

Acknowledgments

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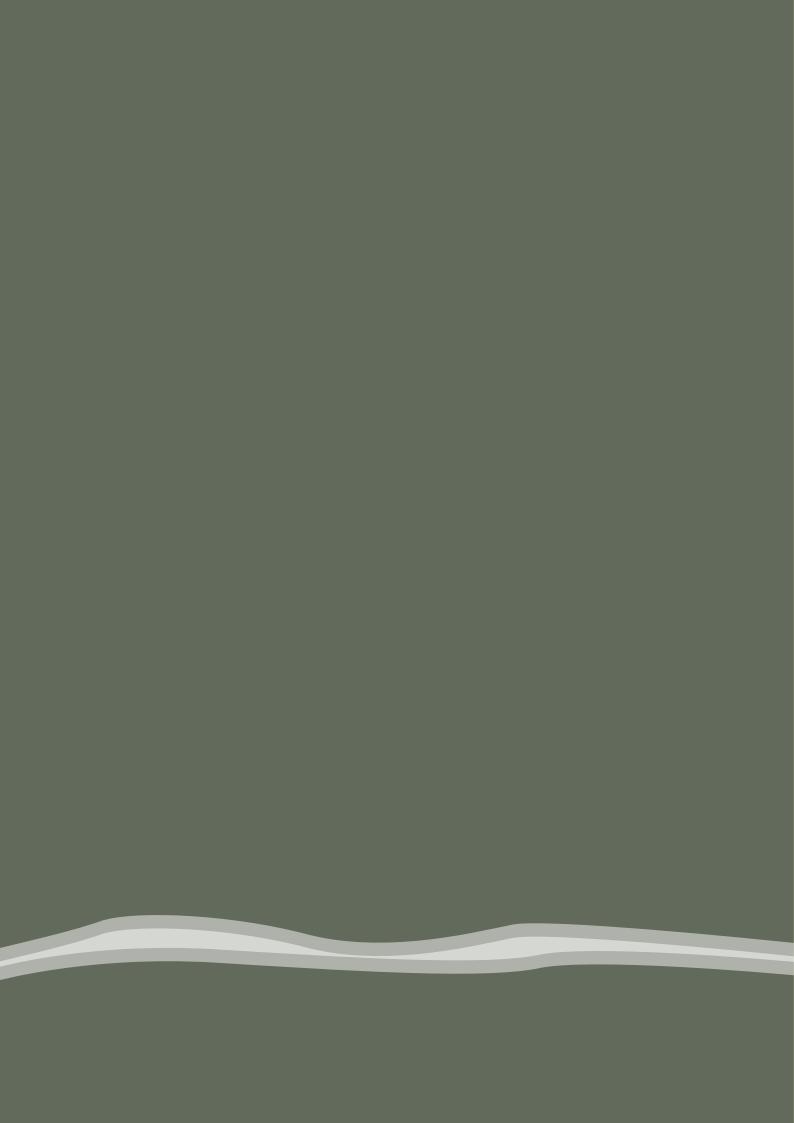
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Front cover photo: Kaltukatjara Rangers Selwyn Burke and Raymond James digging pitfall traps during the Indigenous Protected Area Survey at Mann Rangers. Richard Brittingham, 2009.

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1 Introduction

The beneficial relationships held between Indigenous people and their country are encapsulated in sayings by Indigenous people such as 'healthy country, healthy people' and 'if you look after the country, the country will look after you' (Griffiths and Kinnane 2010:iii, 3). This literature review considers the growing field of research that is documenting and examining the benefits of caring for country.

'Caring for country' can be understood generally as Indigenous peoples' approaches to land and water management, although with some central distinctions. 'Country' is a term Indigenous people use that can be described as the lands with which Indigenous people have a traditional attachment or relationship (see Rose 1992 for a much broader definition). Care for this country is based in the laws, customs and ways of life that Indigenous people have inherited from their ancestors and ancestral beings.

In the 1970s and 1980s, recognition of land rights in the Northern Territory highlighted nationally the importance of land management by Indigenous people on Indigenous land. The term 'caring for country' became popularised to describe this land management. In 1995 the Northern Land Council created a Caring for Country unit, and in 2007 Working on Country became an official program of the federal government, providing funds for Indigenous ranger programs across Australia. The other key federal government program supporting Indigenous people's caring for country is the Indigenous Protected Area (IPA) Program, which was established in 1997.

The description of caring for country as 'Indigenous people's land and sea management' logically draws attention to the environmental and landscape management outcomes of this activity, but caring for country also has benefits for the social-political, cultural, economic, and physical and emotional wellbeing of Indigenous people. For Indigenous people, it is increasingly documented that caring for country is intricately linked to maintaining cultural life, identity, autonomy and health (Burgess et al. 2005; Garnett and Sithole 2007; Hunt, Altman and May 2009; Altman, Buchanan and Larsen 2007; Altman et al. 2009; Berry et al. 2010; Burgess and Morrison 2007). These benefits are shared with members of the wider community, who live together with Indigenous people, and facilitate a better community and environment for all Australians (Hunt 2010:19).

The growth in government programs supporting Indigenous land and sea management reflects the synergy between caring for country and environmental issues, and the productivity of Indigenous—environment collaborations. Environmental issues have taken centre stage of policy agendas in response to widespread environmental change since the industrial revolution. Indigenous people have witnessed the effect of habitat destruction, weeds, feral animals, the over-allocation of water, and climate change on their country, and, often in partnership with government, have established regional and local environmental strategies to respond to these threats (Altman et al. 2009:26; Weir 2009). At the same time, there has been increased legal recognition of Indigenous peoples' relationships with country. Native title and Indigenous land rights lands combined encompass about 20 percent of mainland Australia, and include many areas of high conservation and biodiversity significance (Altman, Buchanan and Larsen 2007:14). Indigenous peoples' caring for country is important not just for local places, but for the coordination of environmental issues that have national reach (Altman, Buchanan and Larsen 2007; Altman et al. 2009:24-25; Weir in press).

This literature review considers the benefits of caring for country, and is a commission for the Department of Sustainability, Environment, Water, Population and Communities. It begins by scoping what caring for country means within our intercultural society, and why connection with country is important. This is followed by a discussion of the influential literature on the benefits of caring for country. These benefits include:

- health and wellbeing benefits;
- cultural and socio-political benefits;
- economic benefits; and,
- environmental benefits.

