

PROJECT COORONG

Healthy Coorong, Healthy Basin



Welcome to the October 2020 update for the Healthy Coorong Healthy Basin (HCHB) program. In this edition we highlight some of the recent consultation activities undertaken, in particular around infrastructure and management options for the Coorong.

The HCHB Science team has also been out in the field seeking information to close knowledge gaps and monitor the current health of the Coorong. We look at what they've found and how they managed to adhere to social distancing whilst on a boat!

If you would like more information on the HCHB program or have questions on anything contained in this update please contact the program team at projectcoorong@sa.gov.au

The Coorong, connected waters and surrounding lands have sustained many unique First Nations cultures and economies since time immemorial. The Healthy Coorong, Healthy Basin program acknowledges the range of First Nations rights, interests and obligations for the Coorong and connected waterways and the cultural connections that exist between Ngarrindjeri and First Nations of the South East peoples across the region and seeks to support their equitable engagement.

Aboriginal and Torres Strait Islander readers are advised that the following document may contain images and names of people who have died.



Collaboration

Infrastructure and on-ground works consultation

The HCHB program has undertaken a number of stakeholder and community consultations during June and July 2020. HCHB aims to assess the environmental, social and cultural benefits and potential impacts of a range of long and short term management solutions to improve health of the Coorong. We asked First Nations, the local community and the broader South Australian community to share with us their knowledge and views through a series of surveys, workshops and on-line engagement opportunities.

The HCHB program is looking at the feasibility of a number of **short term** management actions to support important biota (flora and fauna), while longer term solutions are investigated. These **short term** options include localised wetland improvement projects to enhance their role as refuges for water birds, aquatic plant restoration and algae and nutrient management options to help restore the balance of the Coorong. The team has been speaking to the community via a series of online workshops with scientists, engineers, DEW staff and community representatives from the Coorong Partnership.

In July 2020, a site visit on Country was held with First Nations of the South East and Ngarrindjeri representatives to draw on their site expertise and help inform the **short term** options prioritisation process. The Regional Bird Refugia options received supportive written ratings from the Ngarrindjeri Aboriginal Corporation and verbal support from Raukkan and First Nations of the South East.

The HCHB program has also been working with the community to identify **longer term** infrastructure options. Through a survey and online workshops we asked the community which values should become the criteria for deciding which infrastructure options should be put forward for feasibility. The community members who participated determined that:

The most important, indeed essential outcome, is finding the option/s that best contribute to improving the ecology of the South Lagoon as determined by scientific evidence, given water availability and constraints.

In addition, the community members identified a list of other values that the options should support during the decision making process. You can find the full list of values and other information on the consultation on our [website](#). The survey also asked the community to share any new ideas they thought should be considered for longer term infrastructure options. As a result, four more options were added to the list of options under consideration.

Following this, in July 2020, we asked the community to take part in a [YourSAy engagement](#) and tell us which infrastructure options they believed would be most beneficial to the Coorong based on the agreed criteria. To support this process, we developed an options summary which provided detail on the benefits and potential impacts of each option. You can read the guide [here](#).

The recommendations from the community, Coorong Partnership and First Nation consultations will now support DEW's analysis and shortlisting of the options for further feasibility investigations. The decision on which options will go through to the feasibility stage will be announced in the near future. Feasibility investigations will include extensive ecological response modelling, engineering feasibility investigations and ongoing community, landowner and First Nations consultations. Information on how you can get involved in the next phase of this process will be made available on our [website](#) and through future updates.

Coorong Partnership



Hon. Dean Brown AO and Ben Bruce, Executive Director, Water and River Murray, DEW, July site visit, Youngusband Peninsula.

As part of the broader Project Coorong initiative, the Coorong Partnership has been established to provide local communities and groups with the opportunity to help shape the work to be undertaken to restore the health, vitality and visitor experience of the Coorong.

The Partnership has continued to meet via teleconference to comply with COVID-19 requirements and has been actively involved in both the **long term** and **short term** infrastructure consultations.

The Partnership meetings have included discussions with Alexandrina Council on the Sugars Beach Icon Site Project to enhance visitor experience to the Murray Mouth and a presentation from the [South Australian National Parks and Wildlife Service](#) (NPWS) on the Nature Based Tourism Co-Investment Fund.

The Partnership was able to meet in person in July 2020 for a site visit under strict COVID-19 requirements. The Partnership visited [the Coorong National Park](#) and met with NPWS staff to discuss how

National Parks renewal funding has been improving the visitor facilities and experience in the Park. The Partnership noted the opportunities being explored, including through [Friends of the Coorong](#), to enhance multi-day walking opportunities within the Park.

DEW is committed to consulting with the [Coorong Partnership](#) members throughout the HCHB program and thanks the members for their efforts thus far. Find out more about the Coorong Partnership on the [Project Coorong website](#) or email projectcoorong@sa.gov.au

First Nations Partnership

The Coorong is of enormous cultural significance to its First Nations. As a consequence, there is a dedicated project being undertaken to identify what is important to the First Nations of the Coorong through the Ngarrindjeri Aboriginal Corporation and Burrendies Aboriginal Corporation.

In July 2020, the First Nations Partnerships team held a meeting with the South East Aboriginal Focus Group (SEAFG). HCHB project leads attended and presented project updates to the Focus Group. The meeting was held in Kingston South East with limited numbers due to COVID-19 restrictions. Meeting attendees participated in a Welcome to Country and Smoking Ceremony and learnt about the history and importance of the area from Robyn Campbell, who is both a member of the SEAFG and the [Coorong Partnership](#).

The Ngarrindjeri Working Group has been established and comprises the Ngarrindjeri Aboriginal Corporation and broader Ngarrindjeri community. This working group will be an important conduit for the HCHB program going forward and we look forward to working together.

