Strategic Plan
for the Eyre Peninsula Natural Resources Management Region - 2017-2027
Southern Eyre comprises a land area of around 6,500 square kilometres, along with a large marine area. The southern boundary extends east from Spencer Gulf to the Southern Ocean, while the northern boundary extends along the agricultural plains north of Cummins.

Quick stats

**Population:**
Approximately 23,500

**Major towns (population):**
Port Lincoln (16,000)
Tumby Bay (1,474)
Cummins (719)
Coffin Bay (615)

**Traditional Owners:**
Barngarla
Nauo nations

**Local Governments:**
Port Lincoln City Council
District Council of Lower Eyre Peninsula
District Council of Tumby Bay

**Land Area:**
Approximately 6,500 square kilometres

**Main land uses (% of land area):**
Cropping and grazing (63%)
Conservation (34%)

**Main industries:**
Fishing
Aquaculture
Agriculture
retail trade
health and community service
tourism
construction
mining

**Annual Rainfall:**
340 – 560 mm

**Highest elevation:**
Marble Range (436 metres AHD)

**Coastline length:**
710 kilometres (excludes islands)

**Number of Islands:**
113
What's valued in Southern Eyre

The Southern Eyre community is intrinsically linked to the natural environment with its identity ingrained in the “great outdoors”. Many people have their own favourite spot where they go to unwind and feel a sense of place. For some it is their own patch, for others it is a secluded beach or an adventure in the bush.

The coast is incredibly important to the community. Many people remember playing and exploring around the scenic shores and bays during their childhood. The coast is also valued for its Aboriginal heritage and there are numerous sites of Aboriginal cultural heritage including fish traps and middens.

Coffin Bay and Lincoln National Parks are important and accessible destinations for locals and tourists to enjoy camping, 4WD adventures and walking. The pristine environment at Memory Cove and Coffin Bay’s remoteness and wildness provide a sense of adventure and place.

“Sir Joseph Banks Group are magic parts of the world. They have an abundance of marine and birdlife and are a wonderful place to stop and enjoy with friends”

Life on Southern Eyre is also about the sea as it is where people work and play. Tuna, prawns, abalone, rock lobster and mussels are exported around the world from the waters of Southern Eyre. Recreational fishing is a way of life for many locals. Surfing, diving, yachting and paddle boarding are other popular recreational activities. The sea entices many to explaw, and the nearby islands are particular attractions.

Water is an extremely precious yet scarce resource in Southern Eyre. The Uley South groundwater basin is valued for its ability to sustain land use and productivity for the region’s towns and industries as well as for their ability to support freshwater soaks and wetlands.

Farming provides a strong connection to the land, and some landholders of Southern Eyre are now 3rd, 4th or 5th generation farmers. Many farmers identify with being a caretaker of the land and while the productive side of farming is vital, farmers also recognise the value of the bush.

Integral to all these values are the people, with connections and the friendliness of small country towns particularly cherished. The community have a long history of working together and they believe “community is the key”. Many are aware that natural resources underpin their existence and that it is a collective responsibility to manage them.

“I love the farming community as they’re easy to work with and very practical”
Southern Eyre includes a coastline of 710 kilometres and a land area of approximately 6,500 square kilometres. There are 113 islands within the subregion’s marine areas of the Southern Ocean and the Spencer Gulf.

Southern Eyre experiences a Mediterranean climate with cool moist winters and warm to hot dry summers. Summer rainfall is similar across the subregion, while winter rainfall is almost double in southern inland areas such as Big Swamp and Wanilla Forest Reserve, compared to the coast. Northern Eyre includes mallee woodland dominated by Coastal White Mallee (E. diversifolia) and between Lake Malata and Lake Greenly, native vegetation is the subregion’s highest point of 436 m. North of the Range the Marble Range extends along the west coast encompassing sandy soils cover limestone.

