

Citizen Science Strategy for Eyre Peninsula



Government of South Australia
Eyre Peninsula Natural Resources
Management Board



Natural Resources
Eyre Peninsula





What is citizen science?

Citizen science is the practice of professional researchers engaging with the public to collect or analyse data within a cooperative framework of research and education. It is a rapidly evolving discipline and presents a range of unique opportunities to answer key scientific questions while engaging directly with the community.

Previously, most research projects relied on skilled scientists to design, implement and carry out this work. Such projects are often costly, short-term, ask specific questions and are restricted to relatively small areas.

In contrast, citizen science may provide opportunities for data collection over a larger spatial scale, increased community engagement and at a reduced cost compared with traditional research methods.



Citizen science on Eyre Peninsula

Active participation in natural resources management is a key goal identified in the Eyre Peninsula's Regional NRM Plan. Natural Resources Eyre Peninsula (NREP) supports citizen science as an innovative and exciting way of engaging the community while increasing our knowledge of Eyre Peninsula's natural environments.

To date, NREP citizen science projects have often been developed opportunistically. While they are often successful in achieving research and engagement outcomes, additional time must be given to planning and development of future projects to ensure they meet the objectives of the goals outlined in the Regional NRM Plan. This strategy is designed as a tool that will guide the development of future citizen science initiatives.

Natural Resources Eyre Peninsula aims to actively support and promote citizen science initiatives that align with the region's goals. Increased participation in citizen science initiatives will help us understand the trend and condition of our natural resources. Specifically:

Goal 2

Healthy and resilient land, sea and water ecosystems

- Improving understanding and conservation of biodiversity and ecosystems in a changing climate
 - Increase participation in citizen science initiatives that assist in understanding trend and condition of natural resources

Goal 3

Active participation in natural resource management

- Supporting communities and individuals to monitor and conserve natural resources in a changing climate

Partners

Natural Resources Eyre Peninsula partners with a number of organisations to deliver a range of citizen science projects. These include:





Citizen Science Goals

- 1 Support community participation in scientific investigations through citizen science initiatives
- 2 Undertake citizen science initiatives that build skills and knowledge of community to assist with resource condition monitoring, thereby improving our understanding and conservation of biodiversity and ecosystems in a changing climate.

Actions

- 1 Build capacity within NREP to develop, support and promote citizen science initiatives.
- 2 Facilitate community involvement in citizen science projects that align with and contribute to regional priorities, including the Biodiversity Monitoring Program for Eyre Peninsula.
- 3 Educate and engage communities and other key stakeholders in the benefits of citizen science.
- 4 Partner with local, national and international citizen science projects to achieve mutual benefits.
- 5 Develop a standard approach to citizen science across our region that align with Department for Environment and Water (DEW's) protocols and policies.
- 6 Provide NREP staff with a framework for the development of new citizen science projects.

Outcomes

- 1 The number of citizen science projects supported by NREP has increased by 2022.
- 2 The number of community members participating in citizen science projects on Eyre Peninsula has increased by 2022.
- 3 Data collected from citizen science projects has been submitted to appropriate biological databases, aligning with DEW's data management framework.
- 4 Data is used to inform management decisions to improve the understanding and conservation of biodiversity and ecosystems on Eyre Peninsula.

Current projects

Natural Resources Eyre Peninsula supports a number of successful citizen science projects within our region. These projects have focused on a range of topics and species including birds, mammals, reptiles and impacts of climate change.

EP Birds

The Eyre Peninsula Bird Monitoring Program is a large-scale citizen science program. Community members undertake bird identification training which provides them with the skills and knowledge to undertake bird surveys across Eyre Peninsula.

Sightings are entered into an online data portal (www.epbirds.com.au) and the data stored in the Atlas of Living Australia.

EP Goannas

The EP Goannas project is focused on identifying the distribution of the endangered Rosenberg's goanna (*Varanus rosenbergii*) across southern Eyre Peninsula. The project targets visitors to the Coffin Bay and Lincoln National Parks, with promotional signage placed at the entrance to each park.

Participants record the location of their sighting at www.epgoannas.com.au, along with any photographs and a range of other information relating to the goanna sighting.

EP Koalas

Eyre Peninsula's koala population started from just six individuals that were introduced to a fenced enclosure in the native bushland of Mikkira Station (south of Port Lincoln) in 1969. Since then, koalas have spread across southern Eyre Peninsula. However, very little data exists on the extent of their distribution.