The discussion includes some of the barriers to achieving benefits, as well as anticipated and realised benefits of caring for country. Much of the innovation in this field is in the exploration of health and country, and the matching of economic and environmental goals. Because of the reach of caring for country into diverse aspects of Indigenous wellbeing, documenting the benefits is a multidisciplinary exercise.

Given the scope of the subject and the time limitations, this literature review offers a sample of the thinking in this area as a useful starting point for deeper inquiry. There is also much caring for country activity yet to be documented, although websites, such as the following, are reporting on some of this energy:

- Northern Land Council: Caring for Country Unit (www.nlc.org.au/html/care_land.html)
- Desert Knowledge Cooperative Research Centre (www.desertknowledgecrc.com.au/)
- Australian Indigenous Health Bulletin: Caring for Country (http://healthbulletin.org.au/category/topics/caring-for-country/)
- Balkanu Cape York Development Corporation: Caring for Country Business Unit (www.balkanu.com.au/index.php?option=com_content&view=article&id=9&Itemid=27)
- North Australian Indigenous Land and Sea Management Alliance (NAILSMA): Caring for Country on Indigenous Lands (www.nailsma.org.au)
- Kimberley Language Resource Centre: Caring for Country Plan (http://klrc.org.au/projects/projects/caring-for-country)
- Centre for Aboriginal Economic Policy Research (CAEPR): People on Country (http://caepr.anu.edu.au/Projects/People-Country)
- The Lowitja Institute/Cooperative Research Centre for Aboriginal Health: Beyond Bandaids (www.lowitja.org.au/crcah/beyond-bandaids).

Many Indigenous people speak about the importance of their country because who they are and their way of life is embedded in their country. There are also Indigenous people, including members of the Stolen Generations, who seek to reconnect with their traditional lands. This review focuses on the experiences of Indigenous people who identify meaningful relationships with country as central to their wellbeing.

2 Caring for Country

We been borning [in] this country. We been grow up [in] this country. We been walkabout this country. We know all this country all over...Blackfellow been born top of that ground, and blackfellow-blackfellow blood [in the ground]...This ground is mother. This ground, she's my mother. She's mother for everybody. We born top of this ground. This [is] our mother. That's why we worry about this ground (Riley Young cited in Rose 1992:220).

Caring for country centres on the relationships between Indigenous peoples and their country, which includes their lands, waters, plants, animals, heritage, culture, ancestors, laws, religions and more (Rose 1992, 1996). Caring for country activities reinforce and support Indigenous peoples' relationships with their physical, cultural, social, economic, and spiritual environment (Kinnane 2002). By using the word 'care', this activity acknowledges responsibility, ethics, emotion and connection with country (Rose 1992). These activities can be an informal part of daily life, be specifically organised occasions, or form part of ritual obligations. Drawing on Rose (1992:106–7), Burgess and Morrison (2007:181) have translated caring for country into a list of activities:

Burning (cleansing for ceremony and for hunting)

Let[ting] the country know we are there — using resources, hunting and fishing

Protecting the integrity of the country through respect

Protecting and enhancing species diversity

Protecting sacred areas

Providing a new generation and teaching them on country

Learning and performing ceremonies.

Altman, Buchanan and Larsen (2007:37) describe caring for country as:

more than the physical management of a geographical area — it encompasses looking after all of the values, places, resources, stories, and cultural obligations associated with that area, as well as associated processes of spiritual renewal, connecting with ancestors, food provision and maintaining kin relations.

Caring for country is also necessary for the health of the land. Many Indigenous people feel that the land is wild or sick if not managed by its people (Burgess and Morrison 2007:189; Burgess et al. 2005:118). This is a reciprocal relationship, as reflected in the familiar saying by Indigenous people that 'if you look after the country, the country will look after you' (Griffiths and Kinnane 2010:iii, 3). Moreover, the land is a sentient participant in this engagement:

People talk about country in the same way that they would talk about a person: they speak to country, sing to country, visit country, worry about country, feel sorry for country, and long for country. People say that country knows, hears, smells, takes notice, takes care, is sorry or happy. Country is not a generalised or undifferentiated type of place, such as one might indicate with terms like 'spending a day in the country' or 'going up the country'. Rather, country is a living entity with a yesterday, today and tomorrow, with a consciousness, and a will toward life. Because of this richness, country is home, and peace; nourishment for body, mind, and spirit; heart's ease (Rose 1996:7).

With the recognition of Indigenous land rights in the 1970s and 1980s, Indigenous people began establishing community-based ranger groups to undertake caring for country activities, with support from their land and sea councils. This activity began attracting government funding. In recent times, the term 'caring for country' has come to refer to more formal arrangements between communities and governments, often administered through land and sea councils. Through this exchange, caring for country activities — which have occurred within Indigenous societies for thousands of years — are becoming categorised within the frame of government programs and economic initiatives.

In this intercultural context, caring for country is translated as Indigenous land and sea management, but it has distinct differences to land and sea management undertaken by non-Indigenous people (Weir and Muller forthcoming). In caring for country, humans are part of nature, and this nature is alive with activity, including law, language, culture and ethics. In comparison, the Western paradigm of natural resource management is based on understandings of nature as separate from humans, as simple matter and an economic resource to be utilised by humans (Weir 2009:71-73; Burgess et al. 2005:120). This distinction is important when assessing the benefit of natural resource management programs:

Indigenous people do not generally separate natural resources from cultural heritage, but refer to both in a holistic way when talking about 'looking after country'. To obtain social benefits from engagement in NRM [natural resource management], Indigenous peoples must be able to engage in NRM effectively through culturally-relevant processes (Hunt, Altman and May 2009:ix).

According to Sithole et al. (2007:x–xii), the culturally relevant processes required for success in Aboriginal land and water management programs include strong cultural connections, alignment with the aspirations of traditional owners, inclusion of Indigenous knowledge and involvement of the Elders.