Soil type largely influences land use in Southern Eyre, where shallow soil over calcrite and deep sands between Coffin Bay and Port Lincoln is predominately used for conservation or SA Water reserve. Cropping is undertaken on ironstone soils and hard red-brown loam over clay ( duplex) soils, which are present throughout the centre of the subregion. Ironstone soils have a higher risk of soil acidification as they are inherently acidic, while deeper soils over clay have a lower risk of acidification yet are at risk of soil structure decline. Dryland salinity is associated with watercourses and floodplains of the subregion.

The landscape of the southern east coast of Southern Eyre is dominated by the Koppio Hills which extend between Port Lincoln and Tumby Bay. A large proportion of native vegetation in this area has been cleared for cropping however there are numerous patches of low open woodland dominated by Sugar Gum (Eucalyptus cladocephala). Along the numerous watercourses and swamp areas, sedges and rushes are common. On the Jessieu Peninsula south of Port Lincoln, mallee woodland is dominated by Coastal White Mallee (E. diversifolia) or Port Lincoln Mallee (E. conglobata). This area although subject to disturbances since European settlement, including fire and grazing, is now protected within the Lincoln National Park.

Across the southern part of Eyre Peninsula between Port Lincoln and Coffin Bay, extensive dune systems, wetlands and lagoons are vegetated with low mixed shrubland dominated by Coast Beard-heath (Leucopogon parviflorus). Inland, Coastal White Mallee (E. diversifolia) is widespread, growing across undulating landscapes where sandy soils cover limestone.

The Marble Range extends along the west coast encompassing the subregion’s highest point of 436 m. North of the Range and between Lake Malata and Lake Greenly, native vegetation includes mallee woodland dominated by Coastal White Mallee (E. diversifolia) or Mallee Box (E. porosa). Across the inland part of Southern Eyre, extensive clearing for cropping has occurred. Mallee woodland within road reserves supports the only native vegetation across much of this area.

"Thistle Island has diverse landscapes with amazing scenery and a wide variety of plants and animals that are no longer abundant on the mainland." 

Southern Eyre’s coastal landscapes are diverse, featuring sandy beaches, limestone cliffs up to 100 metres high, rocky headlands and undulating sand dunes particularly around Coffin Bay. There are 113 offshore islands in the subregion including Thistle Island, Wedge Island, the Sir Joseph Banks Group and Greenly Island. Offshore habitats include seagrass meadows, sandy seafloors and reefs, where up-wellings of nutrient-rich marine waters support commercial fish species and marine biodiversity. The Sir Joseph Banks Group, Gambier Islands Group, Thorny Passage and Neptune Islands Marine Parks protect marine biodiversity.

The Tod River is the Eyre Peninsula’s only permanent watercourse, discharging to Spencer Gulf near Louth Bay. Smaller creeks traverse the subregion, primarily north of the Flinders Highway. These creeks generally do not flow in warmer months due to low summer rainfall, high evaporation rates, and the small and steep nature of creek catchments.

Potable water is supplied to Southern Eyre from the groundwater lenses within the Southern Basins Prescribed Wells Area (PWA). These lenses are predominantly recharged via rainfall, and some recharge from surface water run-off from the Little Swamp and Big Swamp catchments. The Uley South Basin provides 97% of water extracted from the PWA. The associated Water Allocation Plan provides a framework for the protection and sustainable use of these groundwater resources.

There are over 700 wetlands identified in the subregion, providing important habitats for local and migratory birds. Wetland condition varies from moderate to degraded. Major wetlands include Lake Malata, Lake Greenly, Big Swamp, Coffin Bay Coastal Wetlands, Lake Newland, Pillie Lake, Sleaford Mere and the Tod River Wetlands.

"Lincoln National Park is an easy getaway where there’s always a secluded place to camp with my family... it’s where I go to retreat back to nature."

Just over 30% of the subregion’s land area contains remnant native vegetation, and 40% of this on Government land. 28,000 ha of native vegetation is protected through Heritage Agreements and the remaining 47% of remnant native vegetation is on private land or road reserves. Ten percent of the subregion’s land area is within National Parks and Wildlife Reserves, including the Lincoln and Coffin Bay National Parks, and Sleaford Mere Conservation Park.

