: Distribution of survey responses by remoteness



The respondent's locations were categorised based on the widely used Accessibility and Remoteness Index of Australia (ARIA+) produced by the Hugo Centre for Migration and Population Research, which divides Australia into 5 areas of remoteness (see Figure 11 below) on the basis of relative access to services.

Figure 11: Remoteness areas in Australia



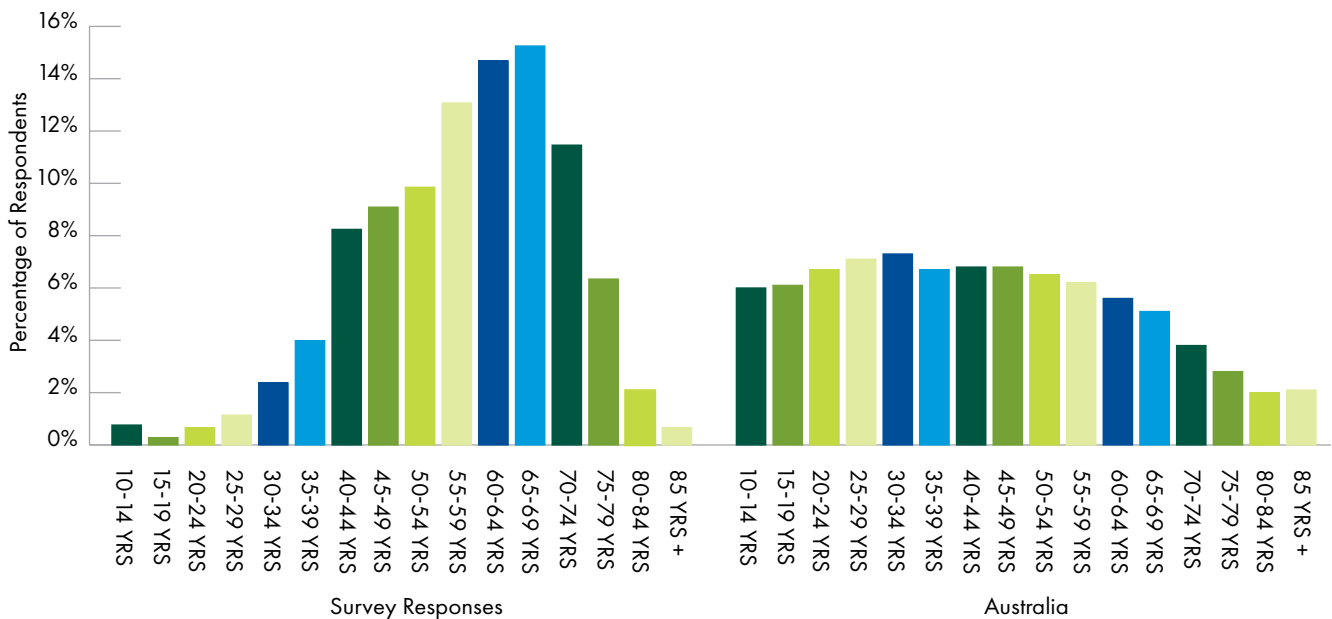


Age

Survey Question: How old are you? Please select one of the following age ranges.

As Figure 12 below shows, survey respondents are considerably older than the Australian population, with 91 per cent of respondents aged over 40 years old, compared to 60 per cent in the general population. Furthermore, 35 per cent of respondents were over the age of 65 compared to 16 per cent of the general population.

Figure 12: Age ranges of survey respondents



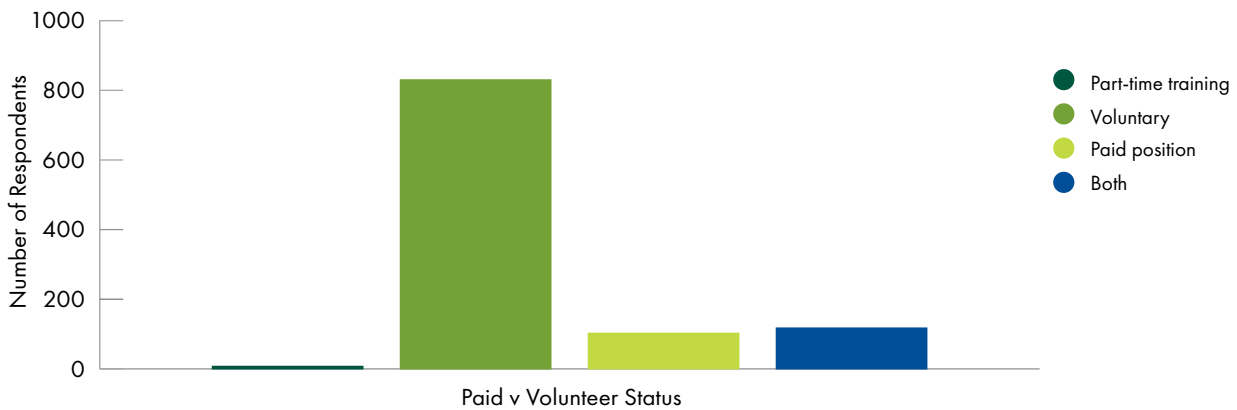
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Type of Involvement

Survey Question: *Is your involvement with Landcare in a paid employment or voluntary capacity, or both?*

The majority of respondents reported that they were Landcare volunteers, however, a few noted that as well as being paid they also volunteered for Landcare. Across most of the following experiential questions it was interesting to note, however, that there was little difference between paid and volunteer participants in terms of the level of impacts experienced, that is, the benefits were similar and employment by Landcare does not appear to skew the responses.

Figure 13: Type of involvement with Landcare

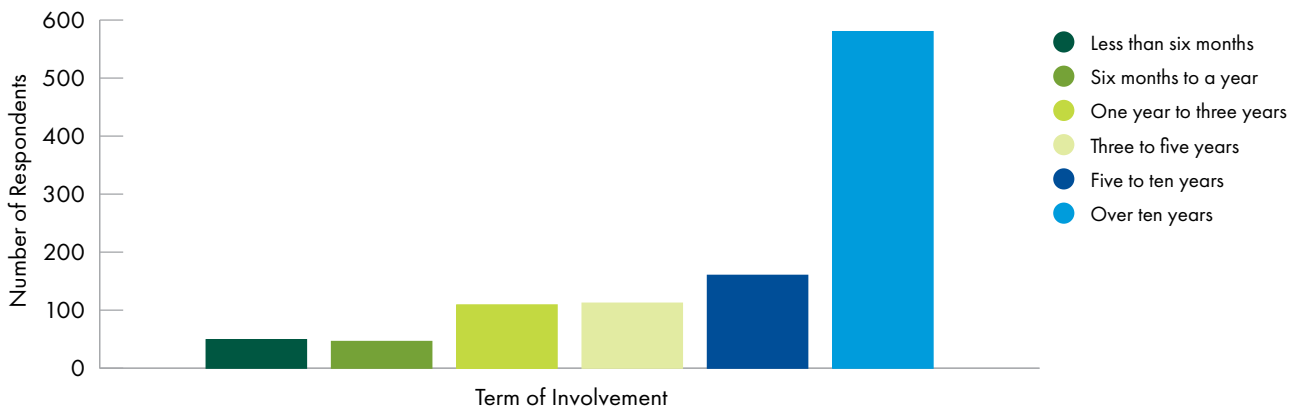


Length of Involvement

Survey Question: *How long have you been involved with a Landcare or other environmental community group?*

The majority of respondents to the survey have been involved in Landcare for a long (10+ years) time. From a survey point of view the advantage of this is that it means that respondents are able to comment on impacts based on extensive experience, and this possibly reduces any bias that might be expected as a result of the heavy load of recent natural disasters.

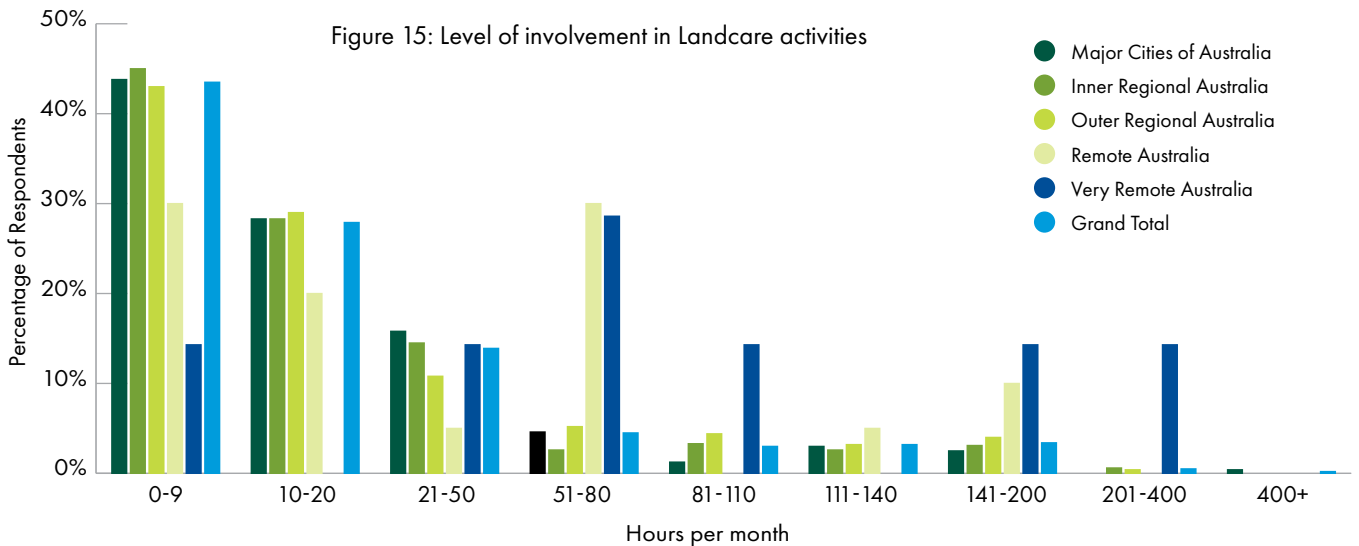
Figure 14: Length of involvement in Landcare



Level of Involvement

Survey Question: How many hours per month, on average, do you spend on Landcare related activities?