Natural resource management programs that do not allow participants to fully express or satisfy their connection to country will affect the realisation of the benefits of caring for country, including Indigenous wellbeing. This must be recognised when investigating the relationship between participation in natural resource management and health and wellbeing. Understanding these differences requires an understanding of the cultural inheritance of caring for country and the cultural inheritance of natural resource management (Weir 2009:1–25). As collaborations proliferate, new terminology — such as Indigenous Cultural and Natural Resource Management (Burgess et al. 2005) — is being developed to describe the dialogue between the two cultural traditions.

Indigenous people inherit holistic, place-based knowledge frameworks that are distinctly different from Western knowledge traditions, which focus on universal values and methodologies. These holistic frameworks, or worldviews, focus on the importance of connections and relationships (Rose 1992). This integrated knowledge is a powerful contribution to the re-thinking of Western knowledge currently occurring across the humanities and the sciences in sustainability studies (Weir 2009). The significance of this inheritance is that caring for country is more than just an activity on country, and has meaning in terms of the ordering, maintenance and transference of knowledge. Knowledge cannot be separated from place: it comes from country (D. Claudie cited in Smith 2005:6). Caring for country is an opportunity to meaningfully know oneself, community and country.

3 The benefits of caring for country

This section considers the benefits of caring for country. The literature documents:

- health and wellbeing benefits;
- cultural and socio-political benefits;
- economic benefits; and,
- environmental benefits.

Health and wellbeing benefits

Caring for country has been linked to a broad range of benefits that positively impact Indigenous peoples' health and wellbeing. The scope of these benefits incorporates individual health and wellbeing and the health of communities.

Before discussing these benefits, it is useful to understand what we mean by the terms 'health' and 'wellbeing'. Broadly speaking, there are two models of health:

- the biomedical model, which isolates the specific cause of illness and focuses on the different medical levels of the human body and the way these interact in order to explain illnesses (Saggers and Gray in Carson et al. 2007:4); and
- the social determinants model, which addresses some of the limitations of the biomedical model and considers societal structure and/or psychosocial factors, such as socioeconomic status, housing and gender (Saggers and Gray in Carson et al. 2007).

Wellbeing is a more holistic approach to health and life, and recognises that a whole-of-life view of health is essential to achieving positive life outcomes (Social Health Reference Group 2004). This understanding of wellbeing is articulated in the *Social and Emotional Well Being Framework* (Social Health Reference Group 2004), and is based on Indigenous peoples' holistic definitions of health, which encompass mental, physical, cultural and spiritual health (NATSIHC 2003; see also Anderson, Baum and Bentley 2004). The *Social and Emotional Well Being Framework* identifies factors that affect wellbeing, including:

- physical and mental health problems;
- substance abuse;
- child development problems;
- cultural dislocation;
- family breakdown; and,
- social disadvantage.

Rather than identifying country as a specific wellbeing factor, the framework recognises the central importance of land to identity, spirituality, community and culture, as Pat Anderson (1996:15) explains:

Our identity as human beings remains tied to our land, to our cultural practices, our systems of authority and social control, our intellectual traditions, our concepts of spirituality, and to our systems of resource ownership and exchange. Destroy this relationship and you damage — sometimes irrevocably — individual human beings and their health.

Engaging with this holistic understanding, Burgess et al. (2005) undertook research in Arnhem Land to establish whether there were health links between country and people, as popularised in the slogan 'healthy country, healthy people'. It was undertaken by a larger multidisciplinary team of traditional owners, ecologists, social scientists, medical practitioners and policy analysts, and looked at the broader implications of this research (Garnett and Sithole 2007). The health research found positive associations between caring for country activities (which Indigenous people perceived as beneficial to their health) and health outcomes. Among people who took part in Indigenous Cultural and Natural Resource Management (ICNRM), especially when living in their traditional country, the researchers found more frequent exercise, lower rates of obesity, lower rates of diabetes, lower rates of renal disease, lower rates of cardio-vascular disease, and less psychological stress (Garnett and Sithole 2007:23; Burgess, Mileran and Bailie 2008). Thus, the research supported the assertion that connection to country is an important positive influence on health.

Significantly, Aboriginal participants in the study supported the idea that the majority of benefits from ICNRM, both health benefits and benefits to landscape health, derive from the sense of wellbeing that comes from maintaining or re-establishing cultural connections to country and the more obvious influences of a more nutritious diet and more exercise (Garnett and Sithole 2007; Burgess and Johnston 2007). The researchers concluded that further investment in caring for country is likely to lead to greater improvements in the health of communities (Burgess et al. 2005; Garnett and Sithole 2007).

The literature also suggests that by addressing health risk factors, caring for country will ultimately lead to cost savings in health, such as through the savings attained by preventing disease and ill health in later life (Johnston et al. 2007). In relation to the chronic diseases of hypertension, renal disease and diabetes, one study estimated the possible savings in primary care costs associated with Aboriginal people's involvement in land management. The study involved almost 300 people from a remote Aboriginal community in the Northern Territory, and found expected net annual health savings for the community of \$268,000. In addition to these savings, the researchers noted that there are likely to be further savings arising out of improvements in other health conditions, reduced hospital costs, and the economic benefits of a healthier population and well-managed land (Campbell et al. 2011:83). The researchers identified that these significant health savings demand more investigation into the relationship between involvement in land management and better health for Indigenous people (Campbell et al. 2011:87). Although such levels of saving may be less dramatic in New South Wales, the public (as well as private) benefit is tangible and potentially significant (Hunt, Altman and May 2009:13).

Another key theme arising out of the research into health and country in Arnhem Land is the relationship between identity, autonomy and wellbeing and caring for country. Burgess and Morrison (2007:193) argue that by developing the knowledge and skills necessary to care for country, individuals can achieve a sense of autonomy. They are able to move from being looked after, to looking after others, including country. When individuals are unable to develop their autonomy and identity through a positive relationship with country they are likely to become frustrated. This frustration may be expressed through substance abuse and violence. This sense of frustration may be compounded by the pressures of town life.

