

South Australia's NatureLinks Program: Successfully Integrating Protected Areas into Landscape Scale Conservation

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LANDSCAPE SCALE CONSERVATION IS NOW THE DOMINANT APPROACH for responding to the challenges of conservation, sustainable livelihoods, and climate change. Just as international efforts to conserve biodiversity have progressed from a species focus to a broader systems approach, the future of protected areas relies on their integration into broader physical, social, cultural and economic landscapes. South Australia's NatureLinks program is integrating protected areas into landscape restoration.

Two case studies illustrate different approaches to integration, with protected areas at their core. Operation Bounceback began as a government driven restoration program in the Flinders Ranges National Park, originally focusing on endangered Yellow-footed Rock-wallabies. Over the last twenty years, it has extended its focus outward to encompass a range of land tenures and involve many different stakeholders. WildEyre, on the Eyre Peninsula, is driven by a consortium of nongovernmental organizations and state agencies, with a focus on restoring private lands that surround and link protected areas.

Connectivity conservation in Australia

Internationally, protected areas are recognized as the cornerstone of our efforts to conserve biodiversity. However, they are just one tool in a suite of initiatives; nature conservation cannot be achieved by parks alone. In response to the challenges of climate change, habitat destruction and fragmentation, contemporary conservation efforts are focusing on a broader and more integrated approach to improve the connectivity and resilience of natural systems, beyond park boundaries.

Citation: Weber, Samantha, ed. 2014. *Protected Areas in a Changing World: Proceedings of the 2013 George Wright Society Conference on Parks, Protected Areas, and Cultural Sites*. Hancock, Michigan: George Wright Society.

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Conservation of landscape-scale connectivity has become the major approach in Australia for biodiversity conservation.

There are now a number of large-scale connectivity conservation projects underway that are helping to protect the integrity and resilience of many Australian ecosystems.¹ These projects have been initiated by the cooperative action of state government, nongovernmental organizations, industry, local communities and individuals. For many of the projects, nongovernmental organizations play the main role in raising awareness about opportunities for conservation action and for forming partnerships with other agencies and groups.

In 2012 the Australian government released the National Wildlife Corridors Plan² to provide a framework for retaining, restoring, and facilitating a national network of wildlife corridors. The South Australian Government has also recognized that, despite having an extensive protected area system, conservation goals cannot be achieved by protected areas alone. In 2003, the government introduced one of Australia's first and most successful landscape conservation initiatives, NatureLinks, which is one of the six foundations of Australia's national wildlife corridors network.

This paper discusses the origins of NatureLinks over a decade ago to its successful implementation on the ground now. It describes the pivotal role that protected areas have played in the success of NatureLinks using two case studies: Bounceback, a government initiated restoration program in the state's semi arid ranges; and WildEyre, a community driven restoration program on the largely agricultural Eyre Peninsula.

South Australia's protected area system

South Australia is one of eight Australian states and territories. It covers approximately 98 million hectares and has a population of 1.65 million people, or 8 percent of the Australian population. Over 80 percent of the state receives an average annual rainfall of less than 250 mm. Historic conversion for agriculture has left only 29 percent of native vegetation remaining in the state's agricultural regions.

South Australia's terrestrial protected area system occurs on public, private and Aboriginal lands, covering around 28 million ha, or over 28 percent of the state (Figure 1). The majority occurs on public land, including over 400 national parks and conservation reserves. Private protected areas cover over 9 million ha. These include Heritage Agreements with a primary focus on protecting native vegetation, co-managed parks on Aboriginal-owned land, sanctuaries and Indigenous Protected Areas.

South Australia's protected area system forms part of the Australian National Reserve System. The National Reserve System represents the collective efforts of all state and territory jurisdictions, the Australian Government, nongovernmental organizations and Aboriginal land owners. It includes more than 9,000 protected areas, on public and private lands, that cover over 11 percent of the continent.

South Australia's protected area strategy, *Conserving Nature*,³ provides a framework for establishing protected areas, including a priority to establish protected areas that will increase habitat connectivity across the landscape, in accordance with NatureLinks principles. South Australia's protected area system provides the foundation for NatureLinks. The land based component conserves most of the remaining native vegetation in the agricultural regions and large areas of native vegetation in the rangelands.