The EP Koalas project allows community members to record koala sightings at www.epkoalas.com.au. This data will be used to assist with the management of koalas on Eyre Peninsula.

EP King Tides

Eyre Peninsula includes over 2300km of coastline, much of which may be vulnerable to damage through coastal inundation association with king tides and storm events.

This citizen science project provides the community with an opportunity to capture images of king tide events at www.kingtides.com.au. These images are then stored in an online library, providing a database of historic king tide events and their impacts on coastal environments.





Shorebird 2020

Migratory shorebirds are declining across the world due to the loss of mudflats, beaches and inland wetlands, and are threatened by sea level rise, hunting and disturbance in roosting areas particularly through the East-Asian Australasian Flyway migratory route.

Birdlife Australia's Shorebird 2020 Program monitors the population trends of shorebirds in Australia and the data informs conservation actions in Australia and the flyway. Shorebird surveys are undertaken by community members across Eyre Peninsula, contributing to this national program.

Malleefowl

Malleefowl (*Leipoa ocellata*) come from an ancient lineage of early birds millions of years old. Malleefowl populations have declined dramatically over the past century, and are now an endangered species in South Australia. Malleefowl continue to survive on the Eyre Peninsula in patches of habitat, both on private land and in National Parks.

Monitoring grids are surveyed near Lock, Cowell, Munyaroo Conservation Park, Pinkawillinie and Hincks Conservation Reserves. Community members can get involved in annual monitoring of these sites through the National Malleefowl Recovery Team.

FrogWatch SA

FrogWatch SA is a community driven program to monitor the distribution of frogs across South Australia. Frogs are well known for their sensitivity to pollution and habitat degradation, making them an ideal indicator species in assessing the health of wetland ecosystems.

FrogWatch SA allows participants to capture frog calls via an app. These calls are then uploaded to a website, where they are verified, before being uploaded to the Atlas of Living Australia.



Building community capacity

Building the capacity of our community to participate in citizen science projects is a key goal of the Citizen Science Strategy for Eyre Peninsula.

The level of training and skill development required to participate varies greatly with each project. Species distribution projects such as EP Koalas and EP Goannas provide users with some basic information on species identification prior to the submission of a sighting. On the other hand, participants in our EP Birds program complete a comprehensive training course before being accredited to undertake targeted bird surveys.

Natural Resources Eyre Peninsula have aided the development of multiple citizen science resources including *Coastal Fauna and Habitats of the Western Eyre Peninsula* and *Native Vegetation of the Eyre Peninsula, South Australia*.

Eyre Peninsula's citizen science community are also provided with an opportunity to collaborate with other like-minded individuals through a biennial Nature of Eyre Peninsula conference. The inaugural event was held in 2017 and attracted over 160 participants from across the region. Bringing together speakers from a range of disciplines, the event also provides participants with the opportunity to participate in workshops and BioBlitz activities.

Data management

A critical component of successful citizen science projects is in the community's ability to access and share data collected. Natural Resources Eyre Peninsula manage data in line with DEW's Managing Environmental Knowledge framework, ensuring data are aligned with DEW's Information Management Principles of being governed, authoritative, compliant and discoverable.

Resources such as Atlas of Living Australia, Biological Databases of South Australia, NatureMaps and Flickr are all used to store and present citizen science data and information.

Information and results will be communicated with participants and the wider community in line with the Communications and Engagement Plan for Natural Resources Eyre Peninsula (2017).

Did you know that koalas were introduced to Eyre Peninsula when six animals were brought here in 1969? Since then the population has established itself across lower Eyre Peninsula and provide a range of opportunities that benefit the local tourism industry. But how far have they spread?

The EP Koalas Citizen Science project is a great way for the community to provide vital intelligence on where koalas had been sighted across EP. Results indicated they were found across an area of approximately 1500 km² in habitats that include river red gum, sugar gum and the nationally endangered Eyre Peninsula blue gum woodland community.

This data was then used to develop a two-year project commencing in 2017 addressing the issues of habitat loss, fragmentation and land management associated with koala habitation.

Specifically, this project aims to:

1. Manage, restore and monitor areas of koala habitat within broad wildlife corridors;
2. Develop and implement options to protect koala habitat on public and private land;
3. Develop standard koala monitoring/habitat assessment protocols.

Without the initial input from citizen scientists, a project of this scale would not have been possible.



For further information please contact

The Natural Resources Eyre Peninsula provides a one-stop service where you can access services and information on National Parks and the management of wildlife, land and water.

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