Barmah-Millewa Feasibility Study - Recap and Wrap Up

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Australian Government

MURRAY–DARLING BASIN AUTHORITY

Acknowledgement of Country

Today's session

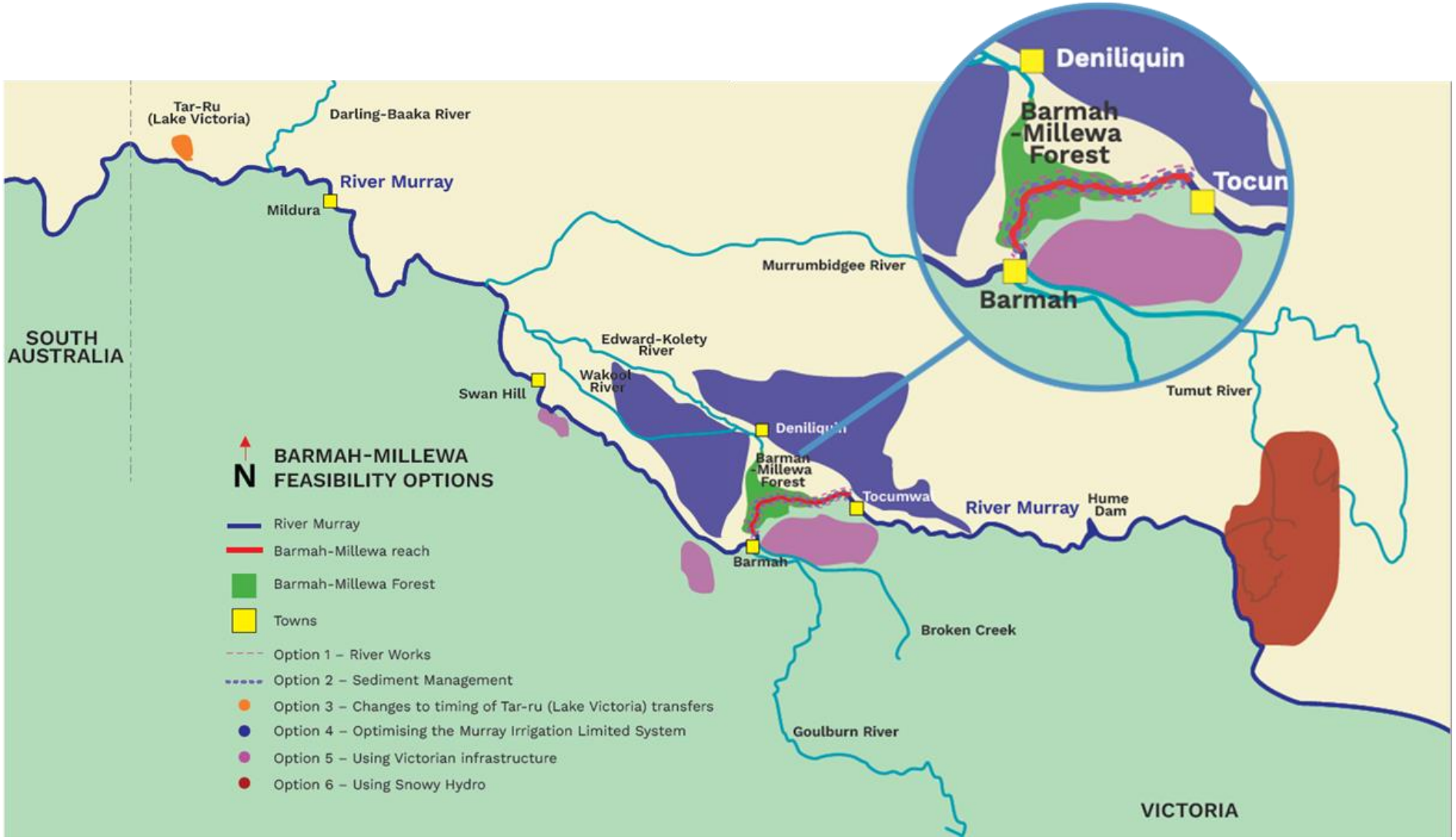
Recap on issues facing the River Murray and Barmah-Millewa Reach

Wrap-up of Barmah-Millewa Feasibility Study

Next steps

The Barmah-Millewa Reach

The reach is a naturally occurring narrow section of the River Murray where it flows through the Barmah-Millewa Forest, from Tocumwal in NSW to Barmah in Victoria



What is the problem?