Sithole et al. (2008:72) found that identity, self-esteem and hope were articulated by Aboriginal people as perhaps the greatest benefit of land and sea management ranger programs. Hunt also found in her research with Banbai people in the New England Tablelands in New South Wales, that looking after country on their Indigenous Protected Area resulted in the enhancement of cultural identity, pride, confidence and overall wellbeing. This work also provided an opportunity to be 'home' with country away from town (2010:10, 15). From their work in the Northern Territory, Burgess and Morrison (2007) noted that Aboriginal people living in towns often voice feelings of powerlessness, a finding supported by Garnett and Sithole (2007:19), who reported that Indigenous people felt that when they were on

country they could avoid the stresses of town life, 'humbug' (that is, incessant or unreasonable demands from relatives), and exposure to harmful substances and violence. This was also reported by Davey and Goudie (2009), who conducted research into connecting with sea country with the Hope Vale community in Cape York.

Thompson's (2009) research into physical activity in remote Indigenous communities identified walking and being on country as an activity that people responded to with enthusiasm. The physical activity was a positive health benefit, but the source of the motivation was in the culture and society of country (Thompson 2009:6–7). People were motivated by connecting with country, their culture and ceremonies, and with their children, Elders and ancestors, and this positive frame of mind inspired them to achieve other economic, social and environmental goals (Thompson 2009:75–9, 80).

In the Murray Region in south-eastern Australia, Aboriginal people have attributed aspects of their own poor physical or mental health to the poor health of the Murray River (Willis, Pearce and Jenkin 2004:189; Weir 2009:56–62). Due to environmental degradation, as well as legal restrictions on access, Aboriginal people were unable to pass on traditional knowledge or pursue traditional activities that were closely connected with the river system. This change in activity had negative impacts on Indigenous people's self-assessed physical and mental health:

Everything was related to around the river. Everything they did everyday was related to around the river. And we're moving further and further away from these things, which I think is harming us a little bit.

So the impact...isn't just in physical health but in mental health. So mental health issues affect physical health, which compounds the problem. And...it all relates to that connection (with the land and river) (anonymous participants in Willis, Pearce and Jenkin 2004:194).

Garnett and Sithole (2007:2) also warn of the impact on health and wellbeing of ongoing ecological decline in Arnhem Land.

The evidence linking positive physical health outcomes with living and working on country (in addition to previous literature cited, see also McDermott et al. 1998; Smith and Smith 1995) contrasts with arguments made about the negative health and employment consequences of Indigenous people residing in remote or rural areas on country (Hughes and Warin 2005). However, health interventions that focus on moving Indigenous people to less remote locations to facilitate Indigenous access to Western health services fail to address the social determinants of health, and focus on the application of a largely clinical biomedical model (Burgess et al. 2005; Garnett and Sithole 2007; Berry et al. 2010).

Significantly, the literature identifies that connection to country is not necessarily satisfied by living or working on country, but requires the ability to access, use and relate to country as desired (Hunt, Altman and May 2009; Morrison 2007; May 2010). The federal government's IPA Program is a good example of a land and sea management program that is also meaningful for caring for country, and has produced positive health benefits. As of June 2011, there are 42 declared IPAs, 40 IPA consultation projects and eight co-management consultation projects across Australia (DEWSPaC 2011). They are voluntary partnerships between Indigenous communities and the federal government, whereby government funds are provided for conservation on Indigenous-held land, managed by the community. The majority of communities involved in IPAs said that IPAs facilitated, at least in some way, the establishment of connection to country, care for country and the passing on of traditional knowledge (Gilligan 2007:35–8). Further, 74 percent of communities involved in an IPA reported that the IPA assisted in the reduction of substance abuse and contributed to functional families (Gilligan 2007:4). Thus, the IPA scheme has the capacity to positively

influence health. A study of Nantawarrina IPA in South Australia found that the benefits to the community included increased community pride and wellbeing, improvements to health and increased employment (Davies, LaFlamme and Campbell 2008).

The research into health links between people and country in Arnhem Land was lead by Indigenous peoples' understandings of caring for country (Burgess, Mileran and Bailie 2008). The researchers translated the Indigenous participants' perspectives on caring for country into five questions to gauge individual involvement in caring for country. The questions considered time on country, burning country, protecting country, ceremony and artefact production (Burgess, Mileran and Bailie 2008:7) and encompassed the significance of diverse activities on land and their spiritual dimensions, including the spiritual integrity of the landscape and the production of paintings, weavings and sculptures to demonstrate and connect with specific landscapes and ancestral knowledge (Burgess, Mileran and Bailie 2008:5). The researchers called this Indigenous Cultural Natural Resource Management, yet the activities listed are profoundly different from the priorities of the Western natural resource management tradition. By prioritising Indigenous worldviews in their methodology, the researchers were able to have a more meaningful discussion about the benefits of caring for country.

Cultural and socio-political benefits

For Aboriginal people, land is not only our mother — the source of our identity and our spirituality — it is also the context for our human order and inquiry (Foundation for Aboriginal and Islander Research Action 2007:1)

Caring for country activities are connected with cultural and socio-political benefits. 'Culture' refers to experience that is learned and accumulated and expressed as knowledge, beliefs, laws and customs. Separating socio-political benefits from cultural benefits is problematic; however, this section identifies the social-political benefits as more specific expressions of culture (see Keesing and Strathern 1998:24).

Cultural benefits

The literature has a strong emphasis on the cultural benefits of caring for country, articulating the embedded relationship between country and culture that sustains cultural and spiritual traditions (Griffiths and Kinnane 2010; Berry et al. 2010; Morrison 2007). Fundamentally, country is the place where knowledge comes from and is taught, thus caring for country is an investment in knowledge, including language maintenance and recovery. Indigenous people also speak about their laws coming out of country, as placed there by ancestral beings. Ceremonies and activities to care for country are part of continuing this law (Griffiths and Kinnane 2010:9). Thus, by affirming relationships with country, one is also affirming deep-seated dimensions of one's cultural identity. This is true for places where Indigenous people have been able to stay on their lands, and in areas of greater comparative settlement and oppression where caring for country plays an important role in facilitating cultural reinvigoration and healing (Hunt, Altman and May 2009:33; Hunt 2010). Caring for country activities that benefit culture may include cultural heritage work, but culture is more than heritage — it is embedded in contemporary life.