Meetings were also held with both Ngarrindjeri and First Nations of the South East representatives to discuss the short term and long term infrastructure options. Both Ngarrindjeri and First Nations of the South East were able to provide critical input into the proposed options and we thank them for sharing their knowledge and expertise.

Field site visits were also held with Ngarrindjeri and First Nations of the South East to sites including Gemini Basin, Parnka Point and Teringie Wetland to discuss short term management actions. Input from First Nations at this field visit has been used to inform the short term prioritisation process.

Science

Citizen Science



Sylvia Clarke on set at Noonameena.

The HCHB program and the Murraylands and Riverland Landscape Board have collaborated on a project for National Science Week focusing on the “Science and Citizens of the Coorong”

A short film was produced which highlights how local citizens and scientists are working towards a healthy Coorong and explores the way the community can get involved.

Murraylands and Riverland Landscape Board Senior Citizen Science Project Officer Sylvia Clarke said that restoring a healthy Coorong was critical for the environment, First Nations, local communities, the South Australian tourism industry and the overall health of the Murray-Darling Basin.

“We encourage you to listen to the scientists and the community members talk about their passion for the Coorong and their connection to this unique environment” she said.

The film is available to view on the [Project Coorong website](#). We also hope to be able to provide information about the first citizen science ‘on-ground’ activities planned for Spring shortly.

Water Resource Optimisation

Monitoring data is critical for maintaining the ecological character of the Coorong. The majority of the ecological character of the Coorong, and Lakes Alexandrina and Albert Ramsar Wetland is directly determined by the volume, timing and quality of water passing through the site. Data collected needs to reflect these parameters, be spatially representative, and be of adequate quality to enable decision makers to:

- detect change in ecological character (both positive and negative) in response to climate, inflows and environmental flow decisions
- provide timely responses to ecological risks
- make evidence based (and adaptive) site management decisions, including environmental water planning and use, and focused assessment of outcomes of management actions and impacts on ecological character.

The Water Resource Optimisation project is investigating expanding the existing water quality monitoring network in the Coorong. It is also developing a water quality monitoring program, an automated forecasting system and an online data interface. Together, the provision of additional monitoring information and the development of management tools will improve the effectiveness, timeliness and efficiency of water operations and environmental water management decisions.



To date, two technical workshops have been undertaken with a range of internal DEW staff and external stakeholders (including SA Water and the Commonwealth Environmental Water Office) to assess business requirements for the Coorong Automated Forecasting System (CAFS) and the Coorong, Lower Lakes and Murray Mouth Management Action Database (CLLMM MAD). Further development of these management tools will continue following an assessment of their respective functional requirements.

In June 2020, the design for measuring Coorong water quality was finalised, replacing a less intensive program. The new program commenced in July 2020, with water quality samples collected at 3-weekly intervals from 20 key locations. Importantly it will provide data to validate and verify the Coorong’s ecological model. This model will be used by the CAFS management tool to support better ecological outcomes for the Coorong.

State of the Coorong discussion paper

Recently DEW initiated a series of workshops to develop a [State of the Coorong discussion paper](#) which seeks to build a shared understanding of the existing and emerging scientific knowledge of the Southern Coorong. It communicates what we know, where our knowledge gaps are, and ideas for how we might achieve the desired state. It acknowledges community and stakeholder knowledge and aspirations and is not a definitive scientific position, but the starting point for a way forward.

The scientific knowledge and understanding in this paper is drawn from synthesis reports on the hydrodynamics, water quality, primary producers, invertebrates, fish, and waterbirds of the Coorong as well as the outcomes from two workshops of environmental managers and leading scientists held in May 2020. The information describes:

- the current state of the Coorong;
- what happens if we 'do-nothing';
- the desired ecological state of the Coorong; and
- our view on the 'desired state'.

It also includes broad statements on how we might achieve the desired state for discussion. The State of the Coorong discussion paper is a working document and is designed to be updated as the knowledge and research is updated. It provides a useful introduction and rationale for what long-term management options might need to achieve. The intention is for this document to be revisited and revised regularly throughout the life of the program through outcomes from the investigations and through community input.

Trials and Investigations

The Trials and Investigations team has been out and about since March 2020 surveying sediment and water quality as well as collating and reviewing existing data. Key interim findings confirm that the southern Coorong lagoon is hypersaline (high salinity) and hypereutrophic (high in nutrients) and reduced flushing has resulted in prolonged periods of this state. Findings have also confirmed poor sediment quality (sulphide rich sediments) is also widespread with few benthic (living on the bottom) organisms present. All of these factors are negatively impacting on benthic flora and fauna communities.

Important survey work was conducted for macroinvertebrates and fish in February and March 2020. Preliminary analysis of the data has also been undertaken to assist in the development of food web conceptual models for macroinvertebrates and fish and the availability of their dietary requirements. This preliminary analysis of food availability indicates that there is a scarcity of prey items for fish and birds in the South Lagoon.

Studies are underway to consider nutrient removal options at a system scale. Key findings and strategies are being considered and will provide the basis for potential future activities.

Research is also underway to quantify population responses in *Ruppia tuberosa* to system scale changes in environmental conditions. This includes recording the seasonal transitions between life history stages, determining growth rates, overall biomass production and flowering and fruiting frequencies. Data and information from this research will be used to guide management actions including possible infrastructure solutions.

If you have any questions on this update or anything else related to Project Coorong, please contact the project team at projectcoorong@sa.gov.au

The South Australian Government's Healthy Coorong, Healthy Basin Program is jointly funded by the Australian and South Australian governments.



Glenn Hill (Coorong Partnership) and Dr Jonathon Tyler during sediment surveys on the Coorong.