NatureLinks

Over the last three decades, successive governments in South Australia have taken a progressive and flexible approach to conservation, recognizing that protected areas must be part of a broader socio economic landscape. This has led to substantial additions to the protected area system

ranging from Wilderness Protected Areas, to multiple use areas that provide for strictly regulated and managed access for mining and pastoralism.

In 2002 the incoming government committed to support the efforts of conservationists to introduce a system of protected areas, surrounded and linked by lands managed to achieve conservation objectives.⁴ In 2003 the government subsequently adopted NatureLinks, a program to provide an overarching framework for government agencies, conservation organizations, landholders and local communities to work together to restore, connect, and sustainably manage natural systems and processes at landscape scales, using protected areas as the foundation stones.⁵

NatureLinks is modeled on the Tasmanian Wilderness Society's WildCountry philosophy,⁶ which in turn is based on the North American Wildlands Project.⁷ NatureLinks applies a long term, cross tenure approach; focuses on building community ownership for conservation; and ensures that the best available scientific, traditional, and local knowledge is shared among partners.

South Australia has incorporated the NatureLinks concept into policy and planning frameworks, ensuring that landscape ecology principles are built into State planning and natural resource management processes. In 2004 NatureLinks was included in South Australia's Strategic Plan⁸ with a target to establish five biodiversity corridors across the state.

At around the same time, the South Australian government adopted an integrated approach to natural resource management, aligning policies and programs that dealt with water, soil, land management and pest species under a single statutory framework. The Natural Resources Management Act was passed in 2004, and was transformative, moving natural resource management forward by introducing a more holistic and integrated approach, with a strong focus on community ownership and partnerships.

This shift towards a community based model for natural resource management, building on the Australian Landcare movement of the 1980s and 1990s, aligns strongly with and is complementary to, the partnerships and community involvement approach that underpins NatureLinks. NatureLinks comprises five wildlife corridors: Arid Lands, Cape Borda to Barossa, East meets West, Flinders-Olary, and River Murray-South East (Figure 2). Each corridor is generally aligned with a bioregion or landscape with similar ecological and social systems and incorporates key protected areas that form the "core."

Corridor implementation plans have been released to provide governments, Natural Resource Management Boards, landholders and nongovernmental organizations with guidance for establishing NatureLinks on the ground.

Case study: Bounceback

The award winning Bounceback program was the first successful landscape-scale restoration program in Australia. Bounceback is a major contributor to the Flinders-Olary and East-meets-West NatureLinks and is located in the semi-arid Flinders, Gammon and Olary Ranges in the north of the State (Figure 3). Since European occupation in the mid-eighteen hundreds, the landscapes and biodiversity of the Ranges have been significantly altered by the impact of native and introduced plants and animals.

Bounceback started in 1992 in the iconic Flinders Ranges National Park (Figure 3). Park and wildlife managers recognized the need for on ground action, both on and off park, to aid recovery of the region's flora and fauna, in particular the Yellow-footed Rock-wallaby, a state and nationally listed threatened species. The two major components of Bounceback are integrated pest management and long term monitoring and evaluation. Major pests include European Red Foxes, Cats, Goats, European Rabbits, Kangaroos (over-abundant native species), African Boxthorn, Wheel Cactus and Pepper Tree.

Over the last twenty years, park rangers have forged partnerships with private landholders,

