STRATEGIC PLAN 2023 - 2026

IMAGE:
Milbrook Top - 2019

Bottom - 2022

Seeding *Natives* *Incorporated*

Contents

Our Vision

To lead a return of the lost richness of native grasslands and grassy woodlands

Our Mission

To reverse grave species loss through innovative grassland restoration for the benefit of humanity and the earth's biological diversity on which all life depends.

- That we revolutionise entrenched ecological restoration practices that produce sub-standard results by building highly functioning ecosystems from the ground up, starting with the grasslands!

- That our innovative methodology (of machine broadcasting a wide range of ground layer florets and seeds onto a lightly prepared weed-free surface) is accepted and celebrated for the breakthrough that it is in a State that is practicing long-standing and outdated restoration processes.

- That we continue to establish a network of Seed Production Areas (SPAs), in a challenging arena where the sought-after ground layer and low understorey families can number around 56 and their species over 300!

- That we collaborate with environmental organisations and government departments to achieve restoration and reconstruction in perpetuity that meets international standards (Society for Ecological Restoration).

- That we aim for and work towards attaining the recovery levels detailed in the National Standards set for the Practice of Ecological Restoration in Australia. Standards reference group SERA (2021) Edition 2.2.

- That we empower the people of South Australia to support* our urgent Mission to reverse grave species loss … primarily in our "backyard island", the Adelaide and Mount Lofty Ranges (AMLR).

Appendix 1

* support via sponsorship, donations, bequests, land for SPAs, property for reconstruction and ongoing management contracts.

Our Objectives

i. The principal objective is the protection and enhancement of the natural environment, primarily in South Australia and particularly conservation and restoration of native grasslands and grassy ecosystems. This involves providing information, education, undertaking works and services and implementing the findings of research related to these ecosystems.

ii. To establish and maintain a public fund to be called the Seeding Natives Incorporate Fund. The Fund is established to support the Association's principle objective. The Fund will be operated consistent with legislation establishing and regulating the Fund.

iii. To make a significant contribution towards the restoration of 150,000 Ha of biodiverse habitat in the Adelaide Mount Lofty Ranges.

iv. To establish and maintain seed production areas.

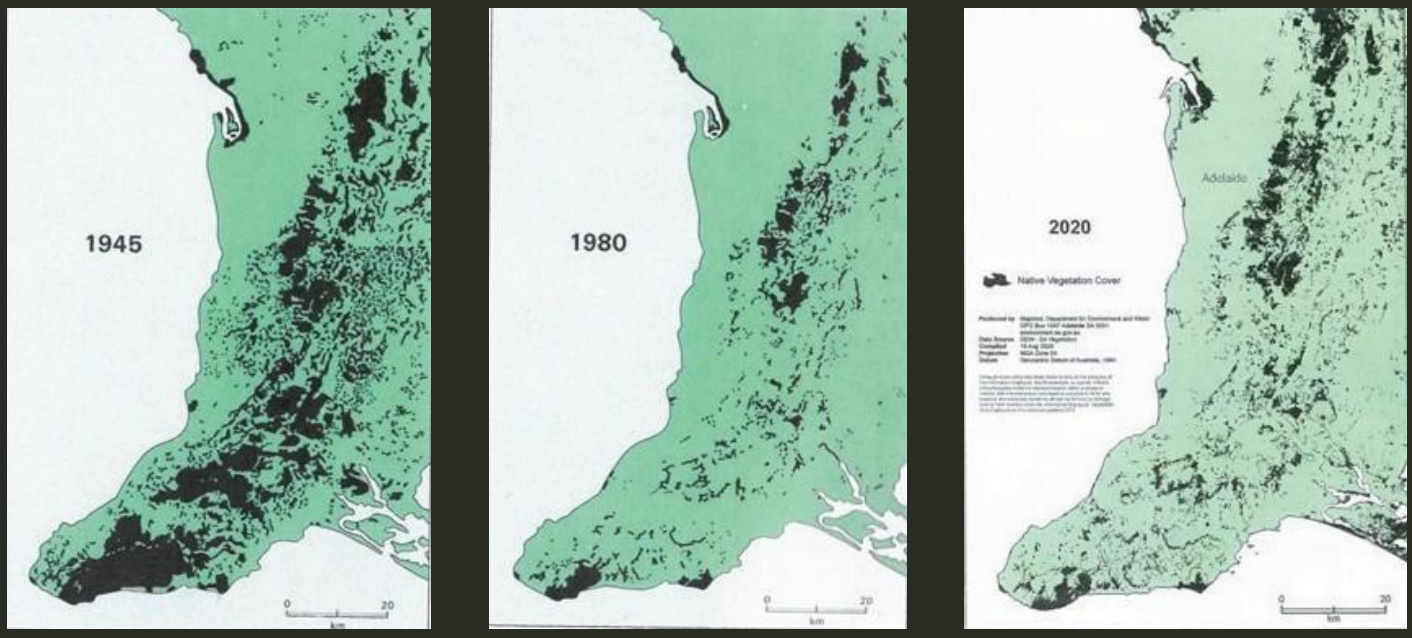
v. To develop specialised machinery to assist restoration and conservation activities and other activities to facilitate habitat restoration and on-going management techniques.