For most respondents participation in Landcare is something that they do occasionally, with 71 per cent of respondents spending between 0 and 20 hours per month on Landcare activities. It is notable that while the total number of respondents from remote and very remote areas was small (3 per cent of those surveyed), those respondents spend on average many more hours working on Landcare activities than those in regional and major cities: 45 per cent of respondents in remote areas, and 69 per cent of those in very remote areas, spent more than 51 hours per month on Landcare activities.

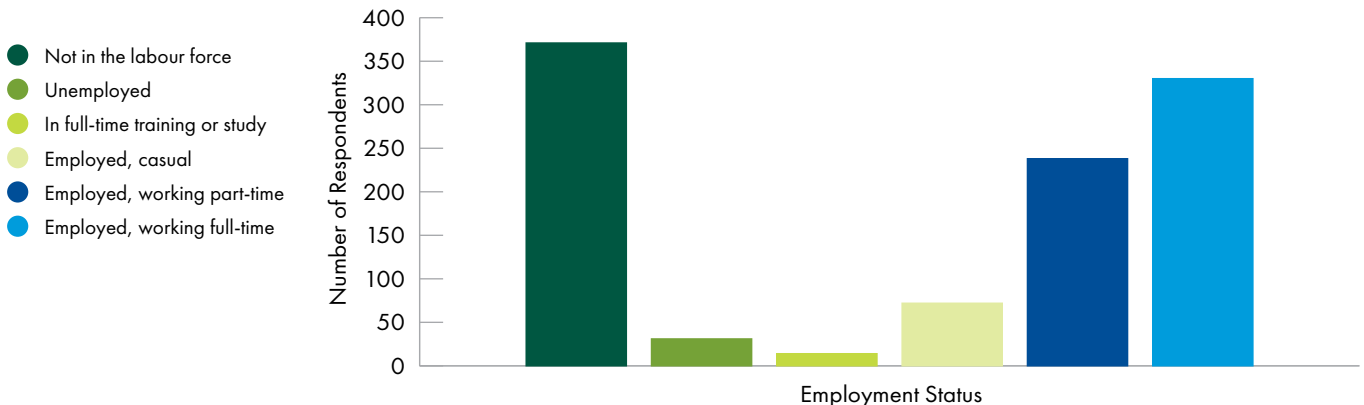


Employment Status

Survey question: Please select one of the following types of employment

As would be expected with a considerably older respondent group, a large proportion (35 per cent) of survey participants are not in the labour force.

Figure 16: Employment status of Landcare participants



Survey results: Impact areas

Impact area: Connection with people, environment and community

For this group of questions, survey respondents answered about whether their involvement in Landcare had led them to feel more connected to other people; more engaged in local community activities; and more connected to the natural environment. The survey also asked respondents to indicate how often they participated in land management, conservation or environmental activities. The results of those questions are shown in Figures 17, 18, 19, and 20 below.

The survey responses show that 62 per cent of respondents were involved in land management, conservation and environmental activities at least once a month. While this result may seem low, further analysis (see Section 3) shows that even those respondents who spend very few hours per month with Landcare still experience an impressive level of positive impacts.

There were also very high levels of benefit shown across all three connection/ involvement questions. When broken down by location, more than 80 per cent of all respondents in all locations, responded 'strongly agree' or 'agree' to all three questions, with no notable exceptions.

Figure 17: Since becoming involved with Landcare, I feel more connected to other people

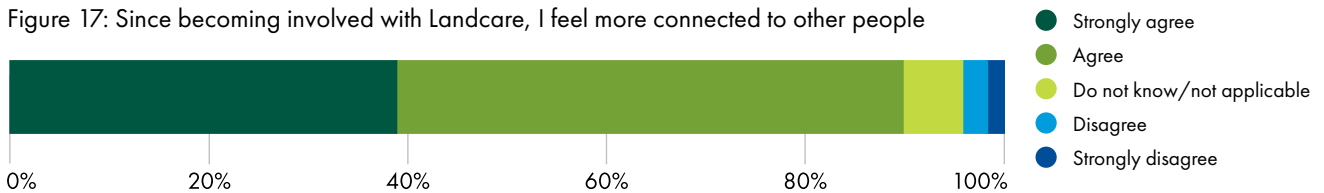


Figure 18: Since becoming involved with Landcare, I am more engaged in local community activities

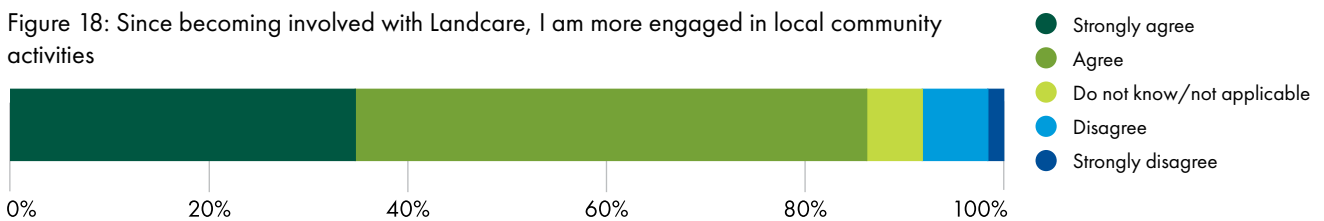
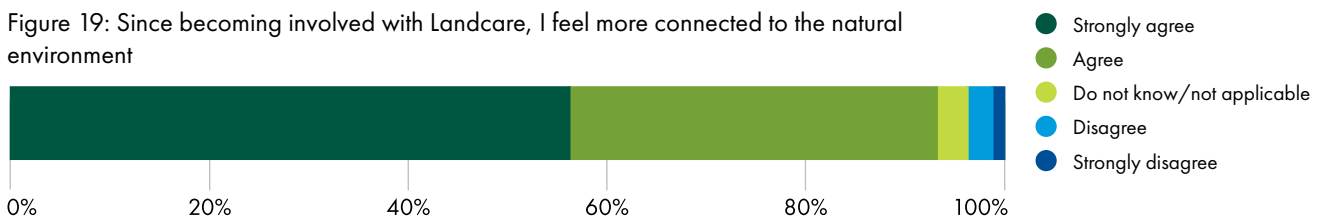


Figure 19: Since becoming involved with Landcare, I feel more connected to the natural environment





- Every week
- Every fortnight
- Every month
- Do not know
- Every six months
- Every year
- Less than once per year

Figure 20: Frequency of involvement in land management, conservation and environmental management activities



Impact area: Economic and community contribution

The next set of impact areas tested through the survey related to Landcare’s role as a community hub and source of helpful information, and the economic and employment impacts of Landcare. Two questions related to the economic impacts asked respondents to identify if their local Landcare group (or other environmental groups they are involved with) carry out activities that support the local economy – e.g. through increasing local employment or supporting local businesses. The second economic impact question asked respondents to identify possible ways in which their involvement in Landcare had improved their employment prospects.

On average 70 per cent of respondents strongly agreed or agreed that the group they were involved in supported the local economy. The picture of employment impacts however, was much more mixed. This question asked respondents to identify the employment impacts relevant to them from those listed, with the majority (62 per cent) responding that their involvement had made no change to their employment prospects. This response will in part reflect the age and employment profile of respondents – i.e. that many Landcare volunteers are over the age of 65 and are not in the workforce. Some respondents did identify an impact on their employment prospect through an expansion of their network (30 per cent), informal skills development (27 per cent), work experience (17 per cent), peer support (17 per cent), or formal training (12 per cent) (refer to Figure 22).

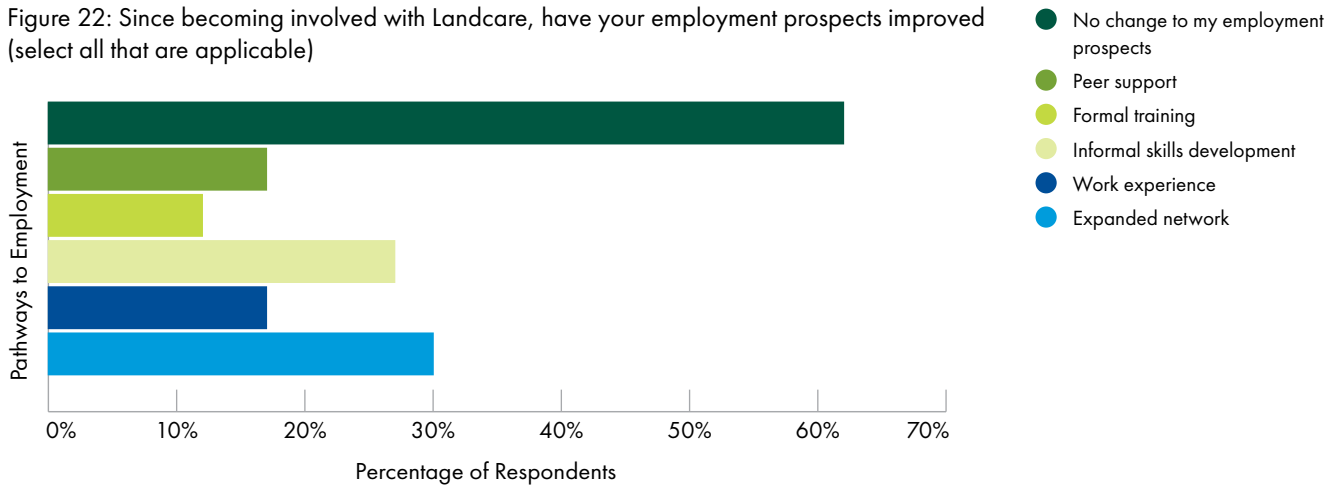
- Strongly agree
- Agree
- Do not know/not applicable
- Disagree
- Strongly disagree

Figure 21: Landcare or other environmental groups I am involved with contribute to the local economy



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Figure 22: Since becoming involved with Landcare, have your employment prospects improved (select all that are applicable)

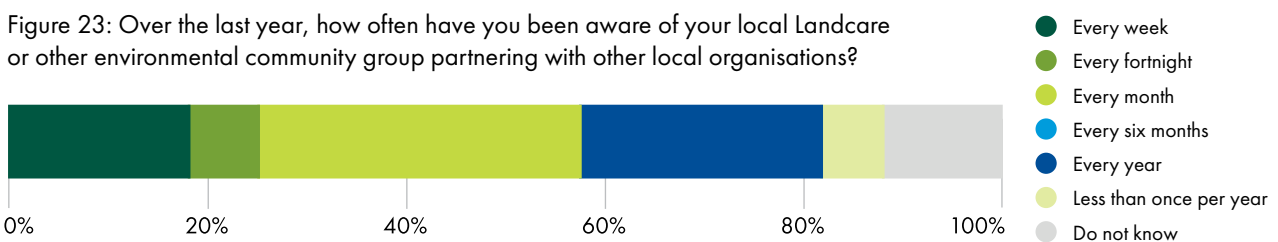


Two questions then considered Landcare’s role as a ‘community hub’. The first question in this group asked how often respondents were aware of their local Landcare (or other environmental community group) partnering with organisations, such as local councils and businesses, to deliver benefits to the community or respond to a community problem. Building on this, a second question then asked whether they had received helpful information as a result of being involved in Landcare (for example about planting and/or revegetation, animals, weed control, land management, and/or natural disaster plans).

