

# NSW Murray and Murrumbidgee Regional Water Strategies



What we heard

Public consultation: October – November 2023

Publication date: May 2024





# Acknowledgement of Country

The NSW Government acknowledges First Nations people as the first Australian people and the traditional owners and custodians of the country's lands and water. First Nations people have lived in NSW for over 60,000 years and have formed significant spiritual, cultural, and economic connections with its lands and waters.

Today, they practice the oldest living culture on earth.

The NSW Government acknowledges the First Nations people/ Traditional Owners from the NSW Murray and Murrumbidgee regions as having an intrinsic connection with the lands and waters of the NSW Murray and Murrumbidgee Regional Water Strategy areas. The landscape and its waters provide the First Nations people with essential links to their history and help them maintain and practice their traditional culture and lifestyle.

We recognise the Traditional Owners as the first managers of Country. Incorporating their culture and knowledge into management of water in the region is a significant step towards closing the gap.

Under these regional water strategies, we seek to establish meaningful and collaborative relationships with First Nations people. We will seek to shift our focus to a Country-centred approach; respecting, recognising and empowering cultural and traditional Aboriginal knowledge in water management processes at a strategic level.

We show our respect for Elders past and present through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places where First Nations people are included socially, culturally and economically.

As we refine and implement the regional water strategies, we commit to helping support the health and wellbeing of waterways and Country by valuing, respecting and being guided by First Nations people, who know that if we care for Country, it will care for us.

We acknowledge that further work is required under these regional water strategies to inform how we care for Country and ensure First Nations people/Traditional Owners hold a strong voice in shaping the future for all communities.

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What we heard

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Note: From the time of writing this report the department has changed its name to the NSW Department of Climate Change, Energy, the Environment and Water

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# Summary

## Background

The NSW Government has developed regional water strategies as part of a broader suite of long-term strategies aimed at improving the security, reliability, quality and resilience of the state's water resources for current and future generations.

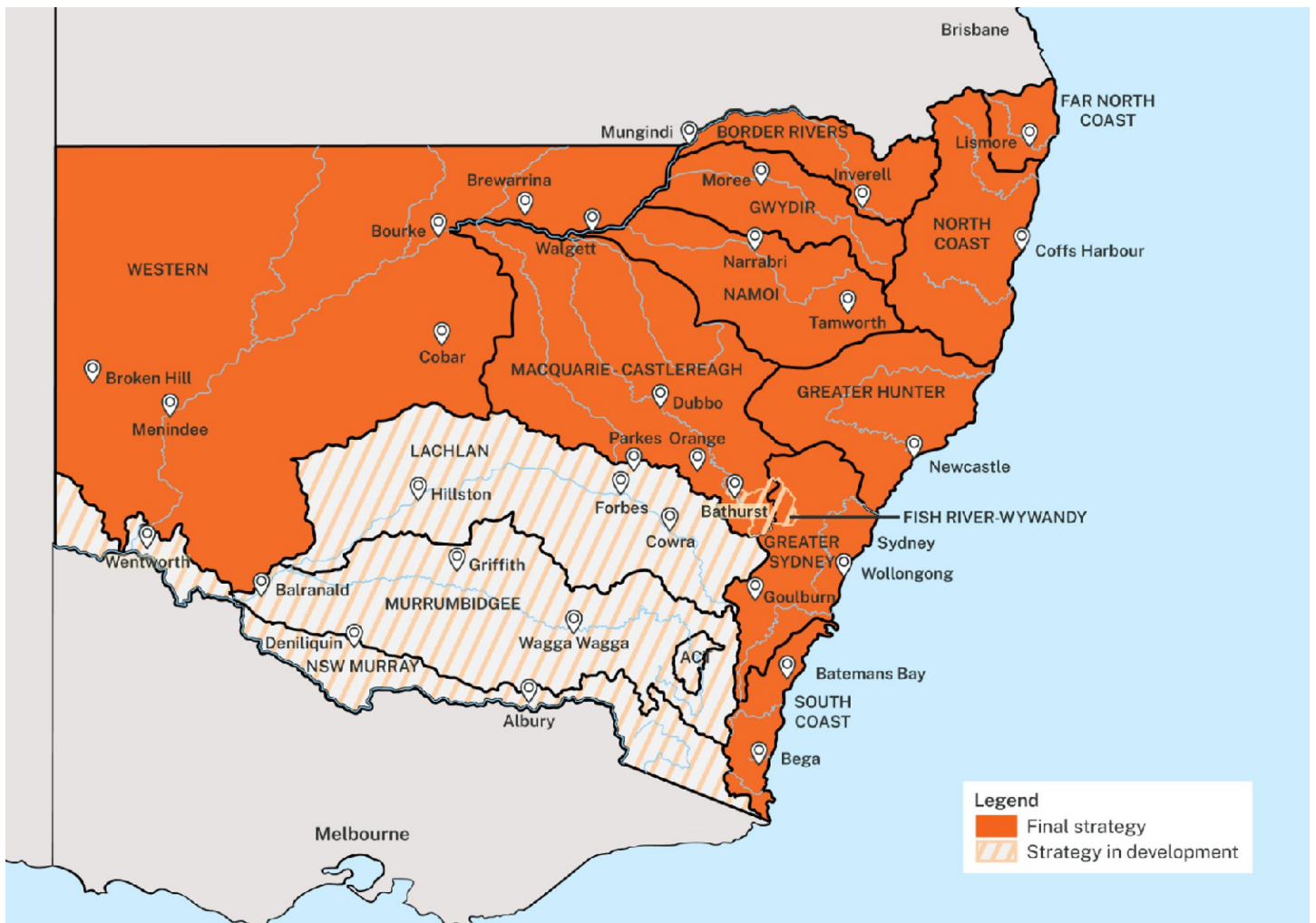
The regional water strategies adopt a long-term approach to strengthening and building the reliability and quality of the state's water resources.