Southern Eyre has a high diversity of flora and fauna. Around 70% of flora and fauna species of conservation significance occurring across Eyre Peninsula are found within the Southern Eyre subregion. The subregion contains a high variety of habitats, high species richness and high number of endemic plants. As a result much of Southern Eyre has been identified as the highest priority conservation area. Iconic species and communities of conservation significance are show in Table 5.
Livelihoods

Agriculture comprises 63% of the land area of Southern Eyre. Cropping is the major agricultural land use, with crops including wheat, barley, oats, canola and pulses grown in rotation. Southern Eyre produces about 25% of the Eyre Peninsula’s wheat crop, and nearly 50% of the barley crop. This equates to about 10% of South Australia’s total production for each commodity. Grain storage and bulk handling facilities support exports from the Port Lincoln deep water port. Transport of grain to the port relies on the rail lines of Port Lincoln – Thevenard and Cummins-Kimba and the Tod, Lincoln and Flinders highways.

Southern Eyre’s seafood industries are major employers, and their produce is recognised internationally for its quality. Wild catches from the Spencer Gulf and the Southern Ocean include prawns, abalone, giant crab, rock lobster, sardines, and marine scale fish. Spencer Gulf also supports a range of aquaculture productions including southern bluefin tuna, kingfish, abalone and sub-tidal mussels. Intertidal oysters are a key industry for Coffin Bay and land based abalone are farmed at Point Boston.

Southern Eyre’s tourism industry centres on the subregion’s natural resources. Tourists from across Australia and the world are attracted to activities including diving with sharks, sea lions and tuna, fishing boat charters, national park adventures, beach visits and enjoying the fresh seafood. Coffin Bay is a popular destination and the town’s population swells over summer months.

Mining employs two percent of the subregion’s workforce both land and enjoy the fresh seafood. Coffin Bay is a popular destination and the town’s population swells over summer months.

Mining employs two percent of the subregion’s workforce both land and with a number of residents working at mines in other areas of Australia. Mining was first undertaken in Southern Eyre as early as 1849 when copper was produced from several small mines near Tumby Bay. Graphite mining has recently recommenced at the Uley graphite mine and a number of small deposits. Graphite mining has recently recommenced at the Uley graphite mine and a number of small mines near Tumby Bay. Southern Eyre has seen a population growth of 5% from 2006 to 2011, with the highest growth in the Lower Eyre Peninsula district council area which includes the areas fringing Port Lincoln and the townships of Tumby Bay, Cummins and Coffin Bay; while the remaining 4,000 live in rural areas.

Southern Eyre is the traditional land of the Barnigarla and Nauo Aboriginal peoples. Around 4% of people in Southern Eyre identify as having Aboriginal and Torres Strait heritage, and this proportion is slightly higher within Port Lincoln. A number of registered Aboriginal Heritage sites exist along the Southern Eyre coast including near Coffin Bay, Port Lincoln and Louth Bay, as well as inland at Wanilla. In 2015, the Barnigarla people were recognised as the traditional owners of the eastern half of Southern Eyre including the offshore islands of the Sir Joseph Banks Group. The Nauo people have an active Native Title Claim across the western half of the subregion and recognition is yet to be determined.

Southern Eyre is home to approximately 21,000 people, more than 65% of whom live in Port Lincoln. Collectively around 2,800 people live in the townships of Tumby Bay, Cummins and Coffin Bay; while the remaining 4,000 live in rural areas. Coastal towns such as Coffin Bay experience significant visitor population increases during the summer.

Local Governments within the subregion are the City of Port Lincoln, the District Council of Lower Eyre Peninsula, and the District Council of Tumby Bay. Southern Eyre has seen a population growth of 5% from 2006 to 2011, with the highest growth in the Lower Eyre Peninsula council area which includes the areas fringing Port Lincoln and the Coffin Bay township. This growth is projected to continue to 2026.

The age distribution of Southern Eyre mirrors that of the broader Eyre Peninsula NRM Region, where just over 50% are aged between 25 and 64 years, and approximately 15% are 65 years and over. Approximately 33% are under 25 years, of which 15% are aged between 5 to 14 years old.