People frequently (57 per cent of respondents reporting monthly, fortnightly or weekly) observed their local Landcare group partnering with other organisations in the community. This question was included because during key stakeholder and case study group interviews it was observed by people in as many as eight interviews that Landcare groups performed a valuable role as a ‘community hub’, collaborating with other groups and organisations to tackle community wide problems collectively. Responses to this question could in part also be taken as an indicator of whether Landcare groups contribute to community resilience.

Across the entire survey the impact area that elicited the most positive response was that relating to Landcare as a useful source of information, with 93 per cent of respondents either agreeing or strongly agreeing with this statement. Further analysis (see the section on Survey results: Demographics and Correlation of Impact Areas below) details which cohorts of respondents this question particularly resonated with.

Figure 23: Over the last year, how often have you been aware of your local Landcare or other environmental community group partnering with other local organisations?



- Strongly agree
- Agree
- Do not know/not applicable
- Disagree
- Strongly disagree

Figure 24: The advice I have received as a result of being involved in Landcare is helpful



Impact area: Mental and physical health and wellbeing

The final group of impact questions related to whether involvement in Landcare had changed the overall wellbeing of participants. Alongside environmental impacts, physical and mental health impacts had emerged from the key stakeholder and case study group interviews as prominent potential impact areas. Questions in this area related to the willingness of respondents to ask for support; changes in mental wellbeing; changes in mental resilience; and changes in the use of physical (e.g. doctors, physiotherapist etc) support services.

A question on changes in the use of mental health (e.g. counsellors, psychologists) support services was also included in the survey, however, the results have not been discussed in this analysis. This is because, in retrospect, the scale applied could be interpreted in two quite different ways (e.g. whether an increase in the use of mental health support services demonstrated an improvement or a decline in mental health). Because of this the analysis of mental health impacts have been informed by responses to the questions on mental wellbeing and mental resilience. While this concern also applies in the context of the physical health question, in the absence of other questions relating to physical health, we have included brief analysis on this question here.

Improvements in mental wellbeing and mental resilience, were substantial – 50 per cent of respondents reported that mental wellbeing had moderately or significantly improved since becoming involved in Landcare, and 46 per cent observed that their mental resilience and ability to manage challenges had moderately or significantly improved. Further analysis (see Section 3 below) indicates that these impacts are also closely correlated with connection to environment.

Willingness to reach out for support or ask for help from Landcare members for issues unrelated to land management and conservation activities was relatively low – 27 per cent responded that they did this less than once a year and a further 27 per cent stated that they did not know how often they asked for support. The last question in this group asked respondents whether their use of physical health services had changed since becoming involved with Landcare.

For this question on physical health services, the number of those reporting a moderate or significant improvement totalled 20 per cent. While small, it is important to note that the overwhelming majority (78 per cent) reported either no change, not knowing if there had been a change or having never used a service. The frequency with which people accessed different services or are comfortable talking about accessing services, is also likely to influence responses to this question.

Figure 25: How often have you reached out for support or asked for help from a member of the Landcare community that is unrelated to land management and conservation activities (on average)?

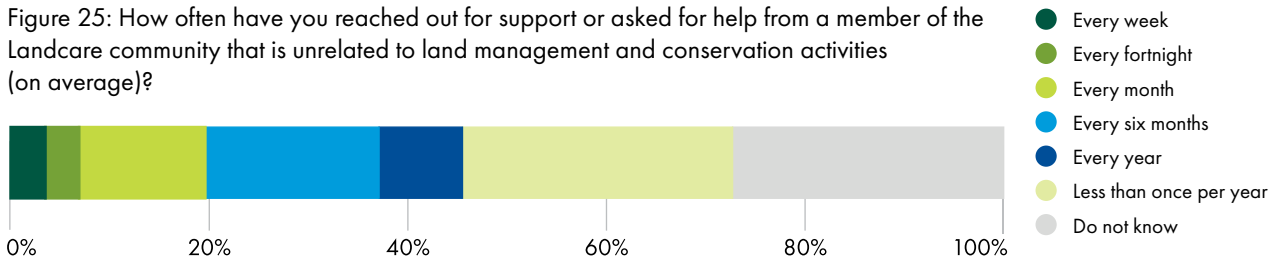


Figure 26: Since becoming involved in Landcare, has your mental wellbeing changed?

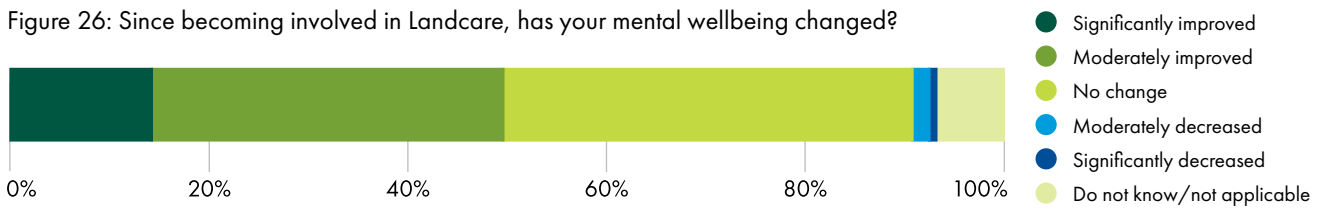


Figure 27: Since becoming involved with Landcare, has your mental resilience and ability to manage challenges changed?

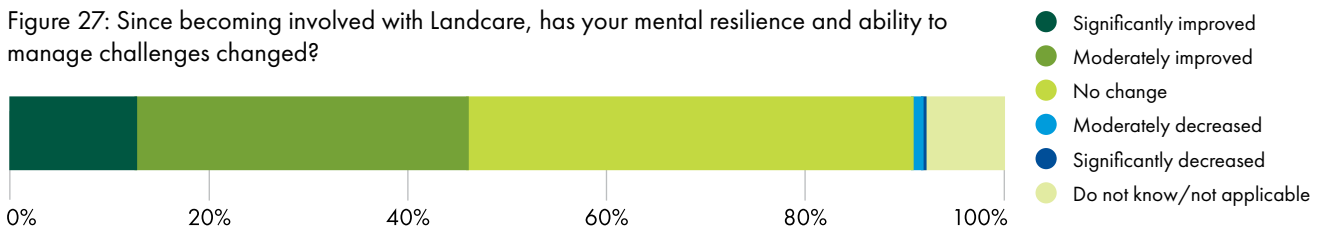
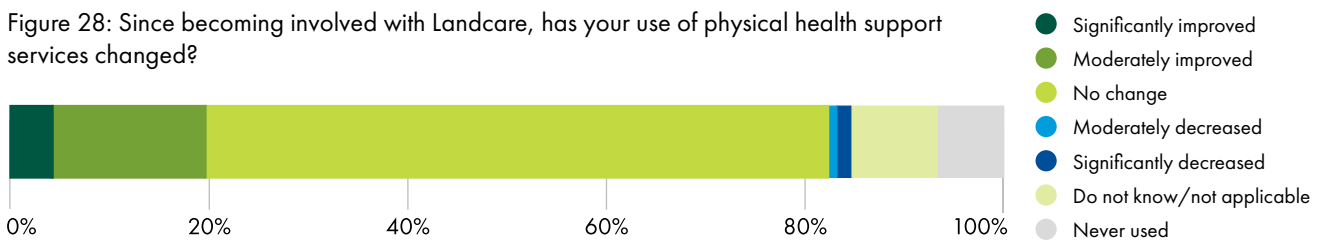


Figure 28: Since becoming involved with Landcare, has your use of physical health support services changed?



Survey results: Demographics and Correlation of Impact Areas

Based on the above results, further analysis was undertaken in order to better understand how different cohorts (e.g. based on location, age, employment status and level of involvement) of respondents experienced different impacts of being involved in Landcare.

Interestingly, despite there being a lower level of respondents from major cities and from younger demographics as compared with the Australian population (as a whole), respondents from these cohorts report experiencing several benefits to a greater extent than other population groups.