- The volume of summer flows that can get through the Barmah-Millewa Reach is declining significantly
- This is due to the accumulation of a large volume of heavy coarse sand in the reach, in excess of 20 million cubic metres
- The sand was mobilised during gold mining and land clearing practices about 150 years ago, with desnagging and river regulation also contributing factors
- The sand is a different material to what is found in the riverbanks, which is fine clay and silt
- The sand will not flush through as it's heavy and the Barmah-Millewa Reach has the lowest flow capacity of any stretch of the river
- Volume of flows through the Barmah-Millewa Reach will decline by about 10% over the next 10 years
- Increased risk of not being able to deliver water to communities where and when they need it

Land and water use key facts

- Horticultural development has changed over the last 20 years and moved further downstream, mainly to the Sunraysia region
- Water for new developments comes from trade (temporary and leased) and irrigation efficiencies
- There has been no growth of regulated flow volumes through the Barmah-Millewa Reach over summer/autumn
- Environmental water has not increased regulated flows through the Barmah-Millewa Reach

The cost of doing nothing about this problem

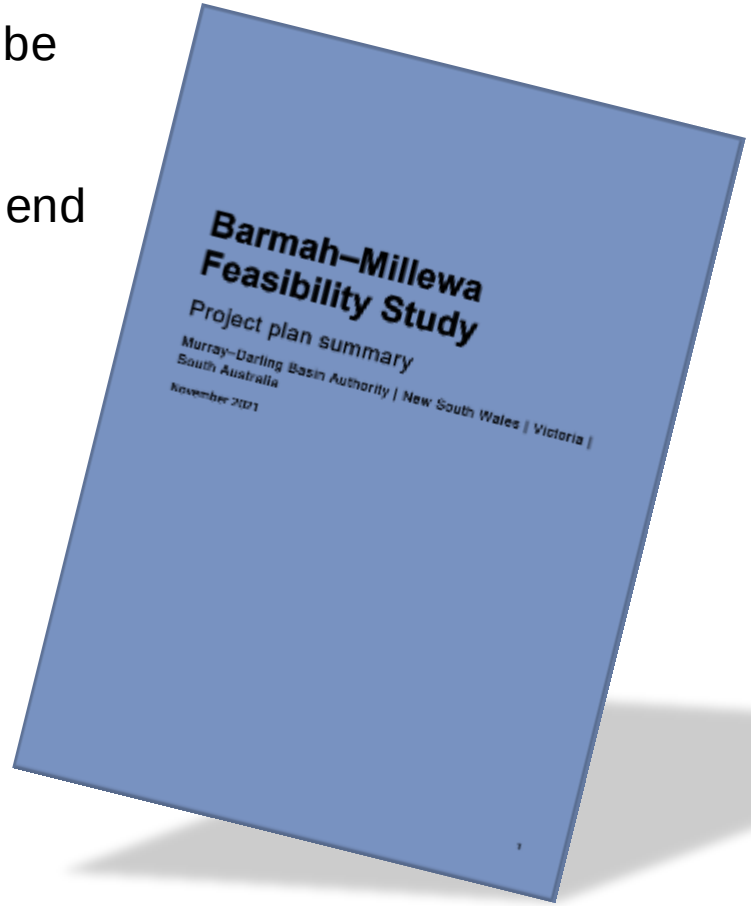
Fishermans Bend – Millewa NP

The ongoing build-up of sand on the riverbed has significant implications for communities and impacts to environmental, cultural, social and economic values, including:

- Accelerated bank erosion and potential break outs into the forest – unseasonal watering and losses
- Increased risk of not being able to deliver water to downstream communities
- Loss of ecological diversity and habitat
- Reduced ability to deliver water for food and fibre production
- Changing the river path over time
- 80GL shortfall in next 10 years ($230 million agricultural production per year cost)

Barmah-Millewa Feasibility Study

- The Murray-Darling Basin Ministerial Council initiated a study to investigate options to maintain and, if possible, restore the amount of water that could be delivered downstream of the Barmah-Millewa Reach
    - Funding was provided in late 2021 and the study will be completed by end of December 2022
- The study incorporated numerous parallel projects the MDBA had running including the:
    - Riverworks program
    - Barmah-Millewa sediment options investigation
    - Tar-Ru (Lake Victoria) study



Project oversight

The Feasibility Study Options

Barmah-Millewa Feasibility Study

- Six options were explored as part of the Feasibility Study
- Options 4 (MIL options) and 5 (Victorian options) include several sub-options
- Collaborated with the states to develop and assess the options

Riverworks

Bank protection river works within the Barmah-Millewa Reach

Sediment Removal

Scope options for removing sediment from within the Barmah-Millewa Reach

Tar-Ru Transfers

Changes to the operation and management of Tar-Ru (Lake Victoria)