Sport is a focal point for community interactions, and football, netball, hockey, tennis and cricket are popular. Attending church is another major point of interaction. Participating in community groups is a further point of interaction, with one in three people volunteering regularly.

| Fauna Flora Vegetation communities |
|-----------------------------------|---------------------------------|
| **Fauna** | **Flora** | **Vegetation communities** |
| Brush-tailed Bettong (Bettongia penicillata ogilbyi) | Jumping-jack Wattle (Acacia enterocarpa) | Drooping Sheoak (Allocasuarina verticillata) grassy low woodland |
| Eyre Peninsula Southern Emu wren (Stipiturus malachurus parimeda) | Fat-leaved Wattle (Acacia pinguifolia), Eyre Peninsula Blue Gum (Eucalyptus petiolaris) | Mallee communities of Broad-leaf box / Peppermint box / White mallee (Eucalyptus behriana +/- E. odorata +/- E. dumosa) |
| Yellow-tailed Black Cockatoo (Calyptrorhynchus funereus) | Whibley Wattle (Acacia whibleyana) | Temperate coastal saltmarsh (Suaeda australis, Sarcocornia quinqueflora, Frankenia pauciflora, Tecticornia sp., Puccinellia stricta, Wilsonia humilis, Diphyllum crassifolium, Atriplex semibaccata, Triglochin stiata) |
| Hooded Plover (Thinornis rubricollis rubricollis) | Silver Daisy-bush (Olearia pannosa ssp. Pannosa) | |
| Australian Sea Lion (Neophoca cinerea), | Silver Candles (Pleuropappus phyllocalymmeus) | |
| Southern Right Whale (Eubalaena australis) | Seagrass (Thalassia testudinum, Syringodium filiforme, Halodule wrightii, Halophila johnsonii, Halophila decipiens, Halophila engelmanni, Ruppia maritima) | |
| Leafy Sea Dragon (Phycodurus eques) | | |

*Table 6 - Selected fauna, flora and vegetation communities of conservation significance*
Managing the water cycle holistically is integral for Southern Eyre and the Region, and there are three key management aspects including:

- **Water sharing between consumptive use and environment**, which requires the water demands of the Region’s community and industry to be balanced with the needs of groundwater dependent ecosystems. This balance is annually adjusted based on available water levels, and the method for this is contained in the Water Allocation Plan for Southern Basins and Musgrave Prescribed Wells Areas.

- **Water security** as the Region’s limited available potable water supply may be challenged by future drought, or industry or population growth. Annual monitoring of water security situation is undertaken via the Eyre Peninsula Demand and Supply Statement, however ongoing efforts are required by households, farms and businesses to adopt water efficiency measures and implement alternative water supply. These efforts will delay construction of expensive new water supply infrastructure.

- **Reduced water quality impacts** from urban and agricultural land uses on riparian, wetland and marine habitats. Agricultural land requires a whole of catchment management approach that reduces nutrient and sediment loads to Coffin Bay and Spencer Gulf, while reducing the diversity of pollutants from urban land requires a water sensitive urban design approach to stormwater management.
**Systems understanding**

Southern Eyre is a complex system of connections and interactions between people, industries and natural resources. These connections and interactions mean that when one feature is impacted, flow on effects will be experienced by other features in the system. Developing this understanding can help identify the factors that make the system resilient or vulnerable to change. The Southern Eyre system is conceptually depicted in Figure 17, where the arrows represent the connections between the system’s features.

Key features of the system include water resources, agriculture, seafood industries, tourism and the city of Port Lincoln. The city provides the hub of the subregion’s services, transport, employment, and community interactions. A number of connections in the system are integral to the viability of the Southern Eyre. The connection of water resources to the town and agriculture, is critical for maintaining economic prosperity and social wellbeing of the subregion and region. Managing the water cycle is a critical challenge for Southern Eyre (see Figure 18). An equally important part of this water cycle is the influence of land based activities of agriculture and urban development on coast and marine biodiversity, aquaculture and fishing. These relationships reflects the impacts of land based pollution on water quality for marine biodiversity and seafood industries.