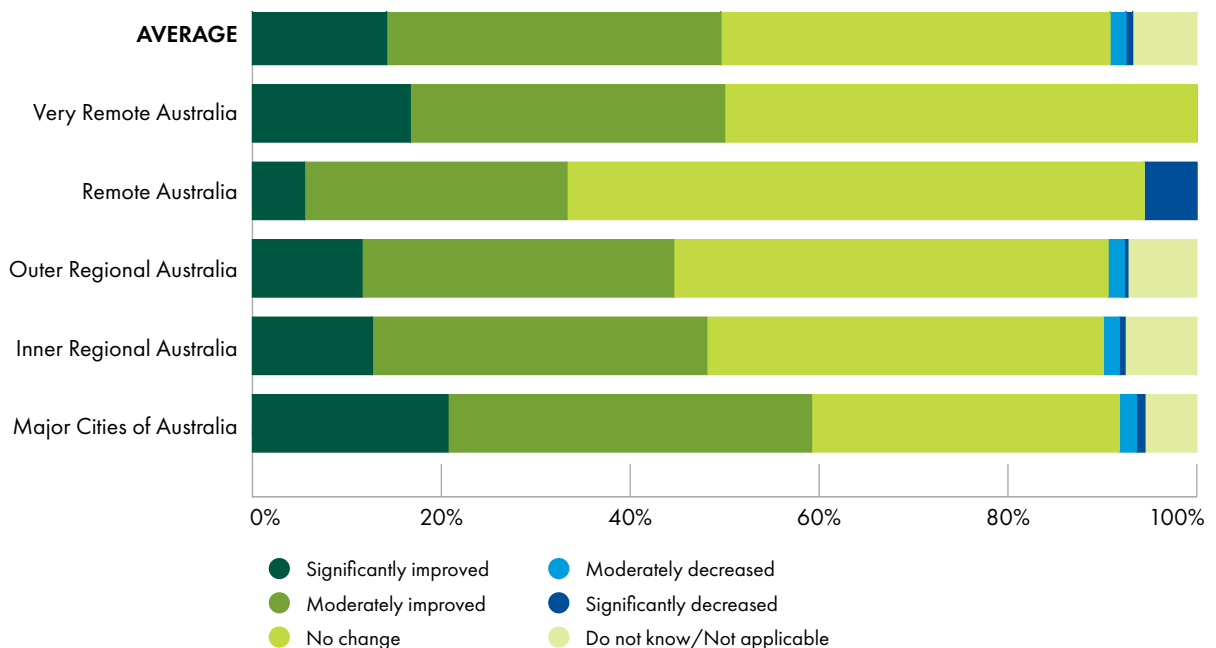
Demographic cohort: Location

In analysing the role of location on impacts, the survey results for those in major cities (48 per cent of survey respondents), inner regional areas (23 per cent), and outer regional areas (24 per cent) were considered. Responses from those in remote (2 per cent) and very remote (1 per cent) areas were excluded as the total number of responses from those areas was not large enough to accurately provide representative samples. Responses from those who did not list their location were also excluded (3 per cent).

Across several impact areas, those in major cities experienced a higher level of benefit from their involvement in Landcare, than those in regional areas. Those include:

- There is a notable difference between those in cities and those in regional areas in terms of the impact of their Landcare experience on their mental health. Figure 29 below shows that 59 per cent of those in major cities reported either a significant or moderate improvement in their mental wellbeing, compared to 47 per cent in regional areas.
- When asked about mental resilience, again there was a large difference with 54 per cent of those in cities reporting an improvement, compared to 43 per cent in regional areas.
- The other area of difference based on location could be found in the responses to the question related to experiencing a sense of greater connection to the environment. Responses to this question consistently showed strongly positive impacts – 96 per cent of respondents in major cities, 93 per cent of those in inner regional areas, and 91 per cent of those in outer regional areas, reported that they either agreed or strongly agreed that their sense of connection to the environment had improved. Respondents in cities, however, felt that sense of connection more strongly – with 66 per cent strongly agreeing, compared to 54 per cent in inner and outer regional areas.

Figure 29: Improvement in mental wellbeing by location





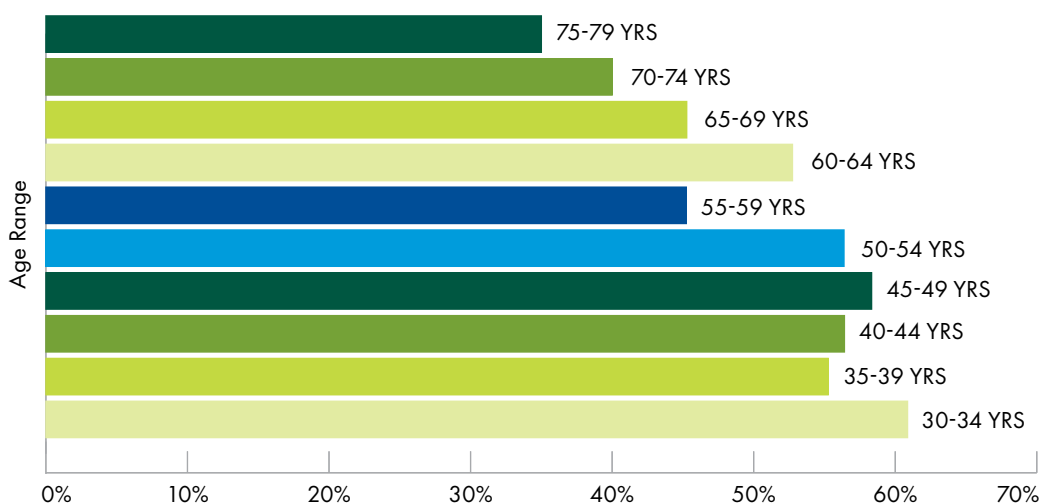
Demographic cohort: Age

In analysing the role of age on impacts, the survey results for those aged 30 to 79 years old were considered. Responses from those in the younger and older age brackets were excluded as the total number of responses from those cohorts was not high enough to be comparable.

The level of agreement that the advice received as a result of being involved in Landcare was helpful was very strong at every age, however:

- Younger people appeared to experience additional benefits of being involved in Landcare more than the older population (e.g. 61 per cent of 30-34 year olds reported an improvement in their mental wellbeing and 58 per cent of 45-49 year olds versus 35 per cent for 75-79 years and 40 per cent for 70-74 years).
- People asking for support on a regular basis (e.g. weekly, fortnightly or monthly) decreased with age (39 per cent of 30-34 year olds regularly asking for support versus 13 per cent for 70-74 years); and
- People reporting improvement in their mental resilience also appeared to decline with age (56 per cent of 40-44 year old's reported an improvement in their mental resilience versus 35 per cent for 75-79 year old's).

Figure 30: Improvement in mental wellbeing by age





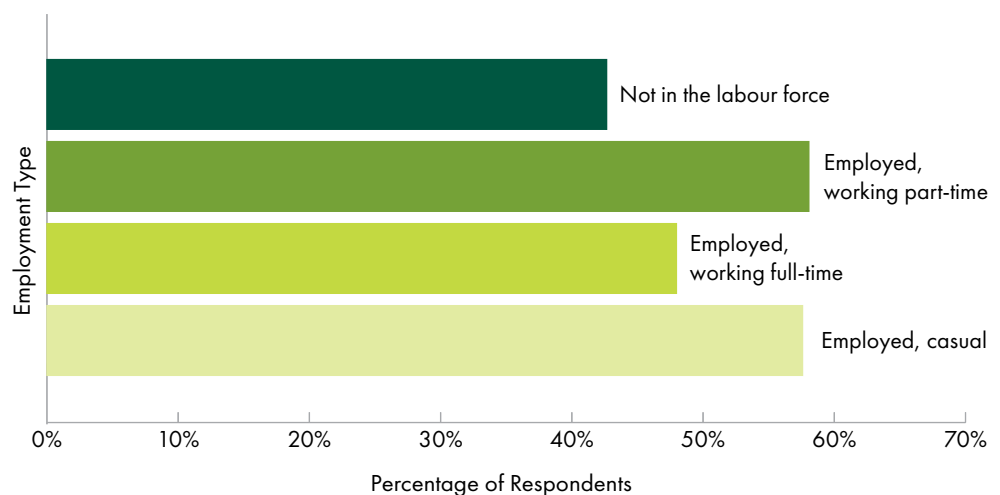
Demographic cohort: Employment status

In analysing the role of location on impacts, the survey results for the casually employed, full-time employed, part-time employed and for those not in the labour force were considered. Responses from those in full-time training or study and those unemployed were excluded as the total number of responses from those cohorts was not high enough to be comparable.

Generally speaking, people working in part-time employment and in casual employment derived more benefits from being involved in Landcare than people in the other employment cohorts. Furthermore:

- The majority of people in part-time employment and in casual employment (58 per cent for both cohorts) reported an improvement in their mental wellbeing, which was a larger percentage than the other cohorts.
- People working in casual employment asked for support more frequently than any other employment cohort, however, this was closely followed by people working in part-time employment (27 per cent of people in casual employment regularly asked for support versus 25 per cent of the part-time employed).
- Also, the majority of people working in part-time employment and in casual employment (53 per cent for both cohorts) reported an improvement in their mental resilience and ability to manage challenges, which was again a larger percentage than the other cohorts.
- In line with previous analysis, across all employment cohorts, approximately 90 per cent of respondents agreed that the advice received as a result of being involved in Landcare was helpful.

Figure 31: Improvement in mental wellbeing by employment type



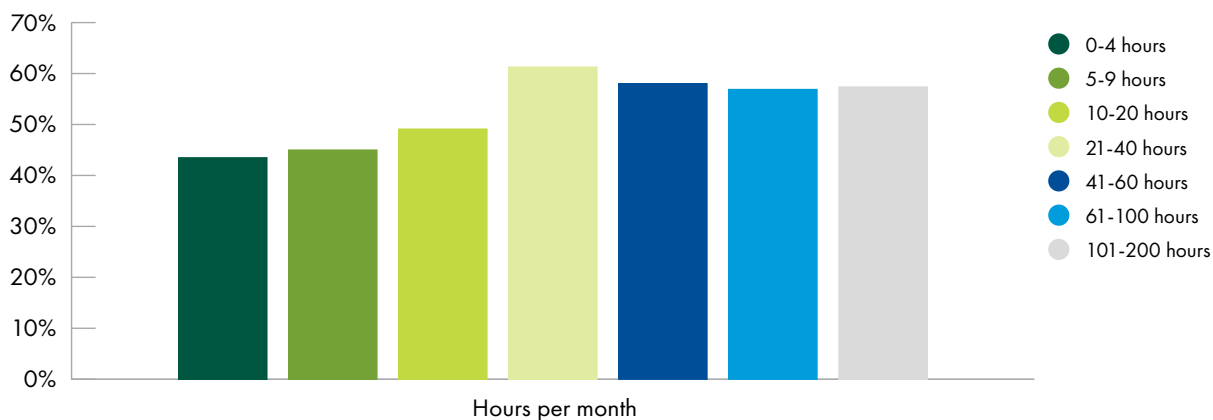


Demographics: Level of involvement

Even minor involvement with Landcare is capable of delivering a majority of realisable mental health benefits:

- For respondents with only 0-4 hours of involvement with Landcare per month, 43 per cent reported an improvement in their mental health.
- Although a greater number of respondents with 101-200 hours involvement per month see mental health benefits compared to those with 10-20 hours, for example, the difference is relatively minor (57 per cent vs 49 per cent) when compared to the difference in time invested. One impact here is likely to be part-time and full-time employees of Landcare Groups who would naturally spend a large number of hours but do not appear to experience different levels of impacts. This has been explored in further in Section 3.
- While there is a correlation between increased hours spent with Landcare and improved mental health outcomes, the benefits peak at 21-40 hours per month.
- This suggests that additional benefits can then be unlocked by increasing monthly hours to approximately a day per week (21-40 hours per month) where mental health benefits peak, after which point further increases do not yield noticeable mental health returns.