vi. To seek funding and work with other organisations to advance these objectives.

The Problems

Seeding Natives Incorporated exists to address a long-standing problem of habitat and species loss.

Native Vegetation
Southern Mount Lofty Ranges



240,000 hectares **90,000 hectares** **Needs 150,000 hectares reconstructed/rehabilitated**

- **South Australia has lost 99% of its pre-European Temperate Grasslands (estimated at 1,000,000ha in 1836) and**

- **The Mount Lofty Ranges has lost 90% of its Temperate Grassy Woodlands (estimated at 500,000ha in 1836). Hyde, Michael, K (1995) The Temperate Grasslands of South Australia Their composition and conservation status (page xii) World Wide Fund for Nature, Australia, Sydney.**

- **The Mount Lofty Ranges is recognised as a National Biodiversity Hotspot, no. 7 of 15 (ref) www.environment.gov.au/biodiversity/conservation/hotspots/national-biodiversity-hotspots**

Double-banded Plover
Swift Parrot
Curlew Sandpiper
Crested Bellbird
Pacific Golden Plover
Spotted Quail-Thrush
Jacky Winter
Grey-tailed Tattler
Hooded Robin
Australasian Bittern
Beautfiul Firetail
Black-chinned Honeyeater
Little Penguin
Flame Robin

The 'Living Dead', the next to go...

White-winged Fairy Wren
Fairy Tern
White-throated Needletail
Orange-bellied Parrot
Restless Flycatcher
Square-tailed Kite
Southern Emu-wren
Gilbert's Whistler
Eastern Reef Egret
Little Lorikeet

=Grassland =Dry Sclerophyll Open Forest =Open Woodland =Open Woodland & DSO Forest

Fauna extinction begins once diverse habitat falls below 30%

We are currently at 7-10%

11 bird species have become locally extinct in living memory^

Critically Endangered Species ("The Living Dead")^^ are next.

13 are directly associated with open grassy woodlands, dry sclerophyll open forest and grasslands.

^Gillam, S and Urban, (2014) Regional Species Conservation Assessment Project, Phase 1 Report. Regional Species Status Assessments, Adelaide and Mount Lofty Ranges NRM Region. Department of Environment, Water and Natural Resources, South Australia.
*Gillam, S and Urban (2014) also provided the list of bird species in the header image (though not in that format).
^^The term "the living dead" was used by Possingham & Field in their paper "Regional Bird Extinctions and their implications for vegetation clearing policy" (2000).



Key Threats

Key threats to the integrity of "remnants" and the reconstruction of critically-needed vegetation communities.

- Continuing (and often contiguous) Residential / Commercial Development
- Uncontrolled land degradation by feral goats, rabbits, deer and kangaroos
- Predation by domestic & feral cats and foxes
- Weed invasions
- Plant pathogen Phytophthora
- Loss of wetlands and protected watercourses
- Inappropriate fire regimes
- Fungal, beak and feather diseases in birds
- Repercussions from a warming world climate
- The inability of humans to operate as a part of ecosystems

The Pathway to a Solution

Our focus is the reconstruction of the foundation habitat layer that contains a significant diversity of native grasses, sedges, ground-covers, daisies, lilies, tiny herbs and small shrubs found in intact grassy woodlands & grasslands.