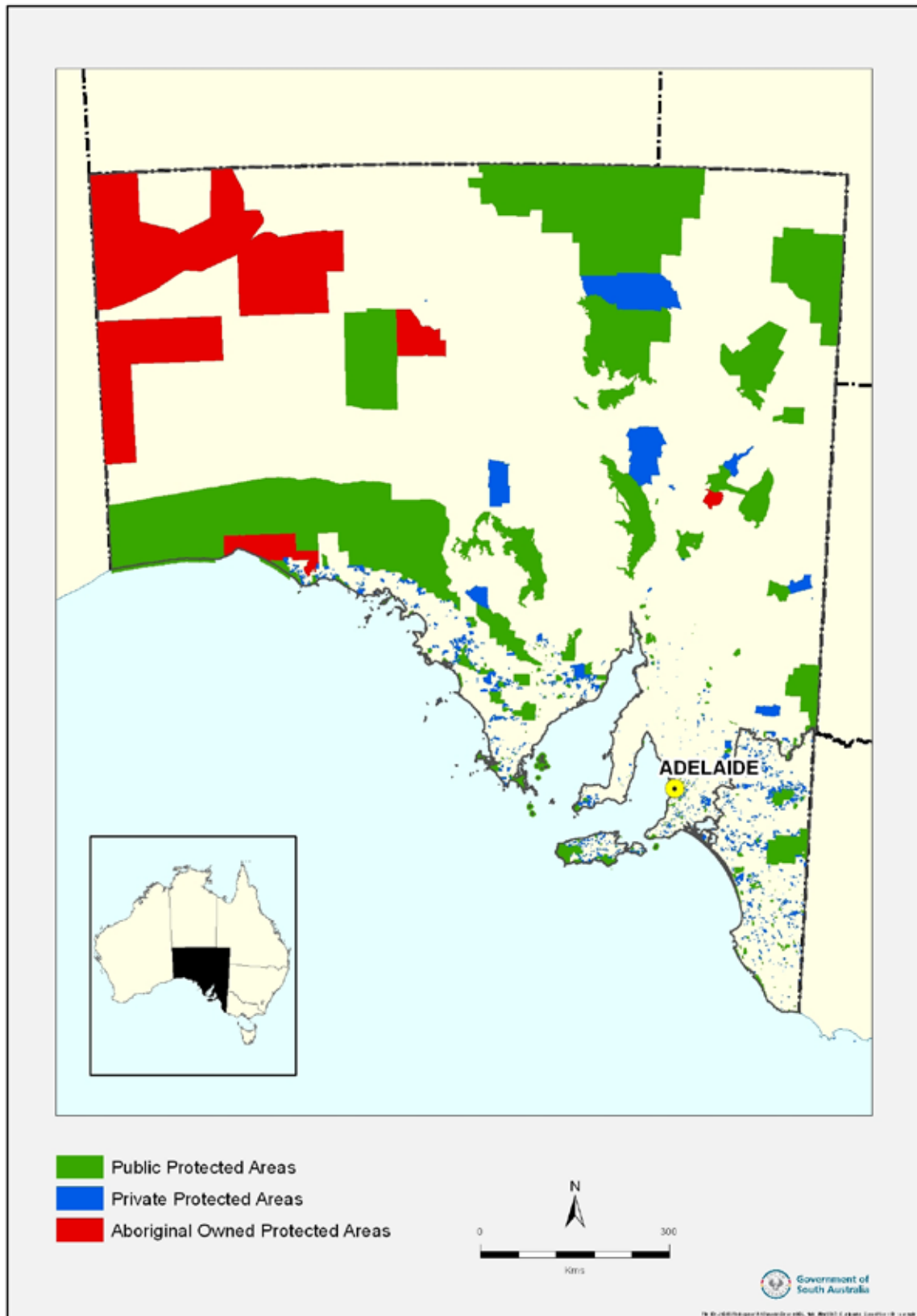


Figure 1. South Australia's protected area system.