The support for the transmission of law, culture and language that occurs through caring for country is recognised in the Kimberley, where the Elders have found limitations in their resources to pass on their knowledge to the young people. The engagement of old and young in caring for country work in the Kimberley has enabled a process of cultural learning and preservation that was previously suffering in competition with the distractions of 'town life' for young people. Language is identified as a key link to accruing cultural benefits from caring for country, through informing not just traditional knowledge of places and sites, but cultural

and spiritual meanings (Griffiths and Kinnane 2010:47). The Yiriman project addresses this specifically. Yiriman was created by four Kimberly language groups, the Nyikina, Mangala, Karajarri and Walmajarri, and centres on back to country camps where youth can separate from negative influences, and reconnect with their culture (Yiriman 2011).

From the Northern Territory, Morrison (2007) writes that government-funded ranger programs offer a unique opportunity for young people to engage with their country and interact with their Elders. This caring for country work offers a space for cultural transmission through strengthening young people's language and knowledge about country, and enabling them to receive advice and direction from Elders who may not have opportunities otherwise. These experiences strengthen values of family obligation and obligation to country, strengthening local governance, reiterating cultural values and protocols, and increasing capacity to engage with the external world in areas such as employment, education and health (Morrison 2007).

The Garnett and Sithole (2007:23) study also showed that intergenerational transmission of cultural knowledge, practices and law is a deep concern of senior Aboriginal people who 'were afraid that young people would lose their culture, their skills and eventually their country'. The rapid expansion of ranger programs established in recognition of Indigenous peoples' land and water management expertise is providing an immediate opportunity to address these concerns (Sithole et al. 2007:22–4).

In addition to, and as part of, intergenerational relationships, caring for country also supports customary and social practices for both women and men, and facilitates their relationships with the land and gendered identities. Within country there are gendered landscapes (Jones 2005) and women and men express their relationship with the land in different ways. McClean has reported how the caring for country work of the Githabul Rangers in Northern New South Wales has provided opportunities for men to spend more time on country, including holding men's cultural camps, learning from the Elders, and diving for bing-ging (freshwater turtle) (McClean forthcoming). Jones (2011) discusses the practice of giving birth on country as being a crucial part of women's business, characterising women's unique role within country. Jones (2005:1–2) also describes women's relationship to their lands through women's hunting and gathering practices, women's healing ceremonies, women's bush medicine, and through gendered landscapes and kinships of female descent. Caring for country offers a way for women to be on country. As found in the National Aboriginal and Torres Strait Islander Women's Health Strategy, when women are on country together, walking, practicing traditional arts and crafts, and cooking together, there are considerable benefits for their health and wellbeing (Fredericks et al. 2010:27). Women often hold the role of key care givers in the community, so these improvements in women's wellbeing have significant flow-on effects for others. The literature identifies that modern land and water management has become a male domain, but the role of women is now being recognised, and more women rangers and women-only ranger groups are being funded (Sithole et al. 2007:25).

Socio-political benefits

Hunt, Altman and May (2009:xi) studied the social benefits of Indigenous peoples' involvement in natural resource management, cognisant of the importance of culturally relevant processes in facilitating those benefits. They identified social benefits for education, training and skills development, reduced substance abuse, greater social cohesion, increased community pride and improved early childhood development. For example, the researchers identified how natural resource and land management activities that involved young people working on country with Elders in New South Wales resulted in increased school attendance (Hunt, Altman and May 2009:33; see also Hunt 2010). In another example in New South Wales, the engagement of young people in caring for country programs reduced

anti-social behaviour, and this increased the accessibility of social services to these young people, such as housing and future employment (Hunt, Altman and May 2009:36). Reduced rates of recidivism have also been linked to caring for country, which is a major priority for addressing disadvantage as identified in the *Royal Commission into Aboriginal Deaths in Custody* (Johnston 1991).

Hunt, Altman and May (2009) reveal how caring for country can foster relationships and partnerships between Indigenous people and formal structures and systems with which they may not have previously held positive or constructive relationships — such as educational institutions, government and community service organisations, employers, land managers and health services. These relationships can also foster non-Indigenous people's understanding of caring for country, making a positive contribution to reconciliation and improved social opportunities for Indigenous people (Hunt, Altman and May 2009:25).

Yanner (2008) has argued that caring for country programs are important for community autonomy and Indigenous sovereignty. When governments depend on Indigenous people to perform valuable caring for country services, this has a consequential impact on the existing power inequalities, and Indigenous people can use this service delivery as a bargaining tool or a form of leverage. Yanner also notes similar opportunities for caring for country activities with non-government organisations and private business. This goes at least some way towards reducing Indigenous peoples' vulnerability to power inequalities and increases autonomy. As noted earlier, control over life is an important determinant of wellbeing (Devitt, Hall and Tsey 2001).

Accessing caring for country programs to support Indigenous peoples' capacity to govern their lands and waters is a growing phenomenon on native title lands (Bauman and Tran 2007). Funding to manage native title is virtually nonexistent, but Indigenous people are required by law to establish native title corporations to manage their native title and facilitate the priorities of developers and others with interests in the native title area. Caring for country programs provide a valuable — and sometimes the only — source of funding to assist the governance and institutional capacity of these emerging organisations. For example, Karajarri people in the West Kimberley have had their emergent ranger group supported through state and federal caring for country programs, which provide employment, skills training and resources that will have flow on benefits for their native

title corporation (Weir 2011:30–1). There are clear synergies between native title corporations and the priorities of ranger groups, as identified in the regional Caring for Country plan for the Kimberley (Griffiths and Kinnane 2010). Indeed, caring for country activities are integral to the laws and customs that are recognised as giving rise to native title rights and interests.

Economic benefits

Caring for country supports what is referred to in the literature as 'socio-economic wellbeing'. Caring for country inherently generates economic benefits through food sources and other valued resources, as Altman's (2003:3) research into productive customary activity shows. Caring for country can also provide opportunities in employment, wealth generation and overcoming economic disadvantage (Hunt 2010:19).