- We have the skills, field experience and innovative technology approaches to make a significant contribution towards rebuilding the required 150,000 ha to give the critically endangered species a fighting chance. This figure is variously 'expressed' by DEW in AMLR NRM Strategic Plan (2009-2014)at 30% & by Associate Professor David Paton (in presentation to Butterfly Conservation (2015) 150,000 ha & by Professor Hugh Possingham & Dr Scott Field re Regional Bird Extinctions & the Theory of Island Biogeography (2000) +30%.

- We utilise methods we have trialled to reduce the dominance of exotic grasses & broadleaf weeds (even eliminating many species). The processes that have enabled their aggressive naturalisation have to be disabled. If not, any restoration & reconstruction can quickly fail with a return to weedy understorey (again).

- We know from research that C4 perennial grasses have specialised adaptive characteristics to handle heat stress and with them, we can continue to add guaranteed persistence & resilience to restoration & reconstruction. C4s are commonly called warm to hot season active grasses. 20 genera and 131 species are recorded across the Southern Mt Lofty Ranges.

We are continually studying recent ground-breaking scientific research into habitat reconstruction of open woodlands and the implications for our methodologies, establishing processes that ensure that the research findings/criteria are followed.

Strategic Actions

Innovation	We are utilising our proven innovative sowing equipment for restoration, rehabilitation and reconstruction, and further innovating large scale equipment for the future.
Education	We are raising awareness of the diversity and complexity of ground layer vegetation communities and their importance in ecosystem restoration.
Experience	We are prioritising current evidence-based methods of site preparation to give us an adaptive edge in an ever-changing climate to maximise the germination and establishment of sown ecosystems.
Cooperation	We are establishing working relationships with relevant authorities utilising fire as a land management tool, including First Nations Peoples, CFS, DEW, NVC, Forestry SA, Local Government and SA Water.
Expansion	We are expanding and developing existing Seed Production Areas (SPAs) as well as seeking new long-term SPA contracts to work towards our objective of 150,000 hectares of habitat restoration in the AMLR to halt the loss of species.
Growth	We are pro-active in seeking talented individuals to help grow our specialist team.