Figure 32: Improvement in mental health by hours of involvement





2.5. IMPACT FRAMEWORK AND MODEL

This section outlines the approach to the development of the impact framework and how this flowed into the model and calculation of the benefits of being involved with Landcare. Figure 9 in Section 1.3 provides a high-level view of how the Impact Framework and model was developed, while Figure 33 below shows how the quantification of benefits was carried out.

QUANTIFICATION OF BENEFITS

Significant and detailed desktop review of available literature.

An analogous source and financial proxy was identified for one of five key benefits.

This source and financial proxy was multiplied by the number of survey responses and weighted percentage of the selected answer – either ‘Agree’ or ‘Strongly Agree’.

A percentage of attribution was allocated to each response – ‘Agree’ or ‘Strongly Agree’ – across three levels of impact (Low, Medium and High).

Total benefit cost was divided by the approximate population (/142,063) to find the approximate per capita value of impact.

The approximate discount that Landcare provides to the economy.

Figure 33: Methodology Explanation for the Quantification of Benefits

Identification of Sources and Indicators

Table 4, includes the details of each of the analogous sources and financial proxies (termed as “indicators”) for each of the benefit categories.

Table 4: Benefit Categories and Indicators

Benefit Category	Analogous Source	Corresponding Indicator	Related Survey Question
Mental Health – Avoided Healthcare Costs	Journal of Aging and Health, <i>Social Isolation and Medicare Spending: Among Older Adults, Objective Social Isolation Increases Expenditures While Loneliness Does Not</i> , October, 2017, available from: https://pubmed.ncbi.nlm.nih.gov/29545676/	Avoided cost of loneliness	Questions 10, 12, 13
Mental Health – Increased Productivity	Deloitte Access Economics, <i>The Economic Benefits of Improving Social Inclusion, a Report commissioned by SBS</i> , August, 2019, available from: www2.deloitte.com/content/dam/Deloitte/my/Documents/risk/my-risk-sdg10-economic-benefits-of-improving-social-inclusion.pdf	Economic benefit of social inclusion	Question 7, 8, 9
Improved Physical Health	medibank, <i>The Cost of Physical Inactivity</i> , October, 2008, available from: www.medibank.com.au/client/documents/pdfs/the_cost_of_physical_inactivity_08.pdf	Cost of physical inactivity to the Australian economy	Question 18
Disaster Resilience	<i>Australian Business RoundTable for Disaster Resilience & Safer Communities/ Deloitte Access Economics, Building Resilience to Natural Disasters in our States and Territories, 2017</i> , available from: http://australianbusinessroundtable.com.au/assets/documents/ABR_building-resilience-in-our-states-and-territories.pdf	Reduce costs to the economy spent on disaster recovery	Question 16

Table 5 demonstrates the applicable evidence and relevance of each of the analogous sources (described in Table 4 above) to help explain why these sources, and subsequent financial proxies, were chosen.

Table 5: Evidence and Relevance of Indicators

Benefit Category	Analogous Source	Evidence
Mental Health – Avoided Healthcare Costs	<i>Social Isolation and Medicare Spending: Among Older Adults, Objective Social Isolation Increases Expenditures While Loneliness Does Not.*</i>	A study of 5,270 United States Medicare beneficiaries found that individuals who were socially isolated cost the Medicare System US\$1,643 (per beneficiary/per month) more per year than similar individuals who have good social networks.
Mental Health – Increased Productivity	<i>Economic Benefits of Improving Social Inclusion.*</i>	<p>Improving social inclusion – defined as ‘affording all people the best opportunities to enjoy life and prosper in society’ – is a source of economic strength and higher living standards. Having an inclusive society avoids the costs incurred when people are excluded – from jobs, from businesses and from accessing social services.</p> <p>It is estimated that the economic dividend to Australia from having a more inclusive society to be \$12.7 billion annually.</p> <p>Part of the \$12.7 billion figure – approximately \$5 billion – represents higher productivity from more creative and innovative workplaces where employees experience greater inclusion. But there are also labour market benefits from increased employment, worth almost \$1.2 billion to Gross Domestic Product (GDP) each year and improved health outcomes, which are estimated to improve well-being by \$6.5 billion a year. These are benefits to all Australians and represent a lift in overall living standards.</p>
Improved Physical Health	<i>The Cost of Physical Inactivity.*</i>	<p>Medibank, a private health insurance provider, estimates the cost of physical inactivity to the economy to be \$13.8 billion, in 2008.</p> <p>The National Physical Activity guidelines recommends 30 minutes of moderate-intensity physical activity on most days of the week as the minimum requirement for good health.</p> <p>Unfortunately, it is estimated that 16,178 Australians die prematurely each year due to physical inactivity.</p> <p>Productivity loss due to physical inactivity equates to 1.8 working days per worker per year.</p>
Disaster Resilience	<i>Building Resilience to Natural Disasters in our States and Territories.*</i>	<p>This Report assesses the resilience of Australia’s states and territories to natural disasters. The Report quantifies the cost of natural disasters, comprising of:</p> <ul style="list-style-type: none"> • Direct tangible costs which include emergency response efforts and damage to property and infrastructure; • Indirect tangible costs which include flow on effects to businesses and networks such as network outages or disruptions to business or supply chains; and • Intangible costs which capture death, injury and impacts on health and wellbeing, employment and community connectedness. Intangible costs are estimated to be as great, or greater than, tangible costs, however they are hard to price <p>In the 10 years to 2016, the total economic cost of natural disasters averaged \$18.2 billion per year, equivalent to 1.2 per cent of GDP over the same period. The total economic cost is forecast to grow by 3.4 per cent per year, double by 2038 and by 2050 to be around \$39 billion per year.</p>

* See full source citation in the second column of Table 4.



Impact Calculation

Scenarios

To demonstrate the possible impact that participation in Landcare programmes have on the economy, three scenarios have been calculated dependent on the survey responses. The reasons for using three different scenarios are:

- While the survey results give an indication of impact (e.g. significantly improved vs. no improvement), it is not possible to determine how big or small participation factors are in the overall outcome category. Even if a survey respondent indicates that there has been a significant improvement in, for example, their mental health as result of participation in Landcare, there will be other factors impacting on their mental health.
- Some outcome categories could draw evidence from multiple survey questions. For example, the category related to disaster recovery resilience, could draw on data from questions 9, 12, 13, and 16. However, for simplicity and clarity the model has used the response rate from the question (16) where there is the clearest related indicator and supporting evidence (as shown in Table 5)."

Because of these two factors, it was deemed necessary to provide Low, Medium and High scenarios to account for these variables.

Method of Attribution

For each quantifiable outcome, using the survey responses, a percentage of attribution was allocated to either a 'Strongly Agree' or 'Agree' response. For example, Question Seven, of the survey, was, "Since becoming involved with Landcare, I feel more connected to other people: (a) strongly agree; (b) agree; (c) do not know/ not applicable; (d) disagree; or (e) strongly disagree."

Each benefit was then discounted – as illustrated in Table 6 below – whereby a range of percentages are attributed to each value of impact to demonstrate the three different levels of the total impact.

Table 6: Attribution value by scenario

Level of Impact	Attribution of Value of Impact (per cent)	
	Strongly Agree	Agree
Low	50%	10%
Medium	75%	25%
High	100%	40%



2.6. TOTAL ECONOMIC IMPACT

Calculating the Landcare population

In order to derive an estimate of the total benefit provided by participation in Landcare, it is necessary to understand the total Landcare population. An estimated total population of approximately 140,000 has been identified through the membership of the state and territory Landcare organisations. This population estimated was calculated using the sources included in Table 7 below. The average group size reported across the following resources referenced on average 30 volunteers per group. This was then multiplied by the total number of groups reported for each state and territory. The breakdown for each state is below along with the associated references. Note that this estimate doesn't include the large number of community environmental organisations that are not members of the state and territory Landcare organisations.

Table 7: Approximate Landcare Population Estimates and Sources

State or Territory	Landcarer Population Estimates	Source
New South Wales	60,000	'Who is Landcare NSW?', Landcare NSW, https://landcarensw.org.au/
Australian Capital Territory	1,800	'Who Are We', LandcareACT, https://landcareact.org.au/who-we-are/#menu_lc
Victoria	30,000	'Landcare', Environment of Land, Water and Planning, Victoria State Government, www.environment.vic.gov.au/landcare
Queensland	31,333	The Health of Landcare in Queensland, Queensland Water & Landcarers, 'The Health of Landcare in Queensland', prepared for the Queensland Department of Natural Resources, Mines and Energy
Northern Territory	480	Annual Report 2017-18, Landcare NT, https://landcarent.org.au/uploads/assets/uploads/Landcare_NT_Annual_Report_2017-18.pdf . Victoria State Government, www.environment.vic.gov.au/landcare
Western Australia	1,650	'About Us', WA Landcare Network, www.landcarewa.org.au/about-wa-landcare-network/
South Australia	9,000	'Landcare and Volunteers', Department of Primary Industries and Regions, Government of South Australia, www.pir.sa.gov.au/aghistorical/natural_resources/landcare_and_volunteers
Tasmania	7,800	'Who We Are', Landcare Tasmania, www.landcaretas.org.au/overview
Total	142,063	

Source: the above figures and sources were provided by Landcare Australia on 18 June 2020.