The socio-economic wellbeing of Indigenous communities is discussed in many different ways in the literature. Altman has developed extensive models of Indigenous economic development focused on the 'hybrid economy', and establishes caring for country as a valuable economic activity in itself (Altman 2004, 2005:36). The hybrid economy is a conceptual approach that expands upon the usual market/state or private/public economic division and embodies a broader understanding of Indigenous economies as being broken into three parts: customary, market and state (Altman 2004:514). More recently, the Australian Conservation Foundation has proposed the model of a 'cultural and conservation economy', derived from a Canadian model of Ecotrusts (Hill et al. 2008). Both models match economic

See also the substantial savings arising out of improvements in health discussed in the 'Health and wellbeing benefits' section of this report.

outcomes with other priorities — including culture and country — to multiply the benefits of economic activities for the community and wider society. These models challenge the market's failure to appreciate the value of caring for country (Altman 2004; Burgess and Morrison 2007:185).

Research into Indigenous peoples' socio-economic opportunities uses the term 'livelihoods' to indicate a broad economic framing. Hunt, Altman and May (2009:15) draw on the international development literature to discuss livelihoods in holistic terms, whereby employment and economic activity is understood as supporting the way of

life and wellbeing of individuals and communities. In Central Australia the Desert Knowledge Cooperative Research Centre investigated economic development opportunities arising out of sustainable livelihoods. The concept of sustainable livelihoods supports economic engagement and growth that is durable, long lasting, and provides opportunities to sustain Indigenous people's cultural and social frameworks (Davies, LaFlamme and Campbell 2008).

Programs

There are a range of programs that facilitate working on country and that are funded solely by Indigenous bodies or in conjunction with governments or other organisations. Here, the focus is on programs at the state/territory and federal level targeted specifically for Indigenous peoples.

Morrison (2007) notes how work opportunities that emerge out of caring for country programs foster the development of innovative ideas of economic development and wealth generation. For example, the working environment increases capacity to interact with the external world through training and education (Morrison 2007:253). This is supported by an evaluation of the IPA program, whereby 95 percent of communities involved in IPA reported economic benefits (Gilligan 2007). As Lane (2002) writes, because many caring for country programs originate largely from Indigenous-driven initiatives, recognisable successful economic benefits have emerged through backing an established momentum.

Ranger groups are the base of the corporations (such as the land and sea councils) that are emerging out of Indigenous land and sea management, and that have been identified as a new industry sector (Putnis, Josif and Woodward 2007:4). Indeed, Putnis, Josif and Woodward (2007:3) found that:

many Indigenous organisations and government agencies regard Indigenous land and sea management groups as among the most important and productive organisations in communities. They are achieving a broad range of environmental, cultural, social, education, health, employment and economic development outcomes.

The ranger groups have rapidly expanded in recent times. In 2009 Hunt, Altman and May (2009:x) estimated that approximately 500 Indigenous people were employed in land and sea management groups in the Northern Territory, with fee-for-service contracts valued at an estimated total of \$4 to \$6 million per annum. In a 2010 study of the federal government's Working on Country program, May (2010:7) found that, with a combined investment of \$197 million from the Caring for our Country program and the Department

of Families, Housing, Community Services and Indigenous Affairs, there were sufficient funds for 661 ranger positions nationally, although this includes a small portion of trainee and flexible roles. At the time of writing, the administered funding delivered under the Working on Country program was \$243.1 million between June 2007 and June 2013 to employ up to 680 Indigenous rangers (http://www.environment.gov.au/indigenous/workingoncountry/index.html). The Portfolio Budget Statements 2011-12 set down a further \$43 million and \$43.7 million to deliver Working on Country across 2013-14 and 2014-15 respectively (http://www.environment.gov.au/about/publications/budget/2011/pubs/pbs-2011-12.pdf) The Working on Country ranger program provides valuable wages and operational funds to support the customary activities of caring for land, with medium term three-year work contracts.

Another source of financial support for this work is the Indigenous Land Corporation, which finances land management on Indigenous-held land to achieve economic, environmental, social and cultural benefits (Morrison 2007:256). Previously, many caring for country activities had been supported through the Community Development Employment Projects (CDEP) program, which has now been considerably scaled back (Altman et al. 2009:29-30; Muller 2008:151–2; Hunt 2010:21). There was also the Contract Employment Program for Aboriginal people in Natural and Cultural Resource Management, which was a federal government-funded program operating from 1987 to 1997 (Breckwoldt, Boden and Williams 1997).

Significantly, these caring for country programs provide an economically viable form of employment for Indigenous people in remote communities, where people live close to or on the land being managed (Altman, Buchanan and Larsen 2007; see also Morrison 2007).² In remote areas, Smyth (2011) identifies the industries established around caring for country as a 'propitious niche' for Indigenous people, enabled through the preservation of culture, identity, ancestry and the conditions of remoteness. For example, in the Kimberley, ranger groups are well placed to undertake Fire and Emergency Services Authority contracts for the state government, and other land management services where there are no other service providers (Griffiths and Kinnane 2010:8). These activities are also called 'payment for environmental services', where Indigenous people are paid for work that is of environmental benefit to the wider community. The Dhimurru rangers in western Arnhem Land are well placed to conduct surveillance work regarding the taking of shark fins and the bio-security threats of foreign ships (Muller 2008:158).

Despite the convergence of interests, engaging Indigenous people in land and sea management programs that are recognised by the government and also reflect and inform policy is a significant challenge (Morrison 2007; Weir and Muller forthcoming). As discussed earlier, barriers to implementing natural resource management strategies and behaviours arise from cultural differences in institutional and knowledge systems (Davies, LaFlamme and Campbell 2008). Lane (2002) emphasises the constraints on the capacity of Indigenous people to participate effectively in natural resource management, relative to other stakeholders. These constraints include language and cultural barriers, geographic isolation, lack of resources, and lack of familiarity with European-Australian planning and decision-making processes (Lane 2002). The importance of empowerment through ownership of and responsibility for Indigenous land and land management initiatives appears repeatedly in the literature to address such challenges (May 2010; Lane 2002:829; Sithole et al. 2007:48).