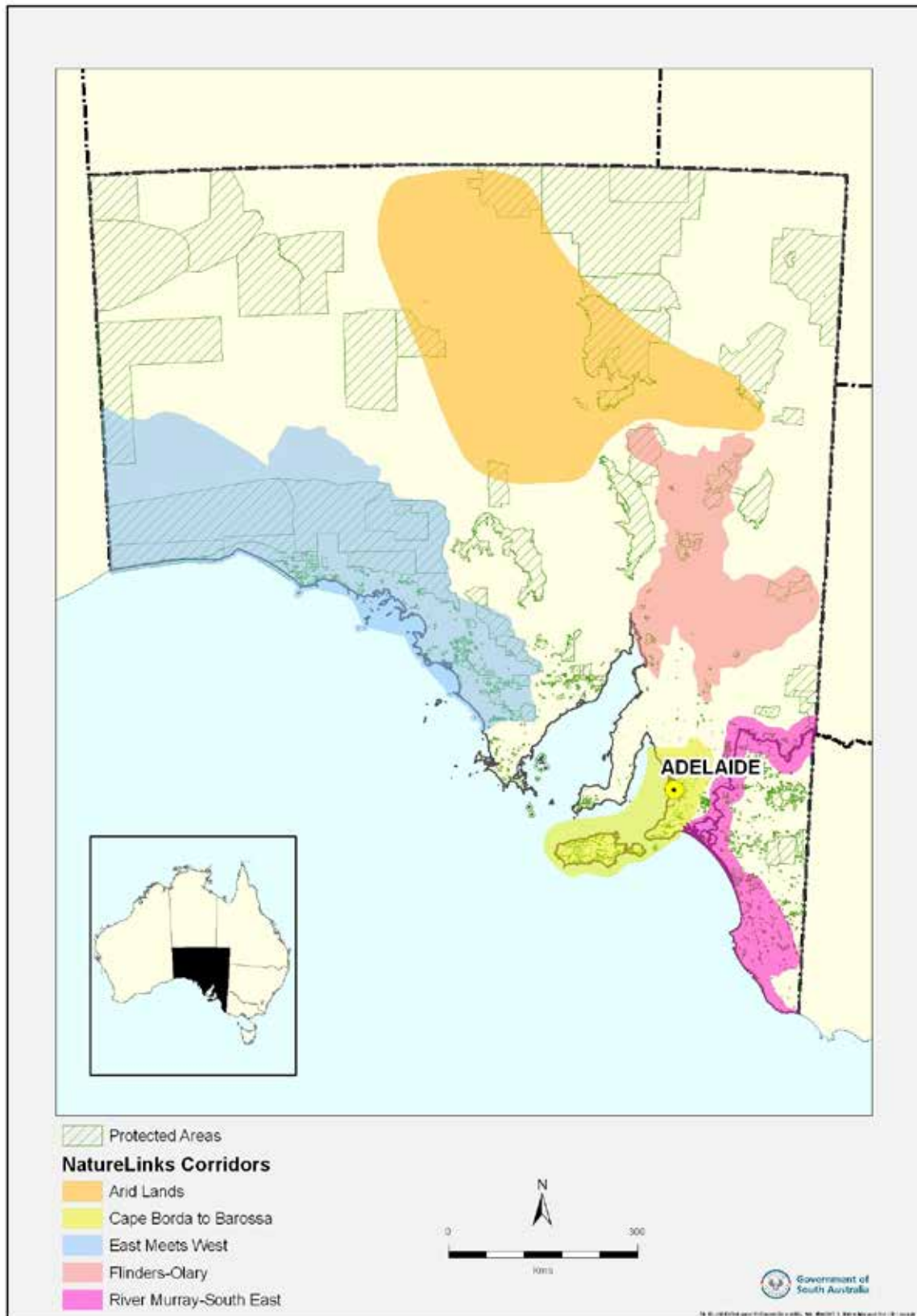


Figure 2. South Australia's NatureLinks corridors.