**Key NRM challenges and opportunities**

A range of opportunities were identified by the community and stakeholders to address the key challenges facing natural resources in the Southern Eyre subregion. Table 7 identifies key NRM challenges and opportunities to address them.

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<tr>
<th>Challenges</th>
<th>Opportunities to address challenges</th>
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<tbody>
<tr>
<td><strong>Agricultural viability</strong></td>
<td>A1. Support extension officers and agronomists to facilitate practice change and promote sustainable agriculture practices, this includes information sharing with farming groups and agricultural bureaus</td>
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<td>A3. Promote practices that prepare landholders to be drought ready, and promote practices that build soil health, and address the causes of soil acidity, soil erosion, dryland salinity and soil structure decline</td>
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<td>A8. Support the development and utilisations of water efficiency measures and alternative water supply infrastructure including sheeted catchments</td>
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<td>A9. Partner with agricultural industry to reduce water quality impacts and manage dryland salinity</td>
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<td>D6. Promote the adoption of restorative farming practices that build soil life and diversity, and maximise ecosystem services</td>
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<td><strong>Declining biodiversity</strong></td>
<td>D1. Protect and restore coast and marine habitats, particularly for priority areas identified in the Coastal Action Plan and Marine Parks’ plans</td>
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<td>D2. Protect and restore remnant terrestrial habitats and establish biodiversity corridors that link habitats. Priority areas include Eyre Hills</td>
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<td>D3. Facilitate whole of catchment management planning and supporting works to restore riparian and wetland ecosystems, and reduce water quality impacts</td>
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<td>D4. Develop and implement integrated pest management strategies that address the impacts and causes of pest persistence or incursion. Particular attention is required for overabundant herbivores, feral predators, woody weeds and new pest incursions such as buffel grass</td>
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<td>D5. Develop and implement strategies and plans to protect threatened species and ecological communities, includes implementing threatened species recovery plans</td>
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<td>C1. Monitor and evaluate natural resources management actions, and their effect on natural resources’ condition and trends</td>
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<td>C3. Increase participation in citizen science initiatives that assist understand trend and condition of natural resources</td>
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<td><strong>Coast and marine degradation</strong></td>
<td>B1. Support local and regional partners implement the Off-Road Vehicle Strategy, including investigations for designating areas for biodiversity protection and recreational use</td>
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<td>B2. Facilitate the development of tourism infrastructure, facilities, information and signage to enable sustainable access and use of the coast and parks</td>
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<td>B3. Support on-ground works to protect and enhance coastal and park condition including track rationalization, fencing, erosion control, access tracks, revegetation and pest control</td>
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<td>B4. Raise awareness about coast and marine conservation including education about human impacts</td>
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<td></td>
<td>A4. Partner with seafood industry on mutually beneficial projects including water quality monitoring and works, habitat protection, and marine debris reduction and clean-up</td>
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<td>D7. Partner with Local Government to undertake urban stormwater planning and implementation focusing on water sensitive urban design that reduces water quality impacts</td>
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<td><strong>Aboriginal involvement in NRM</strong></td>
<td>F2. Support native title groups in co-managing public land</td>
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<td>F3. Support traditional owners, Recognised Aboriginal Representative Bodies, Aboriginal Regional Authorities and Aboriginal communities manage natural resources and record sites of Aboriginal cultural significance</td>
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<td>F4. Provide training and career pathways into NRM related employment</td>
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<td>F5. Support awareness raising activities about Aboriginal cultural knowledge and law</td>
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*Table 7 – Key NRM Challenges and opportunities for the Southern Eyre subregion*
References

51 Davenport D & Masters B (2015), Land Systems and associated land management issues of Eyre Peninsula, Rural Solutions SA.

52 Davenport D & Masters B (2015), Land Systems and associated land management issues of Eyre Peninsula, Rural Solutions SA.


55 Department of Environment, Water and Natural Resources (2014) Biological Database of South Australia Flora and Fauna Records.