Meet the Staff and Board

Chief Executive Officer

Andrew Randell Fairney

Restoration Coordinator

Caleb Lilley

Restoration Trainee

D'Arcy Weaver

Various Casual Staff Members

Chairman of the Board

Robert Myers OAM

Treasurer

David Rowland

Secretary of the Board

Tracy Kramer

Board Member

Joan Gibbs

Board Member

Helen Grey-Smith

Board Member

Greg Johns

Appendices

Appendix 1: Map of our "Backyard Island", the AMLR

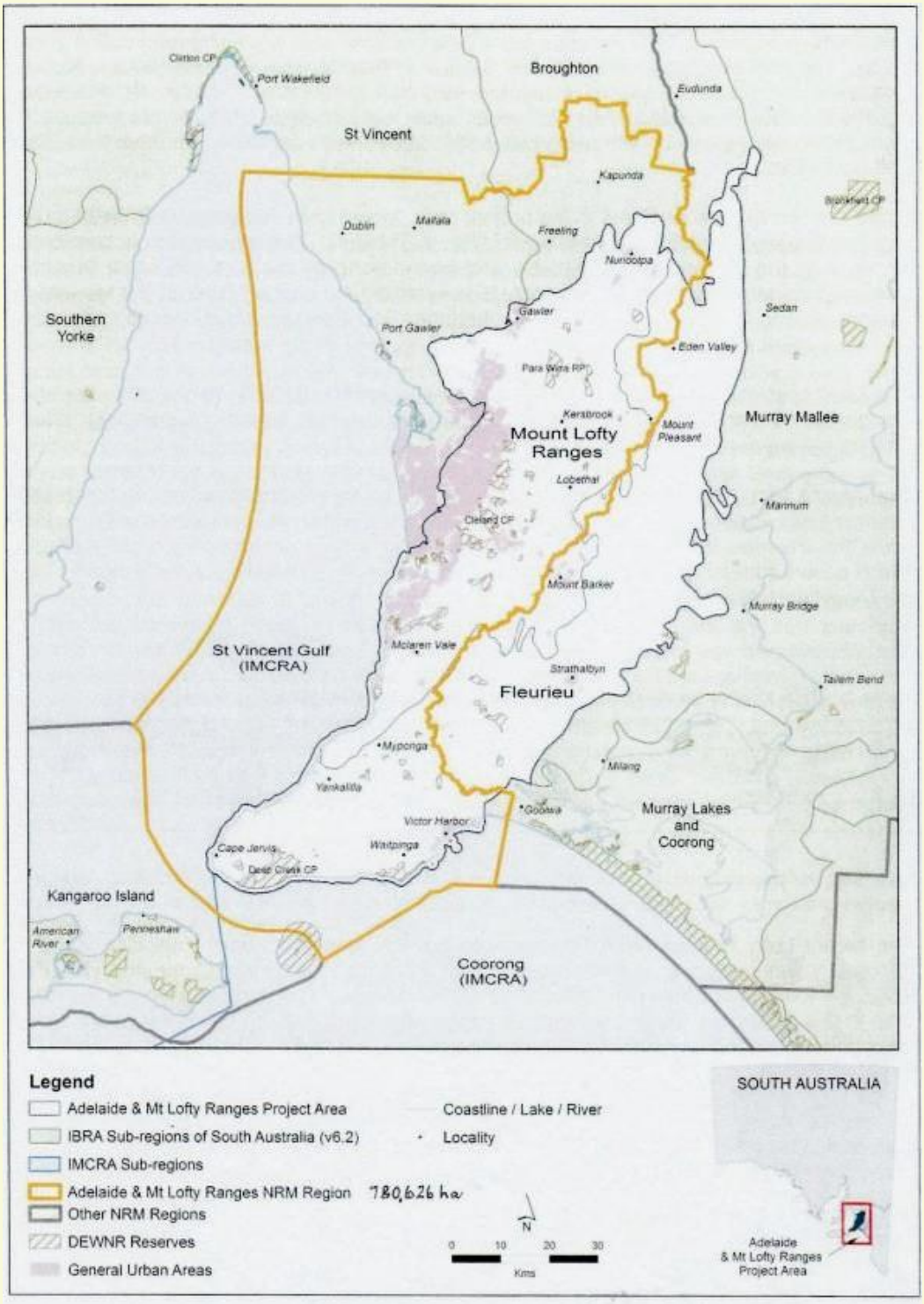


Fig. 1. Map showing location of IBRA subregions and IMCRA regions within the project area. The Adelaide and Mount Lofty Ranges NRM regional boundary is shown, along with the surrounding two IMCRA regions and other IBRA subregions.

Appendix 2: Descriptions of Broad Vegetation Groups

Table 8. Descriptions of Broad Vegetation Groups

BVG	Description	Area and distribution*
Grassland	A native grassland is dominated by native grasses and herbs, with few or no trees. All grasslands in the AMLR are tussock grasslands, having discrete clumps or tussocks of grasses, herbs or sedges.	5%. Located on plains either side of the spine of the AMLR.
Grassy Woodland	Grassy woodlands are woodlands with an understorey dominated by grasses, herbaceous species (e.g. daisies, lilies) and sedges, a scattered shrub layer and a discontinuous tree layer. The over-storey is typically dominated by eucalypts.	37%. Widespread. Wide arc either side of spine of AMLR, and on good soils in ranges.
Heathy Woodland	Similar to heathy open forest, heathy woodland has a dense understorey and mid-storey of a variety of low small-leaved (sclerophyllous) shrubs. These layers have high structural diversity, but contain fewer species than grassy woodlands.	15%. Widespread. Spine of AMLR, Fleurieu Peninsula
Heathy Open Forest	Heathy open forest has a canopy dominated by eucalypts, and a dense understorey comprising many species of low shrubs, generally with small sclerophyllous hard leaves.	7%. High-rainfall areas, central spine of AMLR
Shrubland	Shrubland is vegetation with an open to very dense layer of shrubs up to 2 m in height, with few or no trees. Shrubland types in the AMLR include coastal chenopod shrublands, low-rainfall open plains shrublands, and high-rainfall sclerophyllous shrublands.	2%. Restricted. Northern Adelaide Coastline, Northern Adelaide Plains, Fleurieu Peninsula.
Mallee	Mallee is a term used to describe vegetation with low, characteristically multi-stemmed trees. Mallee may have a grassy or shrubby understorey, or a mixture of both. The type of understorey is dependent upon soil and rainfall patterns.	2%. Peripheral. Northern and eastern boundaries of region. Some coastal.
Riparian	Riparian vegetation is vegetation found along watercourses and on flood plains. Riparian zones represent transition areas between land and water. The natural vegetation of these areas usually reflects the better soils and moist conditions found in the lower parts of the landscape.	15%. Widespread. Restricted to riparian zones.
Wetland	A number of wetland types are found in the AMLR, including freshwater wetlands especially in the lower Fleurieu Peninsula, and seasonal wetlands of the Adelaide Plains. Freshwater wetland vegetation in the AMLR is shrub-dominated and typically very dense. Note that estuarine creeks particularly of the south coast are considered under 'Coastal'; red gum wetlands along creeks featuring waterholes with fringing reeds are considered under 'Riparian'.	2%. Restricted. Primarily Fleurieu Peninsula and Adelaide Plains.
Coastal	Coastal vegetation is vegetation that is subject to the influences of coastal environments.	<4%. Restricted. Narrow coastal margin.