Murray Irrigation Limited

Using existing infrastructure to bypass the Barmah-Millewa Reach

Upgrade or build new infrastructure to bypass the Barmah-Millewa Reach

Victorian Options

Use existing storages below the Barmah-Millewa Reach to meet peak irrigation demand

Also, extending existing irrigation infrastructure

Snowy-Hydro Scheme

Use the Snowy-Hydro Scheme to transfer River Murray water via the Murrumbidgee River

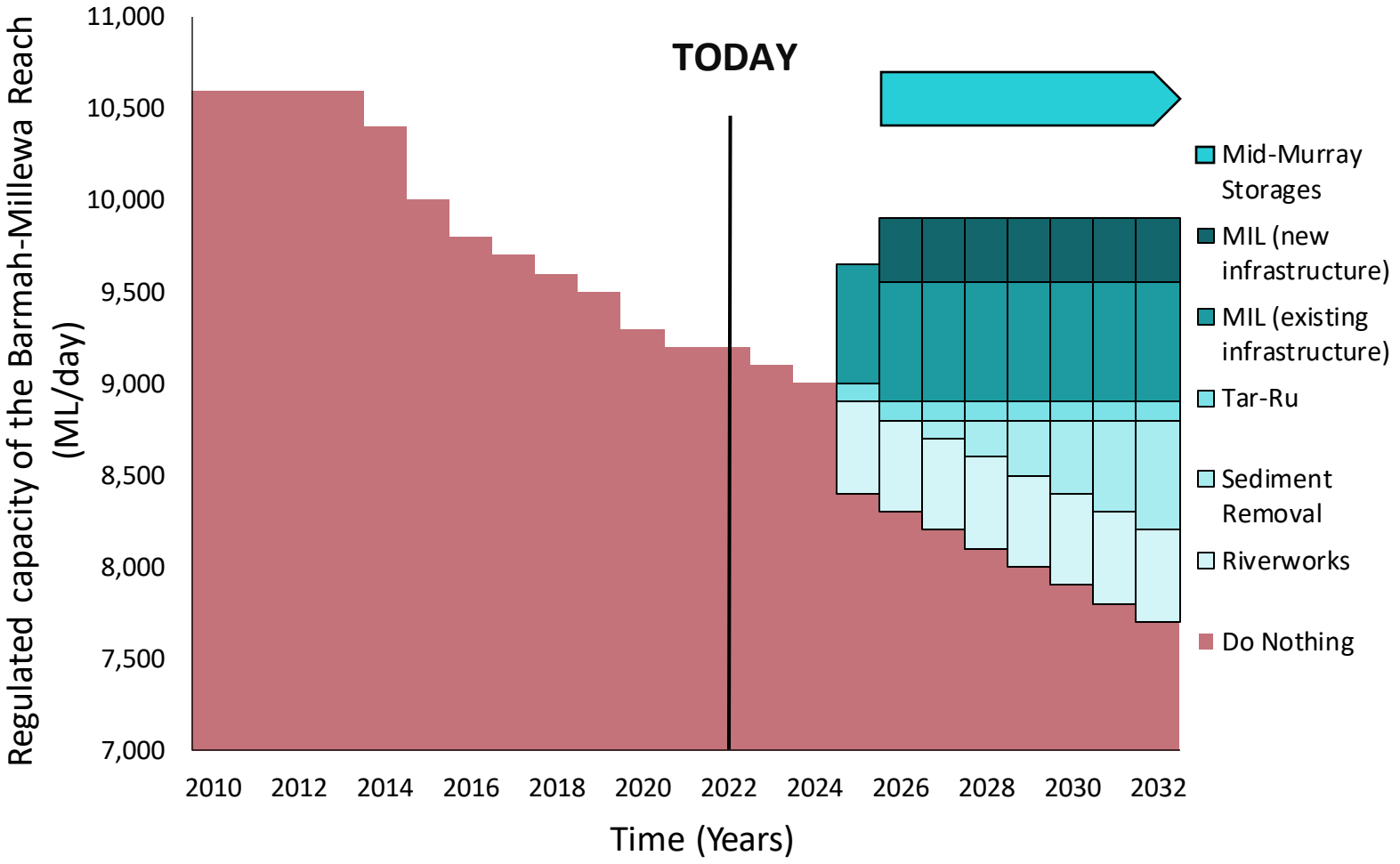
Bringing the options together

No one option can resolve this complex problem

- **A suite of options is needed for a southern basin solution**
  - Options have been developed and assessed to determine when and how much they could contribute
  - The options work over different time scales and under different seasonal and operational conditions
  - The study identified 5 suites of options that could be implemented
    - The suites of options represent different levels of benefit, cost and risk
  - The suites were compared against the cost of doing nothing – environmentally, culturally, socially and financially
  - If nothing is done, there will be an 80GL shortfall per year in 10 years' time or $230 million agricultural production per year alone

