

# Environmental water for the Murray River

*The Murray River is home and lifeblood to many small, rural Uniting Church communities. Mission and ministry along the river are greatly influenced by the health (or otherwise) of the river. Farmers and retirees, schoolchildren and transient fruit-pickers, and the traditional owners of the land all carefully watch the cycles of the river's life, knowing their own livelihoods are dependent on its wellbeing. The river in good times is seen as a blessing. In bad times, it is a reminder of our brokenness. Heather Hill discusses some of the issues currently facing the River Murray.*



*Swans and cygnets on the River Murray. Photo courtesy of Callie Nickolai.*

The Murray River in South Australia has suffered from declining ecological health for decades. This decline has occurred throughout the Murray-Darling Basin as a result of river regulation through the installation of dams and locks and over-allocation of water.

The changing climate is also altering water availability patterns and increasing impacts on the whole river system. The millennium drought showed Australia the devastating outcome of a lack of water in our rivers.

The frequency and size of medium to high flows in the Murray River has greatly reduced. This means that the floodplain is not watered as often as needed to maintain and enhance the flora and fauna. For example, river red gums, black box and lignum are dying as well as those species that rely on these trees for their survival. Early this century it was recognised that the River Murray's ecological decline could only be reversed by returning water to the river. As a result, "buy back" and water use efficiency schemes were established.

In 2002, the Murray-Darling Basin Commission (now Authority) instigated The Living Murray Program to return 500 gigalitres of water to the River Murray and to build environmental infrastructure to deliver water to small areas of the floodplain. In 2008, in response to further scientific research and the major drought, the Commonwealth and State Governments agreed that additional water was needed to reduce the possibility of irreversible environmental decline in the Murray-Darling Basin. This led to the adoption of the Basin Plan in 2012.

The environmental water currently available for use in the Murray River is making an important contribution to the survival of species, particularly those listed as threatened, such as the southern bell frog and southern pygmy perch. Environmental water has been pumped

into small, unique wetlands that support tiny native fish species, including the Murray Hardyhead – there are only a few sites left where populations of this fish survive in South Australia.

Environmental water has been delivered as a flow pulse in the channel during spring when the water begins to increase in temperature. This has enabled spawning and recruitment of golden and silver perch. There has also been successful delivery of late spring water to the Coorong to ensure that a very important aquatic food plant, *Ruppia sp.*, can flower and fruit and begin to colonise a greater area of the South Lagoon. *Ruppia* provides food and habitat for birds, small fish, invertebrates and zooplankton.

South Australia is the home to the only estuary of the Murray-Darling Basin i.e. the Lower Lakes, Coorong and Murray Mouth. This is a Ramsar site (a site that is recognised on the List of Wetlands of International Importance according to the Ramsar Convention) and recognised as a major world site for migratory birds. It is essential that this site receives the water it needs to support its diverse flora and fauna. The site has freshwater lakes, estuarine channels and lagoons with water saltier than the sea. These varied habitats contribute to the immense biodiversity of the site.

Christians are called to care for our natural environment. The River Murray and surroundings are beautiful and inspiring places where people can relax, enjoy nature and commune with God. As a community, we hope to ensure that future generations can enjoy the amazing natural world and be enriched and enlivened by its reflection of God.

*In past decades, the Murray River has undergone not only ecological changes, but name changes. Explorer Charles Sturt gave the Murray River its most common name. Indigenous communities along the waterway each had their own name for the life-sustaining river. In the lower river it was referred to as Murrundi, for those near Echuca in Victoria it was called Millewa, and near its source it was Indi.*