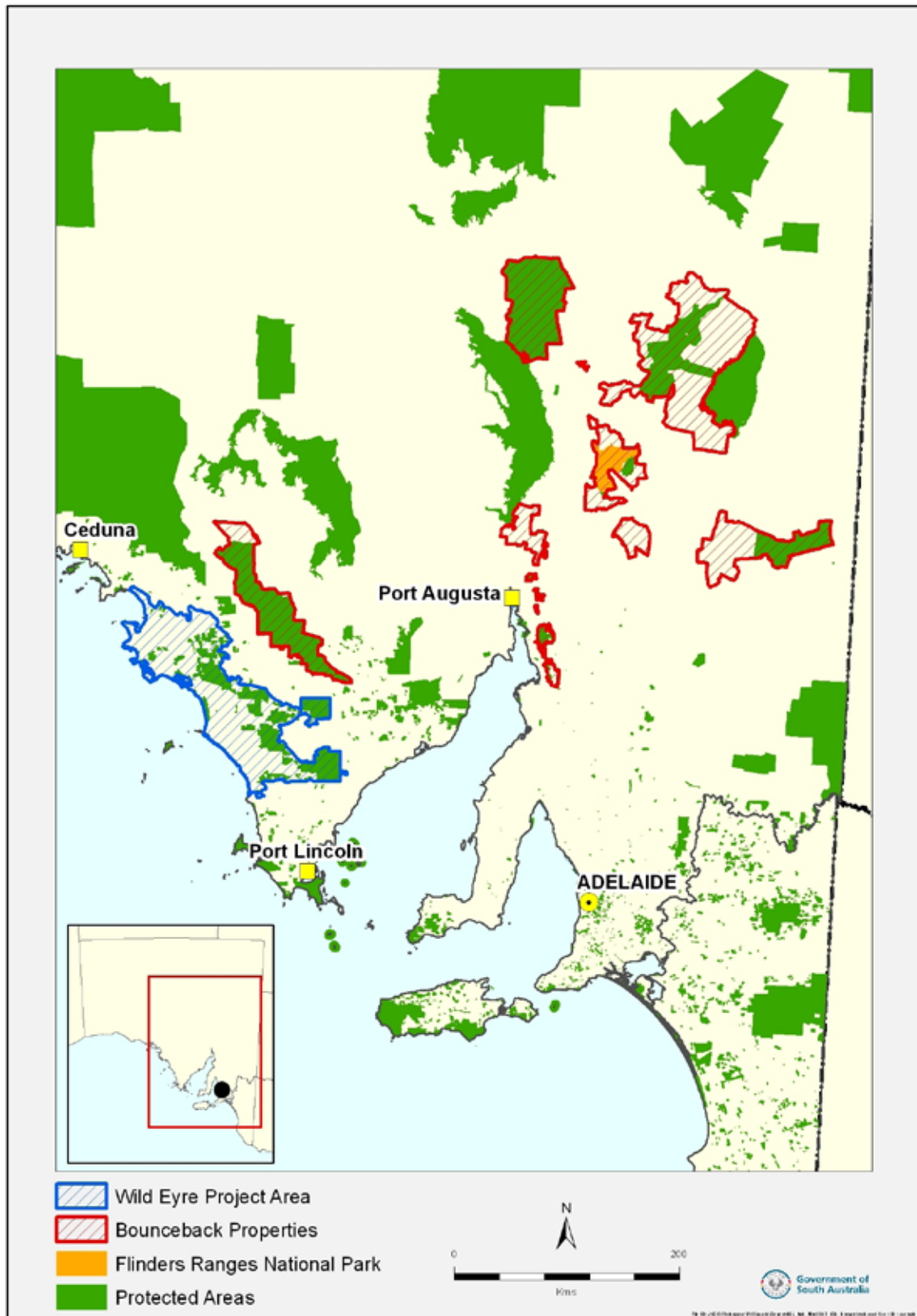


Figure 3. Location of the Bounceback and WildEyre project areas.

nongovernmental organizations, and Aboriginal communities. On the ground pest management now extends outwards from key protected areas across other land tenures, including privately managed sanctuaries, around 30 pastoral properties and Aboriginal owned and managed land. In total, Bounceback covers 10,000 sq km. More than twenty partner organizations are now involved, including conservation organizations, Aboriginal communities, hunters, and universities.

Successful results. Predation by European red foxes is believed to be the major cause of the extinction and decline of a large number of native small to medium sized terrestrial mammals, reptiles, and ground-nesting birds in Australia.⁹ In the Bounceback area, fox numbers have been dramatically suppressed by aerial and complementary ground baiting (using semi-dried, sodium fluoroacetate-treated meat). Commencing in reserves in 1993, the baiting footprint has gradually expanded onto adjacent properties and then more widely as landholders have become engaged. Fox baiting now covers more than 7,000 sq km of the Bounceback project area. Fox sightings are now very low with, on average, less than one fox sighted per 100 km of spotlight transect; 10–20 foxes are observed over the same distance in unbaited areas.

Bounceback's goat control program commenced in 1992, and was one of the first programs of its kind to operate outside protected areas. Control is through a combination of coordinated and closely managed on ground and aerial shooting by volunteers, rangers, and contractors. To date, more than 140,000 goats have been removed from the project area.

Long term monitoring of land condition (based on photo point data) indicates that the reduction in total grazing pressure (from goats, rabbits, and kangaroos) has encouraged the widespread regeneration of tree and shrub species. Data from Bimbowrie Conservation Park in the Olary Ranges shows that previously grazed mulga (*Acacia* sp.) plants have, on average, doubled their height between 2006 and 2010 following reduced grazing pressure from goats. Annual population monitoring via aerial surveys indicates that Yellow-footed Rock-wallaby numbers have increased spectacularly in areas where there has been broadscale fox and goat control, both on and off reserve. Numbers in the Flinders Ranges National Park have increased from less than 30 individuals in 1993 to an estimated 1200 in 2012. In the Olary Ranges, the population has increased from less than 50 in 1993, to over 500 in 2012, with similar dramatic increases seen in other parts of the Ranges.