Estimated total benefit of Landcare participation

As noted in Table 4, multiple indicators have been considered, but it is important to note that these indicators should not be used cumulatively in areas where there are likely to be overlapping impacts. A number of the indicators, for example, relate to different aspects of mental health. For that reason this model has taken a cautious approach and has applied the value of the highest single financial proxy related to mental health, but has not applied the value of other indicators in this area. To derive an estimated total value, the following tables, Table 8 to Table 10, combines the scenarios and survey response, and applies them to three financial proxies only – savings related to physical health impacts, savings related to the economic cost of natural disasters, and the aforementioned mental health savings.

Table 8: Approximate Discount to Mental Health (per Landcare participant)

Indicator	Value of Impact (per unit)	Units of impact	Population Size	Percentage of population impacted (based on survey response)	Number of Landcarers impacted	Approximate Discount (\$)
Mental Health – Avoided Healthcare Costs	\$1,797	Estimated Landcare Population/ Per Year	142,063	35% 'strongly agreed' in the survey	Low scenario: 24,598 Medium scenario: 36,897 High scenario: 49,196	Low scenario: \$44,209,472 Medium scenario: \$66,314,209 High scenario: \$88,418,945
				51% 'agreed' in the survey	Low scenario: 7,228 Medium scenario: 14,456 High scenario: 21,684	Low scenario: \$12,990,921 Medium scenario: \$25,981,842 High scenario: \$38,972,763
Mental Health – Improved Productivity	\$2,804	Estimated Landcare Population/ Per Year	142,063	39% 'strongly agreed' in the survey	Low scenario: 27,638 Medium scenario: 41,458 High scenario: 55,277	Low scenario: \$44,209,472 Medium scenario: \$66,314,209 High scenario: \$88,418,945
				50% 'agreed' in the survey	Low scenario: 7,173 Medium scenario: 14,346 High scenario: 21,518	Low scenario: \$20,115,644 Medium scenario: \$40,231,288 High scenario: \$60,346,932

Table 9: Approximate Discount to Physical Health (per Landcarer)

Indicator	Value of Impact (per unit)	Units of impact	Population Size	Percentage of population impacted (based on survey response)	Number of Landcarers impacted	Approximate Discount (\$)
Physical Health – Avoided and/or reduced cost due to inactivity	\$1,379	Estimated Landcare Population/ Per Year	142,063	4% 'strongly agreed' in the survey	Low scenario: 3,026 Medium scenario: 36,897 High scenario: 49,196	Low scenario: \$4,172,007 Medium scenario: \$6,258,011 High scenario: \$8,344,014
				15% 'agreed' in the survey	Low scenario: 2,201 Medium scenario: 4,401 High scenario: 6,602	Low scenario: \$3,034,009 Medium scenario: \$6,068,018 High scenario: \$9,102,027

Table 10: Approximate Discount to Disaster Resilience (per Landcarer)

Indicator	Value of Impact (per unit)	Units of impact	Population Size	Percentage of population impacted (based on survey response)	Number of Landcarers impacted	Approximate Discount (\$)
Disaster Resilience – reduce costs to the economy on disaster recovery	\$2,121	Estimated Landcare Population/ Per Year	142,063	13% strongly agreed' in the survey	Low scenario: 9,085 Medium scenario: 13,627 High scenario: 18,170	Low scenario: \$19,273,064 Medium scenario: \$28,909,596 High scenario: \$38,546,128
				33% 'agreed' in the survey	Low scenario: 4,711 Medium scenario: 9,422 High scenario: 14,132	Low scenario: \$9,993,664 Medium scenario: \$19,987,328 High scenario: \$29,980,992



Table 11: Total Discount that Landcare provides the economy (per Landcarer)

Value of Impact (per unit)	Units of impact	Population Size	Total Approximate Discount (\$)
\$8,101	Per Landcarer/ Per Year	142,063	Low scenario: \$1,347 Medium scenario: \$2,182 High scenario: \$3,018

Table 12: Total Discount that Landcare provides the economy

Value of Impact (per unit)	Units of impact	Population Size	Total Approximate Discount (\$)
\$8,101	Estimated Landcare Population/ Per Year	142,063	Low scenario: \$191,299,150 Medium scenario: \$310,015,844 High scenario: \$428,732,538

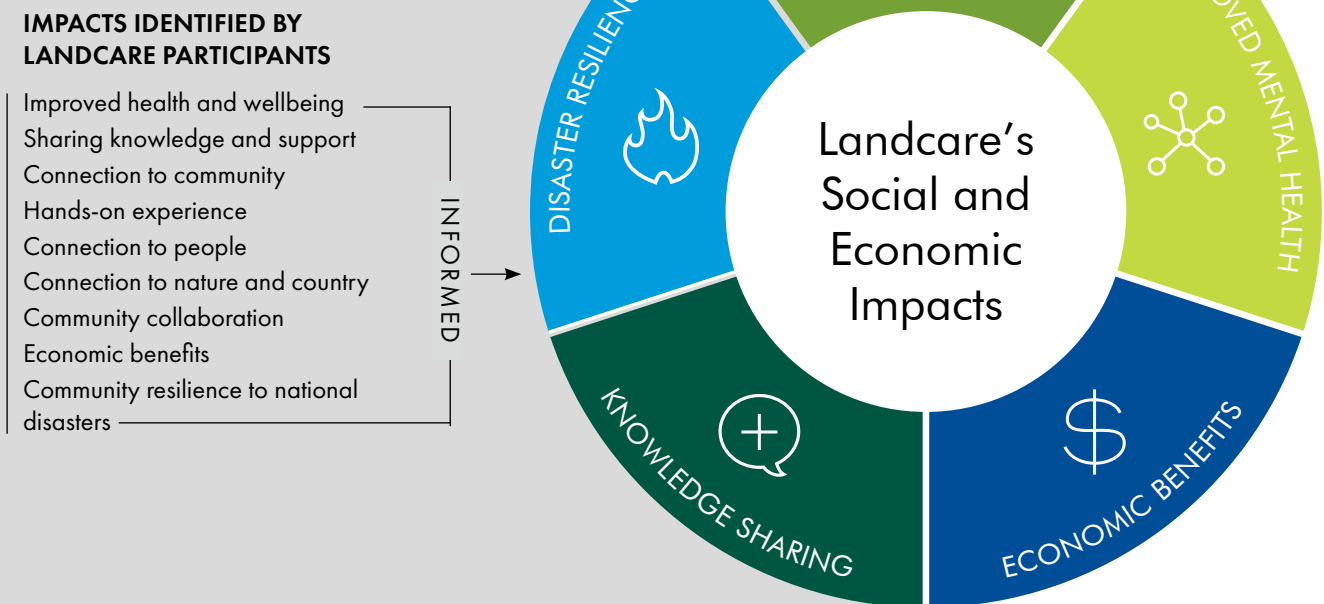
3. Benefits of participation in Landcare

People who volunteer with and are involved in Landcare experience a broad range of impacts as a result of their involvement. As noted in Section 1, however, finding a way to understand those benefits, and the experiences of the approximately 142,000 Australians involved in Landcare, is not without challenges.

These impacts are experienced by individuals and communities, and more broadly, states, territories and Australia as a whole. This report focuses heavily on the start and the end of the chain of impacts – on individuals and on the total Landcare population – but it is important not to forget the communities that sit in-between.

The impact framework and model discussed in Section 2.5 used selected impact areas and survey results to estimate the potential economic benefits of participation in Landcare. This flow of impact areas, through to survey questions, benefit areas, and economic impacts is shown in Figure 34 below.

Figure 34: The social and economic impacts of Landcare participation



The impacts can also be described and accounted for in different ways. As shown in the overlapping layers of this project’s methodology. There are some impact areas which lend themselves best to a qualitative approach, with a strong focus on the social impacts that are experienced. Other impact areas, however, lend themselves to a combined social and economic – qualitative and quantitative – approach.

This final section of the report draws those different threads together to explore the different impacts of participation in Landcare. Those impact areas are grouped in three different ways:

- Those impact areas and demographic groups where there are very clearly strong benefits experienced by those involved in Landcare;
- Those impact areas and demographic groups where there is either a negligible or negative impact; and
- Those impact areas and demographic groups where this study is only able to tell a partial story and where further research is required.

3.1. BENEFITS OF PARTICIPATION IN LANDCARE

Building connection is key

In the survey of Landcare volunteers and coordinators, one of the most important results was the strength of the layers of connection that people experience through their involvement in Landcare: 90 per cent feel more connected to people; 86 per cent more connected to their community; and 93 per cent feel more connected to the environment.

While this may seem unsurprising to those who know Landcare well, what makes this finding important is how clearly it translates into other benefits. There is a strong correlation between those who report a significant improvement in their sense of connection to others and to the environment, and improvement in their mental wellbeing.

- Almost 60 per cent of respondents who strongly agreed with the statement that Landcare helped them connect to other people reported an improvement in their mental wellbeing.
- Those that strongly agreed with the statement that Landcare helped them feel more connected to their environment also reported an improvement in their mental wellbeing 54 per cent of the time.

The mental wellbeing impacts are clear

Half of all participants surveyed reported clear improvements in their mental wellbeing. And as noted above, it appears that it is the simple process of connecting to people, communities and the environment that creates this benefit.

Those wellbeing impacts have a tangible economic benefit through a combination of avoided healthcare costs, as well as improved productivity. Conservatively, the approximate discount for avoided healthcare costs is \$57 million for the estimated Landcare population (or \$403 per Landcarer). Whilst, improved productivity is \$97 million for the same population (or \$487 per Landcarer).

