

Barmah Choke Study

FACT SHEET 1: PROJECT BACKGROUND

The Murray-Darling Basin Commission (MDBC) is investigating current and potential water supply and environmental risks associated with river regulation through the Barmah Choke, including options to improve the management of flows in the mid-Murray region.

ABOUT THE BARMAH CHOKE

About 25,000 years ago, an uplift of land created the Cadell Tilt, a north-south geological fault in the earth's surface near Deniliquin and Echuca. Its impact on the River Murray led to the formation of the Barmah Choke, a narrow section of the River Murray through the Barmah-Millewa Forest. The forest formed as a result of regular flooding in this section of the river caused by the Cadell Tilt and the Barmah Choke.

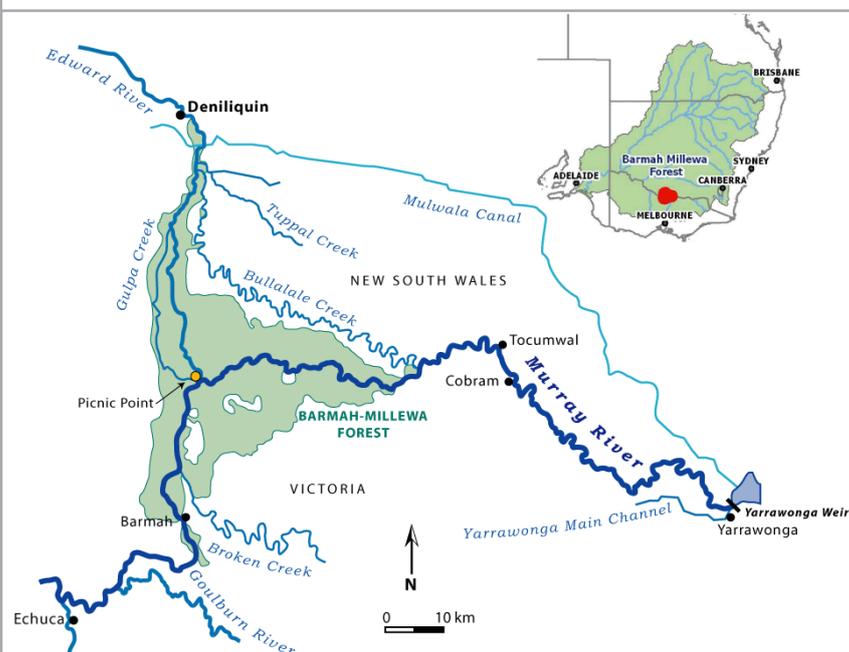
The channel capacity of the Barmah Choke is about 8,500 ML per day downstream of Picnic Point. During summer and autumn, river operation aims to keep flows at or below channel capacity to minimise unseasonal flooding of the Barmah-Millewa Forest. This constraint provides challenges in meeting downstream peak water use demands and transferring water to Lake Victoria and South Australia, even in relatively dry years. The constraint has led to a restriction in water trade from areas upstream to downstream of the Barmah Choke.

There are other environmental challenges in river management and the Barmah Choke. Operating the river for long periods at 'top of bank' levels leads to notch erosion and bank instability. Unexpected changes in weather and water demands can lead to events such as rainfall rejections¹ where unseasonal flooding is unavoidable. The Barmah Choke also limits the ability to target the delivery of environmental flows from upstream storages to downstream icon sites.

THE BARMAH CHOKE STUDY

The study seeks to identify current and potential water supply and environmental risks associated with river regulation through the Choke, whilst recognising that the Choke performs an important positive function in flooding the forest. Initially the project will seek to quantify the magnitude of the risks posed by the Choke and related issues under current conditions and a range of potential future climatic and system conditions. If the problems are confirmed to be significant the project will then investigate potential solutions, whilst ensuring that the positive function of the Choke in flooding the forest is maintained.

¹ A rainfall-rejection occurs when a combination of rainfall and reduced irrigation demands due to the rain, leads to increased inflows into the River Murray. The River level rises and exceeds the capacity of the Choke, flooding the forest.



The Barmah Choke is located where the River Murray flows through the Barmah-Millewah Forest, the green shaded area on the left.

Winter and spring flooding, caused by the Choke, is critical to the health of the forest. River regulation has reduced the frequency and size of winter and spring floods, and has increased the incidence of unseasonal flooding in summer and autumn, leading to a decline in the health of forest ecosystems.

The complexity of the River Murray, its anabranches and tributaries means that there may be no simple solution to the issues associated with the Choke. Initially, 20 potential options have been identified which fall roughly into three categories; New or upgraded channels, mid River storages and operational rule or policy changes.

The feasibility study commenced in January 2008 and may take until February 2009 to complete. It will draw upon knowledge gained from previous investigations and involve comprehensive hydrological modelling. It is anticipated that the outcome will be a short list of favourable options for further social, economic and environmental assessment, and community consultation. Following this, the MDBC and partner governments will decide whether to proceed with implementation, and with which option.

PROJECT MANAGEMENT AND GOVERNANCE ARRANGEMENTS

This study is being managed by the MDBC under the direction of a project Task Force. The Task Force comprises representatives from:

- MDBC (River Murray Water and The Living Murray)
- Department of Water and Energy (NSW)
- Department of Sustainability and Environment (Victoria).

A Jurisdictional Reference Group will be formed to engage with a wider group of Government stakeholders with an interest in the project and its outcomes.

INTEGRATION WITH OTHER PROJECTS

This study will consider related projects, such as the Murray Goulburn Interconnector, and enable them to be assessed in conjunction with other proposals to achieve outcomes for the River Murray system. Related projects may achieve local or regional outcomes that do not fully address all the issues related to the Barmah Choke.

LINKS TO THE LIVING MURRAY

The Barmah-Millewa Forest is Australia's largest River Redgum Forest, with high ecological value and cultural significance to Indigenous people and the broader community. It is listed as a Ramsar site of designated Wetlands of International Importance, and has been identified as an icon site under the MDBC's The Living Murray program.

This study will also consider options that improve the targeted delivery of water to The Living Murray icon sites downstream of the Barmah Choke to achieve environmental benefits at those sites. The benefits may include an increased number of water bird breeding events, healthier wetlands and River Redgum populations.



Barmah-Millewa Forest in flood with Barmah Lake (right), Moira Lake (left), and the River Murray Channel (centre)

Photo: Paul O'Connor

COMMUNICATION AND CONSULTATION

Stakeholder input will be sought at each major step of the project, to provide advice on the work done to date, and inform future phases of the study.

Communication and consultation activity aims to:

- engage and consult with key stakeholders to ensure they are well informed about the project and provide meaningful input
- encourage integration between this study and other related projects
- understand and respond to stakeholder and community concerns about the project
- gain knowledge on issues and options from specific people and groups
- provide regular updates on project progress, and information relevant to specific issues.

A key source of project information will be the MDBC website, www.mdbc.gov.au. Those interested in receiving email alerts when new information becomes available can subscribe to a project email list by contacting barmahchokestudy@mdbc.gov.au



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