Source: Adapted from the Draft AMLR Biodiversity Strategy.

*Area as a percentage of total remnant vegetation. Note, this figure should be treated with care. Mapping of grassy ecosystems is particularly problematic.

Appendix 3: Threat Assessment/ ecological communities

Table 13. Threat assessment of Broad Vegetation Groups with associated threatened ecological communities

	Threats & rating summary*			State threatened ecological communities (as per DEH, 2005)[8]	AMLR RRP priority
	Very High	High	Medium		
Grassy Woodland	1	3,4,5	2,9,13,14,15	Banksia marginata Grassy Low Woodland Eucalyptus microcarpa Grassy Low Woodland Eucalyptus odorata +/- E. leucoxylon Grassy Low Woodland Callitris preissii +/- Eucalyptus leucoxylon Grassy Low Woodland Allocasuarina verticillata Grassy Low Woodland Eucalyptus leucoxylon ssp. pruinosa +/- E. odorata Grassy Low Woodland Eucalyptus porosa Woodland	Very High Very High Very High High Medium Medium Concern
Wetland	6	1,2,3	4,5,8,12,13,18	Freshwater wetlands e.g. Triglochin procerum Herbland Leptospermum lanigerum Closed Shrubland Melaleuca squamea +/- Leptospermum continentale Closed Shrubland Gahnia filum Sedgeland	Very High Very High Very High High
Riparian	1,6	2,3,19	7,8,10,12,13,14,19	Eucalyptus dalrympleana ssp. dalrympleana Open Forest Eucalyptus ovata +/- E. viminalis ssp. cygnetensis +/- E. camaldulensis var. camaldulensis Low Woodland Eucalyptus viminalis ssp. cygnetensis and/or E. viminalis ssp. viminalis Woodland	Very High High Medium +
Grassland	1	3,4	2,5,8,9,15	Lomandra effusa Tussock Grassland Themeda triandra +/- Danthonia spp. Tussock Grassland	Very High Very High
Healthy Woodland		1,5	2,3,4,6,9,12,14,16	Eucalyptus fasciculosa +/- E. leucoxylon Healthy Woodland	High
Coastal	1,2	4,7,10,11	3,5,6,9,14,15,17		
Shrubland		2	3,4,17	Melaleuca halmaturorum Shrubland/ Low Open Forest	Concern
Mallee		1,7	3,4,5,10,11,		
Healthy O. Forest		1,2	3,4,5,9,12,16		

1: Weed invasion
2: Drought, climate change, severe weather
3: Grazing & disturbance by stock
4: Inappropriate fire regimes
5: Grazing & disturbance by kangaroos
6: Water management & use
7: Grazing & disturbance by rabbits
8: Incompatible/exotic management
9: Firewood & rock removal
10: Residential & commercial development
11: Recreational activities & site disturbance
12: Grazing & disturbance by deer & goats
13: Agriculture intensification
14: Problematic native species (other)
15: Pollution & Poisoning (chemical & solid waste)
16: Disease or insect damage (Phytophthora)
17: Fire management activities
18: Predation & competition by introduced fish
19: Removal of snags

*Note: excluded threats rated 'low'. See Appendices Part A for prioritisation methodology.