Physical health and a 'hands on' experience

Another area that came through strongly during case studies and interviews was the importance of a physical 'hands on' sense of connection with the land. That connection is felt by almost all of those involved in Landcare (93 per cent), and as noted above contributes to clear mental health benefits. A smaller number of Landcare participants (20 per cent) reported that involvement with Landcare had translated into a reduced use of physical health services, and this in turn contributes to a modest level of avoided healthcare costs.



Landcare also serves a crucial role as a source of community information

In addition to this clear chain of ‘connection’ benefits which then build improved mental health, Landcare participants experience other benefits. The most positive response in the participant survey related not to a greater sense of connection, but to knowledge sharing. When asked if the advice they received through their involvement in Landcare was helpful, 93 per cent of survey participants responded positively with 52 per cent strongly agreeing with the statement. This knowledge sharing role also came through very strongly in the key stakeholder and case study group interviews and was by far the most commonly identified benefit of involvement in Landcare by those interviewed for this study.

The fact that Landcare groups have such a positive information sharing role has been considered recently in other studies such as the cost-benefit analysis of the Victorian Landcare Facilitator Program.¹⁴ That study is able to focus on a very specific set of Landcare programs and therefore has a clear understanding of the costs, other inputs and potential outcomes of the work of facilitators employed by Landcare groups in the state. In looking at their information sharing role, the study attributes benefits to that facilitator program such as increased crop yields, carbon sequestration in the soil and increased community wellbeing. The study finds that there is a return on investment of some \$31 million on a \$4 million annual investment.

Disaster resilience and recovery

A final impact area that loomed large during the research was the role that Landcare plays in individual and community resilience, and how that in turn helps those communities recover from natural disasters. This last impact area is a particularly relevant one – as this study began the concern of many Australians was with the enduring effects of a devastating drought. As the early research began that drought had, in many parts of Australia, merged with what would become a devastating bushfire season. Finally, as the case study interviews began, they were carried out with Landcare volunteers who were just starting to get to grips with the challenges of the COVID-19 pandemic. Of relevance here 46 per cent of Landcare participants reported an improvement in their mental resilience and ability to manage these kinds of challenges.

A high level of benefit for those in major cities

Landcare originally emerged in rural areas as a community driven response to restoring degraded landscapes. The Landcare model soon expanded into urban and coastal areas, and there are now many Landcare and other community based environmental groups in urban and metro areas. The survey found a greater number of respondents reported benefits from their participation in Landcare in major cities compared to those in regional centres. For example, 59 per cent of those in major cities reported an improvement in their mental wellbeing, compared to 47 per cent in regional areas. The higher level of benefit also came through in results related to connection to the environment and improved mental resilience.

This is an interesting result because the qualitative research – i.e. key stakeholder and case study group interviews – was based largely on Landcare participants, coordinators and groups in regional areas. That in turn influenced the design of the participant

¹⁴ RPS Group (2020), Landcare Victoria – Return on Investment: Cost-benefit analysis of the Victorian Landcare Facilitator Program, accessible at <https://www.landcarevic.org.au/assets/Uploads/GroupResourcePage/8675b5e7-95c8-42ad-9d60-a8342f2d62b2landcare-victoria---return-on-investment---final-2.pdf>

survey, and eventually the impact framework and model. Put another way, although the impact areas identified, surveyed and modelled were those developed through case study interviews based in regional areas, a greater proportion of participants in urban areas reported benefits. This may well be because those living in major cities have less day-to-day contact with the natural areas, and therefore derive more benefit from activities that provides them with that connection to environment.

When the above result is combined with the good survey response rate (48 per cent) from Landcarers in major cities, it suggests that it may well be useful to carry out further research on urban Landcare participants. More targeted research on this group may well identify impact areas that are more specific to those living in cities, than those which were identified through interviews with those in regional areas.

It doesn't take much

One of the most striking results of this research relates to the level of involvement for a participant to experience benefits. In those areas where there is a very strongly positive impact – e.g. feeling an increased connection to community, the environment and improved mental wellbeing – those who spend more time involved with Landcare generally experience a higher level of positive impacts, but even those who spend a very small amount of time still derive an impressive level of benefit.

43 per cent of participants who reported that they spent 0-4 hours or less per month involved in Landcare, still reported an improvement in their mental wellbeing.

It should also be noted that when survey responses were broken down by employment type, those groups which experienced the highest level of impacts were those in casual or part-time employment. Looking at improvements in mental wellbeing, for example, 58 per cent of those in casual employment and 58 per cent of those in part-time employment reported an improvement, compared to 43 per cent of those who were not in the workforce and 48 per cent of those who were in full-time employment.

There is a tangible economic benefit

As noted in Section 1 it has not been possible to find financial proxies and therefore quantify the economic benefits of all the different impact areas identified. In some cases that has been because the research did not uncover a suitable financial proxy, in other cases this was because the impact area was best described qualitatively rather than quantitatively.

Of those impact areas which have been included in the final impact framework and model, the potential economic benefits are very important. As Table 13 shows below, even when taking the most conservative 'low' scenario there is a \$1,347 per person per year economic benefit from participation in Landcare. When applied to the entire estimated Landcare population of approximately 142,063 people, that generates a total economic benefit of over \$191 million dollars per year.

It is important to note that this estimate is conservative in that:

- It uses the lowest benefit attribution scenario of the three considered.
- It does not include calculations of explicit environmental or economic impacts such as those considered by the aforementioned study in Victoria (e.g. improved land productivity and yields).
- The research shown here shows that Landcare participants experience benefits even when the number of hours they spend on Landcare each month is very small.



43 per cent of participants who reported that they spent 0-4 hours or less per month involved in Landcare, still reported an improvement in their mental wellbeing.

Table 13: Summary of economic benefits

	Approximate Discount (\$) – Low Scenario	Approximate Discount (\$) – Medium Scenario	Approximate Discount (\$) – High Scenario
Per capita benefit	\$1,347	\$2,182	\$3,018
Total estimated Landcare population benefits	\$191,299,150	\$310,016,844	\$428,732,538

3.2. AREAS OF NEGLIGIBLE OR NEGATIVE IMPACT

While the results of this project clearly show very positive benefits for most of those involved in Landcare, it is important to note that there are some participants who experience a negligible or negative impact. Across the participant survey, for example, there were a small number of respondents who reported a decline in their mental wellbeing (3 per cent) as well as negative impacts in other areas. Across all survey questions, there was a strong correlation when it came to negative impacts – i.e. those who reported a negative impact in one area, in general reported negative impacts across other areas. For example, those who reported a negative impact on their mental health were also far more likely to be those respondents who disagreed that Landcare delivered increased connection to the community, the environment, or that it aided their local community.

There are two other areas where this study identified a more muted level of impact. Firstly, the 117 survey respondents who identified themselves as paid Landcare employees, did not appear to experience more benefits than volunteers did. This result provides some reassurance that the survey results have not been skewed by those who receive a direct employment benefit from Landcare, and as shown by the RPS research commissioned by Landcare Victoria, those paid employees then facilitate a higher level of benefit for those involved in Landcare.

The second area where a low level of impact was observed related to pathways to employment. Very few respondents made a connection between their participation in Landcare and an improvement in their employment prospects. The majority of respondents (62 per cent) reported that their employment prospects were not improved by participation in Landcare, which almost certainly reflects the demographics of the respondents and Landcare more broadly. With only 3 per cent of the total survey respondents being under the age of 30, and 64 per cent of respondents being 55 years or older, and therefore at a mature stage of their employment pathway or likely to have left the workforce, the low level of employment benefits is not surprising.

3.3. AREAS FOR FURTHER RESEARCH

Finally, there are some parts of this study where the results are either equivocal or where more data is required in order to better understand the impact area.

Demographic considerations

With regards to demographic groups, there were two sub-sets of survey respondents where the response rate was too low to reliably draw conclusions. The first of those sub-sets were those living in remote or very remote areas. Only 3 per cent of respondents were located in these areas, and while this is slightly higher than the overall percentage of the Australian population in remote and very remote areas, it is still difficult to draw any strong conclusions based on the survey results.

More problematically, however, were those under the age of 30. While 26 per cent of the Australian population falls in this group, it accounted for only 3 per cent of survey respondents, and this also limited the observations that could be made about this cohort. This reflects Landcare's older demographic, which also overlaps with the older demographic of those that live in regional Australia, compared with the younger population of the major cities. It should be noted, however, that this very small group of respondents did report higher than average levels of benefits (e.g. in areas such as mental wellbeing and resilience), so this group would certainly be worthy of further research.

As noted in Section 1, the survey used in this study contained only a relatively small number of demographic questions. This was done in order to keep the survey to a manageable length to encourage a high response rate. However, because of this, there are important demographic considerations that this study is unable to speak to. Most obviously, there is no breakdown of impacts and benefits by gender, ethnicity, income or socio-economic disadvantage, obvious and important areas that would benefit from further research.

As noted in Section 3.1 above, those living in major cities reported a higher level of benefit when it comes to mental health impacts. Because of this it may well be useful to carry out qualitative research that is targeted specifically on Landcare groups and participants in major cities to identify any impact areas that might be specific to Landcarers and groups in cities.

Impact area considerations

Finally, there are two impact areas where there are clear results but for different reasons should be treated with some degree of caution and would benefit from further research.

The first of those areas pertains to the survey results related to whether participants felt that there was a direct economic impact in their communities as a result of Landcare's activities. A large majority of respondents – 70 per cent – agreed or strongly agreed with a positive economic impact. In retrospect, however, it would have been better to structure this question in a way that broke down the different types and quantum of economic impacts – e.g. spending with local businesses; provision of jobs; etc. In the absence of that detail it is difficult to know how important this impact is, and for that reason it was not included in the impact framework and model.

Finally, as has already been noted, the timing of study found the Landcare Australia, KPMG project team and key stakeholder interviewees all impacted to different degrees by drought, then bushfires, and then the COVID-19 pandemic. For that reason, the findings related to disaster preparedness and mental resilience may well change considerably were the study to be repeated again today. Because of this it may well be worth carrying out further research as to the impact of these disasters on Landcare groups, as well as how those groups have been able to support volunteers and employees alike during this time.