Markets

There are business opportunities which encompass activities that support both economic development and socio-economic wellbeing through caring for country. The literature identifies a range of industries emerging from caring for country that provide a positive benefit to the socio-economic wellbeing of Indigenous people. These occur in the areas of bush foods; wildlife harvesting; cultural and eco-tourism; heritage; biodiversity conservation; intellectual property rights in ecological knowledge; fire and water management; the arts and crafts industry; and, in recent times, an engagement with the carbon market through biobanking schemes and carbon offsetting (Davies, LaFlamme and Campbell 2008; Hunt, Altman and May 2009:12), and include the following examples:

Many materials and methods in the arts and crafts industry increase activity in customary
and cultural practice on country, and generate millions of dollars for individuals and
communities annually. Research from 2002 estimated an annual value of \$200 to
\$300 million for this market, which could be considered a conservative estimate today
(Altman et al. 2002).

² Additional research on this issue was conducted by the Desert Knowledge Cooperative Research Centre through the Livelihoods in Land research project (DKCRC n.d.).

- Economic opportunities exist for Indigenous people in commercial wildlife utilisation, which can also support the customary practices of wildlife harvesting for subsistence use (Wilson, Edwards and Smits 2010). In central Arnhem Land, the Djelk rangers have established a fledgling industry in the harvesting of tarantulas and the northern long-necked turtle (Fordham et al. 2010).
- The native foods industry is an area that holds potential for income and employment generation for Indigenous people. In 2009 the native foods industry had an estimated value of \$14 million annually (CSIRO Sustainable Ecosystems 2009 in Hunt, Altman and May 2009). Research conducted into the supply chain of bush tomato production found that, through achieving a respect within the industry of 'Aboriginal people's role, traditional and local knowledge', there were opportunities for wealth generation and economic development (Cleary, Grey-Gardner and Josif 2009).
- Cultural and eco-tourism provides a business model that supports sustainable
 economic development while reinforcing cultural and customary practices. In the
 Kimberley north of Broome, Bardi Jawi own the Cape Leveque resort, which has
 won awards for eco and Indigenous tourism, and have recently developed a cultural
 awareness program for tourists to ensure they respect country (Kimberley Land
 Council 2011).
- Potential economic benefit exists in the intellectual property of Indigenous ecological knowledge of bush foods, medicines and other natural resources. In a study of an ethnobiology database in Aurukun, diverse benefits were identified as being linked with local knowledge systems, and included opportunities for young people to engage in eco or cultural tourism roles, intergenerational knowledge transmission, improvements in health through the use of local foods and medicines, and a greater capacity for intercultural communication (Edwards and Heinrich 2006:581).
- In recent years the emergence of an Indigenous carbon market has presented new opportunities for economic development, independent of government programs, and is potentially supportive of Indigenous cultural, social and environmental priorities on country (Foley 2011). However, a lack of standards in this emerging industry presents a risk for Aboriginal and Torres Strait Islander landholders engaging with commercial markets, and these need to be developed before the co-benefits of the industry can be realised (Foley 2011). Also, the creation of IPAs on Indigenous land tenures may limit the eligibility of these lands to participate in carbon economies (Gerrard in press).
- The pastoral industry, depending upon practice, may or may not be considered to be caring for country. The Cooperative Research Centre for Tropical Savannas Management conducted research into the potential of pastoralism to provide sustainable economic futures for Indigenous people in Northern Australia, and found the key challenge to be matching economic viability with the environmental maintenance of pastoral landscapes. It was suggested that environmentally responsible pastoralism could be marketed as a niche industry with a potentially strong competitive advantage (Morrison 2007:257).

The potential to develop such markets that support the cultural and social wellbeing arising out of caring for country depends upon many factors, including relationships with industry and support from government to build these new industries. Altman (2009) writes that the Closing the Gap policy fails to satisfy the diversity of Indigenous goals, and that this seems particularly true in relation to the nexus between caring for country and economic opportunities in wildlife and natural resource management, which are a high priority for Indigenous people (see also Wilson, Edwards and Smits 2010). Further, there is potential for exploitation of Indigenous peoples' 'propitious niche' in these economies — whether it is land, resources, knowledge or heritage. In the case of the carbon market, economic opportunities derived from carbon banking schemes can lead to environmental degradation and little economic profit being realised by the community (Foley 2011).

Environmental benefits

Caring for country has substantial environmental benefits. Through Indigenous-held lands, through the value Indigenous people place in country and through Indigenous peoples' knowledge about how to live with country, Indigenous people make important contributions to national, regional and local environmental goals.

Indigenous people provide a wide range of environmental services including border protection, quarantine, fire management, wildfire abatement, carbon sequestration and trading, weed control, feral animal control, biodiversity conservation, fisheries management, restoration of wetlands, water resource management and sustainable commercial enterprises such as eco-tourism (Berry et al. 2010; Hunt, Altman and May 2009:xxii). The diverse environmental activities to which Indigenous people contribute have positive outcomes for climate change mitigation, biodiversity monitoring, the protection of endangered species, landscape health and more (Hunt, Altman and May 2009:xi).

The Dugong and Marine Turtle project is a very successful example of several ranger groups coordinating their work over a vast area from the Kimberley to Cape York (Bessen Consulting Services 2009). Through extensive community consultation, investment in a network of ranger groups and partner organisations, and innovations in technology, this project has substantially increased knowledge about the turtles and dugongs and reduced threats arising from marine debris, floating nets, feral animals and boat strikes, as well as addressing harvesting practices (Bessen Consulting Services 2009:Appendix 1:6). The challenging geography of this project was aided by the Northern Australian Indigenous Land and Sea Management Alliance, which is an alliance of the Indigenous land councils in Northern Australia. Another example of the reach of ranger groups across northern Australia is their employment by the Australian Quarantine and Inspection Service to intercept invasive weeds washed onshore, or invasive insects that blow in, including dengue mosquitoes.³

As part of their multidisciplinary research into health and country, Garnett and Sithole (2007) examined the ecological benefits of caring for country activities. They found that where people undertook caring for country activities, there were less intense wildfires and more patchwork burning, with positive outcomes for habitat, biodiversity and landscape health (Garnett and Sithole 2007:15). It was further found that this landscape health had positive benefits for reducing weed invasion. Areas of land that were actively managed by Indigenous people were found to be 'remarkably weed free', which was also partly a result of isolation (Garnett and Sithole 2007:17). The capacity building that is occurring in weed management programs with rangers will help detect future weed invasion of these lands.