Option suites and scales of reinstatement

Potential timeline for capacity decline, option implementation & benefit realisation



Next steps

- Barmah-Millewa Feasibility Study findings will be presented to BOC & Ministerial Council in **February 2023**
- If given approval by Ministerial Council, MDBA and State agencies will progress the agreed suite of options a stage at a time
- BOC & Ministerial Council will review options after each stage so there is a steady, considered approach to addressing this problem
- Engagement and consultation with First Nations and communities will continue throughout each stage of each option

For more information mdba.gov.au

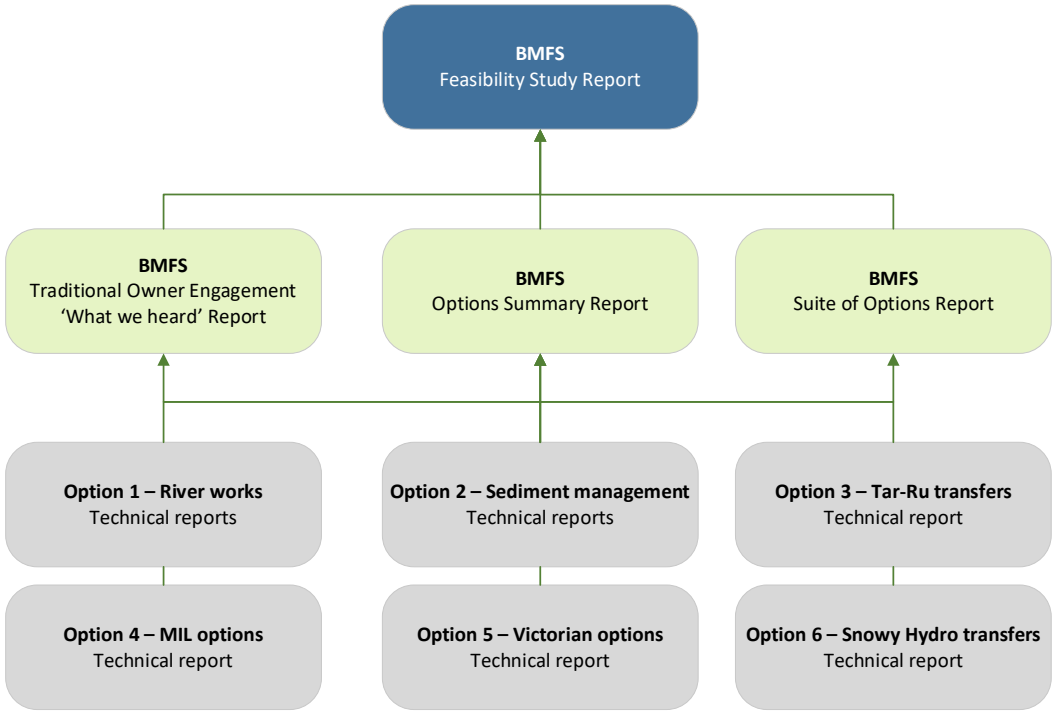
We have published reports as they have been completed

- Options for Managing Sediment in the Barmah-Millewa Reach of the River Murray Preliminary Investigations (Stage 1 Report)
- Barmah-Millewa Feasibility Study Preliminary Scoping Report
- Barmah-Millewa Sediment Sources
- Barmah–Millewa Feasibility Study (Project Plan)
- Historical Flows in the southern connected Murray-Darling Basin – HARC 2021
- Managing Delivery Risks in the River Murray System
- Irrigated crop area data for the Lower Murray-Darling 2003 to 2021 (SunRISE)
- Water demand (shortfalls) | Murray-Darling Basin Authority
- Historical flows in the southern connected Murray–Darling Basin

Study Reports

We expect these to be published after the Ministerial Council Meeting in February

- The **Feasibility Study Report** provides an executive summary of the options, their assessment, and the potential next steps
- The **Options Summary Reports** introduces each of the options, what they involve, how they could contribute, and the studies completed
- The **Suite of Options Report** assesses the relative merits of the options and combinations (or 'suites') of options
- The **Traditional Owner Engagement – 'What we heard' Report** provides an insight into the views of Traditional Owners on the project and the options under consideration
- **Technical Reports** provide the detail of investigations undertaken to date



Thank you