Summary. Bounceback is a highly effective landscape restoration program that had its origins in the protected area system. Park rangers successfully sought buy in from surrounding landholders, community groups, and other organizations to extend what began as a program to secure a threatened species on park into a landscape-scale conservation program. Reserves within the Bounceback footprint remain crucial to success by providing the core areas for long-term monitoring, and a focus for on the ground activity that will play a key role in building ecosystem resilience across all land tenures. All of Bounceback's pest control programs will require ongoing efforts and monitoring to achieve long-term benefits for biodiversity.

Case study: WildEyre

WildEyre is a landscape conservation program encompassing 1.2 million ha on the western Eyre Peninsula (Figure 3). WildEyre is a major contributor to the East meets West NatureLink (Figure 2). Major land uses in the region are dryland cropping and nature conservation. The WildEyre project area includes some of the largest intact, contiguous areas of remaining bushland in the state's agricultural regions, supporting a number of nationally threatened plant and animal species. The majority of bushland is conserved in protected areas and heritage agreements—private land is protected by a covenant under the Native Vegetation Act 1991.

WildEyre commenced in late 2007 and is driven by an alliance of three nongovernmental organizations (The Wilderness Society, Greening Australia, and the Nature Conservation Society

of South Australia), the regional Natural Resources Management Board and the South Australian Department of Environment, Water and Natural Resources. A Memorandum of Understanding guides the involvement of partners. A formal action planning process has determined agreed objectives and on ground priorities.

On ground work includes pest plant and animal control, fencing to exclude stock, extensive revegetation and bushland condition monitoring. Activity occurs across all land tenures including public and private protected areas and rural properties. Priorities are based on maximizing linkages between, and buffering, protected areas.

Successful results. Although still in its infancy, WildEyre has achieved many successes over the last five years. Pest control has focused on rabbits, foxes and key weed species identified through the action planning process as some of the highest priority threats. To date, African Boxthorn has been controlled on more than 3522 ha of coastal land.

In total, 9,600 ha of remnant vegetation have been protected from stock grazing, including 1,000 ha of threatened sheoak (*Allocasuarina* sp.) grassy woodlands on private land. This has been protected under a 10-year land stewardship agreement with two local landholders. Approximately 400 ha of public and private land have been revegetated, mainly via direct seeding. One of the private properties involved is a 13,000 ha heritage agreement owned by the Australian Wildlife Conservancy, a nongovernmental conservation organization, where the aim is to restore linkages across the property and with an adjacent Conservation Reserve.

Rigorous monitoring and evaluation will be critical to the success of WildEyre. A network of 50 monitoring sites, both on and off park, has been established with another 50 planned in the future. Based on its successes to date and the collegiate approach taken by alliance partners, WildEyre has attracted considerable funding support from both State and Federal governments. Most recently it has attracted a \$4.7 million grant from the Australian Government's Clean Energy Future's Biodiversity Fund program.

Summary. WildEyre arose from a shared vision to achieve landscape scale conservation across the western Eyre Peninsula. In a unique partnership between government and nongovernmental organizations the WildEyre alliance has successfully engaged with other individuals, organizations and indigenous communities to determine priorities and deliver on ground results across public and private land. The project is driven by an action planning approach and occurs within a defined area, largely configured around the region's key protected areas.

Conclusions

NatureLinks provides an overarching planning framework to guide conservation action by government and nongovernmental organizations and the community. Two case studies, Bounceback and WildEyre, demonstrate that the shift in focus from protected areas and conservation of individual species to the sustainable management of landscapes and ecosystems is clearly working, supported by strong community networks and underpinned by an effective protected area system.

Bounceback and WildEyre illustrate quite different approaches to tackling landscape conservation. Bounceback, with its origins in the protected area system, has evolved over time with partnerships forming as the project has extended its reach beyond park boundaries to other land tenures. In contrast, WildEyre has taken a planned, tenure-blind approach, driven by an alliance of government and nongovernmental organizations from the outset. Despite their origins and approaches, both projects both depend on successful partnerships, community involvement and a core system of protected areas that provides the basis for on ground action.

Endnotes

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