Appendices

APPENDIX A: LIMITATIONS

As previously noted, the nature of this engagement, as well of Landcare Australia Ltd and Landcare groups in general, impose some notable limitations on this research. Those limitations are as follows.

Limitations in scope and purpose

- Only some impact areas have been considered. This research has explicitly excluded consideration of the environmental impacts of Landcare groups and participation in Landcare.
- Only some impact areas have been modelled. This research identifies a range of impact areas but the scope and resources available to the project have only enabled the financial modelling of some of those impacts. Where the research has been unable to model an impact area, this has been noted in the analysis.

Limitations in information and data

- There is no aggregated data of the total income, expenditure, and activities of Landcare groups. Because of this it is not possible for this research to be used in any form as a cost-benefit-analysis or be implied as providing an indication of return on investment. Actual costs and/or benefits will vary according by group and funding mechanism.
- It has been assumed that the estimated total population, approximately 140,000, is a representative sample of the Landcare community for the purpose of this analysis. It should be noted that the underpinning demographic breakdown of that number (e.g. by age, employment status etc) has not been considered, so if there is a difference between survey respondents and the wider Landcare population, this study has not been able to identify it. Because of this the research has only drawn limited conclusions based on this, though recommendations are made for further research.
- Data available for social benefits quantification is limited. Whilst there have been sizeable steps made in recent years to quantify social benefits, there are still some limitations. A benefits transfer approach has been applied to use benefits that have been identified in relation to similar programs.

APPENDIX B: KEY DOCUMENTS

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APPENDIX C: LIST OF STAKEHOLDERS INTERVIEWED

As part of this engagement, KPMG interviewed the following stakeholders as shown in Table 14 below.

Table 14: Stakeholders Interviewed

Interviewee Name	Position Title	Group
Shelly McCardle	Project Officer, Community Engagement	Capricornia Catchments
Keith Bradby OAM	Deputy Chair	National Landcare Network
Michelle Young	Director, Sustainable Farms Program	Australian National University
Kylie Durant	Project Officer	Holbrook Landcare Network
Simon Molesworth	Honorary President	Landcare Broken Hill
Rachel Lyons	Business Development Manager	Noosa & District Landcare
Rob Fallon	Facilitator	Northern Yarra Landcare Network
John Birse	President	Dixon Creek Landcare Group, Northern Yarra Landcare Network
Evelyn Feller	President	Chums Creek Landcare Group, Northern Yarra Landcare Network
Sabrina Burke	EnviroLink Coordinator	Capricorn Coast Landcare Group
Malcolm Wells	President	Capricorn Coast Landcare Group
Sharon Hocking	Treasurer, Community Leader	Landcare Broken Hill
Tony Nott	Board Member	Holbrook Landcare Network
Selina La Rovere-Nagas	Member	Landcare Broken Hill
Kane Brunjes	Kabi Kabi First Nations Trainees	Noosa & District Landcare
Jarryd Minahan	Chair; Landcare Youth Summit Advisory Team, 2019 Victorian Young Landcare Leader Award	Gippsland Intrepid Landcare
Simon Kirby	Facilitator	Blampied Kooroocheang Landcare Group

APPENDIX D: SURVEY TOOL

Landcare Australia - Wellbeing Survey

Over the last 30 years, Landcare Australia has continued to represent and support the thousands of Landcare and other community groups across the country, along with Landcare facilitators, members, farmers, landholders and volunteers, who protect the environment in their local communities through environmental activities, such as sustainable land management and conservation activities.

The environmental benefits of Landcare groups' activities are regularly recognised and quantified, however, Landcare Australia would like to better understand the other impacts that Landcare groups have on their facilitators, members, volunteers, and communities.

As part of this, Landcare Australia has partnered with KPMG in order to better understand the nature and extent of the benefits experienced by people involved in Landcare activities including environmental volunteering.

We understand that COVID-19 is making it difficult for everyone to connect at the moment, but we would really appreciate your help in understanding the nature and extent of the benefits experienced by individuals involved in Landcare and/or with a Landcare group.

Why has this survey come to you?

You have been identified as being involved with a local Landcare or community environmental group, and we are keen to hear from facilitators, members and volunteers across Australia. We are seeking insights from Landcare Groups and Networks, Bushcare Groups, 'Friends of' Groups, Coastcare Groups and other environmental community groups. Your survey responses and the insights you provide will help us to develop a picture of how Landcare contributes to the wellbeing of communities and individuals. There are no wrong answers, as we are keen to understand how different people benefit from their involvement with Landcare in different ways.

Should you have any questions about this survey, please feel free to contact Melissa Higgins from Landcare Australia via email at melissa.higgins@landcareaustralia.com.au. The survey will remain open for two weeks, closing at 11.59pm AEST Monday 25 May, 2020.

How will the information I supply be used?

The information collected through the survey will be combined with other evidence to develop a report on the findings of the research.

Respondents that complete the survey will not be named, therefore neither Landcare Australia nor KPMG will receive any respondent's names, and only aggregated data will be provided to KPMG.

Privacy Statement

Landcare Australia is the administrator of this survey and will pass on the anonymised aggregated results to KPMG for further analysis. The information you supply will be handled in accordance with Landcare Australia's Privacy Policy which can be viewed [here](#).

Start of Survey

Please select an answer that best describes you.

About You –

Q1 Location: What is your Landcare or other environmental community group's location? Please include your postcode.

Q2 Age: How old are you? Please select one of the following age ranges.

- 10-14 years
- 15-19 years
- 20-24 years
- 25-29 years
- 30-34 years
- 35-39 years
- 40-44 years
- 45-49 years
- 50-54 years
- 55-59 years
- 60-64 years
- 65-69 years
- 70-74 years
- 75-79 years
- 80-84 years
- 85 years and over

Q3 Type of Involvement: Is your involvement with Landcare in a paid employment or voluntary capacity, or both?

- Voluntary
- Paid Position
- Both

Q4 Length of Involvement: How long have you been involved with a Landcare or other environmental community group?

- Less than six months
- Six months to a year
- One year to three years
- Three to five years
- Five to ten years
- Over ten years

*Q5 Level of Involvement: How many hours per month, on average, do you spend on Landcare related activities?**

- [X] hours per month

*Numerals only.

Q6 Employment Status: Please select one of the following types of employment.

- Employed, working full-time
- Employed, working part-time
- Employed, casual
- Unemployed
- In full-time training or study
- Not in the labour force

Your Experience with Landcare –

Please select an answer that best reflects the extent to which you agree with the statement.

Q7 Connecting with People: Since becoming involved with Landcare, I feel more connected to other people:

- Strongly agree
- Agree
- Disagree
- Strongly disagree
- Do not know/not applicable

Q8 Connecting with the Natural Environment: Since becoming involved with Landcare, I feel more connected to the natural environment:

- Strongly agree
- Agree
- Disagree
- Strongly disagree
- Do not know/not applicable

Q9 Connection to the Community: Since becoming involved with Landcare, I am more engaged in local community activities (including but not limited to Landcare):

- Strongly agree
- Agree
- Disagree
- Strongly disagree
- Do not know/not applicable

Q10 Knowledge Sharing: The advice I have received as a result of being involved in Landcare is helpful (for example, about planting and/or revegetation, animals, weed control, land management, and/or natural disaster plans):

- Strongly agree
- Agree
- Disagree
- Strongly disagree
- Do not know/not applicable

Q11 Local Economy: Landcare (or other environmental community groups I am involved with) carry out activities that improve the local economy (for example, an increase in local employment and/or increased support for local businesses):

- Strongly agree
- Agree
- Disagree
- Strongly disagree
- Do not know/not applicable

For the following questions, please select an answer that best describes your involvement in Landcare during normal everyday life.

Q12 Landcare as a 'Community Hub': Over the last year, how often have you been aware of your local Landcare or other environmental community group partnering with other local organisations (for example, local councils or business) to deliver a benefit for the community or respond to a community problem?

- Every week
- Every fortnight
- Every month
- Every year
- Less than once per year
- Do not know/not applicable

Q13 Asking for Support: Over the last year, how often do you reach out for support or ask for help from a member of the Landcare community that is unrelated to land management and conservation activities (on average)?

- Every week
- Every fortnight
- Every month
- Every six months
- Every year
- Less than once per year
- Do not know/ not applicable

Q14 Hands-On-Experience: Over the last year, how often have you participated in organised land management, conservation activities or other activities that support better management of the natural environment?

- Every week
- Every fortnight
- Every month
- Every six months
- Every year
- Less than once per year
- Do not know/not applicable

Q15 Mental Wellbeing: Since becoming involved in Landcare, has your mental wellbeing:

- Significantly improved
- Moderately improved
- No change
- Moderately decreased
- Significantly decreased
- Do not know/not applicable

Q16 Mental Resilience: Since becoming involved with Landcare, has your mental resilience and ability to better manage challenges:

- Significantly improved
- Moderately improved
- No change
- Moderately decreased
- Significantly decreased
- Do not know/not applicable

Q17 Mental Health: Since becoming involved with Landcare, has your use of mental health support services (for example, counselling and/or support groups) changed:

- Never used
- Significantly improved
- Moderately improved
- No change
- Significantly decreased
- Moderately decreased
- Do not know/not applicable

Q18 Physical Health: Since becoming involved with Landcare, has your use of physical health support services (for example, visiting your general practitioner, physiotherapist, dietician, and/or other health professional) changed:

- Never used
- Significantly improved
- Moderately improved
- No change
- Significantly decreased
- Moderately decreased
- Do not know/not applicable

*Q19 Pathways to Employment: Since becoming involved with Landcare, have your employment prospects improved through?**

- Expanded network
- Work experience
- Informal skills development
- Formal training
- Peer support
- No change to my employment prospects

*Select as many answers that are relevant to you.

Q20 Additional Thoughts: This survey seeks to understand the nature and extent of the people's experiences with Landcare. Is there anything else that you would like to share that you think might be relevant to this research?

*Responses to be capped at 100 words or less.

End of Survey



FOR MORE INFORMATION PLEASE CONTACT:

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