A well-recognised environmental benefit of caring for country is when Indigenous people choose to declare an Indigenous Protected Area on their land. Under this arrangement, Indigenous people agree to manage their land to meet international conservation standards, in exchange for resources and funding to do so their way (Bauman and Smyth 2007). IPA lands total 20 percent of the national reserve system (Altman, Buchanan and Larsen 2007:39). Gilligan (2007:47) found that IPAs were extremely cost effective in achieving national biodiversity and conservation goals.

Indigenous people also actively work for environmental outcomes on joint-managed lands on national park and other reserved land tenures. This is caring for country formalised through joint management agreements between governments and traditional owners. As part of a cooperative management agreement over the Barmah Forest in Victoria, the Yorta Yorta have supported conservation initiatives through sharing their knowledge and management expertise (Wilcock 2007).

Although Indigenous peoples and ecologists are not always in agreement over resource use and landscape management (Heinsohn et al. 2004; Redford and Stearman 1993), both philosophical traditions recognise that humans are part of nature, and that the health and

³ See, for example the Djelk rangers from Arnhem Land (BAC n.d.).

survival of humans and nature are entwined futures (Weir 2008). Caring for country activities provide an opportunity for ecologists and Indigenous people to communicate these philosophies, as part of developing better land and sea management practices. As Morrison (2007:251) writes, 'In terms of environmental research, caring for country reflects a growing global trend towards intercultural approaches that combine Western scientific and Indigenous knowledges'.

Examples of collaborations between Indigenous people and environmental scientists on activities directly related to caring for country include innovations in fire management to better predict fire behaviour across landscapes, thereby reducing the impact of fires on habitat and reducing greenhouse gas emissions (Roughley and Williams 2007:27). Conservation initiatives also have benefited by working with Indigenous people in surveying wildlife populations, facilitated by Indigenous peoples' knowledge of landscape and species (Wilson, Edwards and Smits 2010).

On the Anangu Pitjantjatjara Yankunytjatjara lands in Central Australia, the Kuka Kanyini wildlife management project was designed in response to Indigenous knowledge traditions and practices, and matches Indigenous knowledge with scientific knowledge as part of wildlife surveys and identifying and improving habitats for threatened species (Wilson and Woodrow 2009). Other successful intercultural landscape management programs include the Anangu Pitjantjatjara cyber tracker program for threatened species and the Itjaritjari Project to collect information on the critically endangered Southern Marsupial Mole (Brown and Creaser 2006). These projects were supported by the Aboriginal Lands Integrated Natural Resources Management Plan and Investment Strategy (2004–07) that was developed through extensive collaboration with Indigenous communities in South Australia, state and federal government agencies, non-governmental organisations and other regional Indigenous natural resource management bodies (Brown and Creaser 2006).

The National Landcare Program also uses a collaborative approach to land management, combining Indigenous people's knowledge and community structured approaches with Western science and conservation philosophy (Hyndman 2004). In Arnhem Land, Yolngu founded the Yirrkala Landcare group to empower the younger generation to learn about caring for country from the Elders. The rangers are also working with other landscape management approaches such as revegetation and mapping cultural heritage sites (Robinson and Mununguritj 2001). The Aboriginal Landcare Education Program successfully promoted win-win activities for Indigenous communities and the local environment, which included tree planting around family living spaces (Greening Australia n.d.). A landscape mapping project initiated by the Warumungu traditional land owners and the Central Land Council won a Landcare Australia award for the most comprehensive mapping project by an Indigenous organisation in Australia (CLC 1997). This project combined traditional knowledge with conventional scientific methods to develop a plan for sustainable land use management in the central arid Indigenous rangelands region (CLC 1997; Hyndman 2004). Also in Central Australia, the Anangu Landcare combines Indigenous knowledge with Western science in an intercultural environmental education and landscape management program.

Traditional caring for country practices that involve harvesting of wildlife also can have positive outcomes for the environment. The harvesting and cultivation of bush foods, such as wild wattle seeds, bush tomatoes and native millet, can help propagate and re-establish these species in areas where they might otherwise be out-competed or over-predated by exotic species (Wilson, Pickering and Kay 2005). These activities also provide potential eco-enterprises (for example, bush food horticulture for commercial markets) that have positive outcomes for Indigenous communities and the environment. Traditional Aboriginal ecological knowledge often applied constraints upon where species could be harvested and by whom. Such practices are thought to have ensured the continued survival of plant and

animal species and promoted biodiversity through heterogeneous land use practices (Altman and Whitehead 2003; Wilson, Edwards and Smits 2010). Indigenous mechanisms that regulate sustainable wildlife harvesting are more likely to be lost or diminished in communities where the authority of Elders has weakened or is no longer in place. This emphasises the importance of caring for country activities as a way to strengthen community and intergenerational relationships and achieve positive flow-on effects to the environment through the passage of intergenerational knowledge about sustainable resource use (Wilson, Edwards and Smits 2010).

Morrison attributes the success of caring for country initiatives in northern Australia to a holistic approach that encompasses environmental, socio-cultural and economic aspects of Indigenous land management (Morrison 2007). A fundamental part of this program is that Indigenous people have ownership and direction over their own caring for country programs.

4 Conclusion

The contemporary context of ecological degradation, endangered species and rapid shifts in the climate has presented new priorities and challenges to Indigenous people and their role in caring for country, but this context has also drawn government and other support for Indigenous land and sea management. The literature on the benefits of caring for country is growing alongside this public interest. What is unique about this literature is how it extends beyond environmental benefits to grapple with the role of caring for country in terms of health, wellbeing, cultural, social-political, economic and other benefits. While this research field is still developing, the literature reveals how interlinked these benefits are, and the potential for benefits to be multiplied through mutually reinforcing positive connections. Where researchers have drawn on Indigenous peoples' holistic expressions of wellbeing, this wellbeing involves more than just setting health within a social determinants of health framework — it involves the larger context of country.

Indigenous peoples' caring for country traditions are receiving greater recognition in collaboration with government, community and private initiatives. Pivotal to achieving the benefits identified in the literature is a commitment to ensuring that this caring for country encompasses the holistic meanings and values that Indigenous people bring to this activity. Through these partnerships, caring for country is no longer just an Indigenous tradition, but is being shared and transformed to become a uniquely Australian land and sea management.

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