They combine climate evidence and economic and ecological analysis with local and regional insights from water service providers, local councils, communities, Aboriginal people, and other stakeholders.

The NSW Murray Regional Water Strategy and the Murrumbidgee Regional Water Strategy (the strategies) examine future water-related risks and challenges in the regions and the actions that need to be taken to manage water availability and security risks.

The NSW Department of Climate Change, Energy, the Environment and Water (the department) has taken a staged approach to develop the strategies, with early steps designed to identify a long list of options, which, after consultation and analyses, will be narrowed down to a shortlist of priority areas and proposed shortlisted actions.

Figure 1 NSW water strategy regions



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# Consultation

The draft strategies have been developed over several years in consultation with water users, Aboriginal groups, environmental and community groups, local government representatives and government agencies.

This approach has allowed the department to share information and gather feedback to inform development of the strategies as they progress towards the final strategies and implementation plans.

## Public consultation

Public consultation on the draft strategies, including a long list of proposed options to meet regional water challenges, occurred in April and May 2022. Feedback from this public consultation was published in the [NSW Murray and Murrumbidgee Regional Water Strategies: What We Heard \(2022\) report](#).

Following the mid-2022 consultation, the department released a climate and hydrological modelling report for both regions and discussion papers on the revised NSW Murray and Murrumbidgee regional water challenges.

Public and targeted consultation about the climate and hydrological modelling report and discussion papers was conducted from 4 October to 19 November 2023. This offered an opportunity to provide feedback via a survey, webinars, submission process and targeted stakeholder meetings.

During the consultation period in 2023, the department received 19 submissions and survey responses. Over 60 people participated in public webinars and targeted stakeholder meetings. The survey was designed to gather feedback on the climate and hydrological modelling results and regional challenges.

The department engaged with:

- Community members and organisations
- Region specific stakeholder groups
- Local councils and joint organisations
- Local water utilities
- Aboriginal stakeholders
- Peak organisations.

Feedback ranged from a desire for further information about the selection of the three climate scenarios used in the hydrological modelling, to concern about the use of the dry future climate scenario. Supporting increased town and general water security and improving the health of the environment and ecosystems, were considered important. There was also strong support for establishing a more integrated planning approach across jurisdictions and councils.

Feedback received on the climate and hydrological modelling and draft regional challenges, was used to shortlist actions that the NSW Government proposes be included in the final strategies. These actions are outlined in consultation papers, which will be used as the basis to consult with the community on these proposals:

- Draft Regional Water Strategy NSW Murray region: Shortlisted actions – consultation paper
- Draft Regional Water Strategy Murrumbidgee region: Shortlisted actions – consultation paper

This report summarises what we heard during the consultation process, including input from submissions and survey responses, public webinars and targeted stakeholder meetings.

Feedback is presented by:

- [Climate and hydrological modelling](#)
- [Regional challenges](#).

Feedback relevant to both NSW Murray and Murrumbidgee regions has been included under the subheading 'Both regions'.

Survey statistics have been detailed throughout this report, but are not necessarily indicative of all stakeholders' views.

This report does not provide a government response to the comments and issues raised. The consideration of these is ongoing, and changes to the strategies' approaches will be included in the consultation papers that will be publicly exhibited in mid-2024. We may not respond to each issue individually, but each issue will receive full consideration.

**Figure 2** Regional water strategy implementation process



**Figure 3** Timeline of activities during 2023 consultation

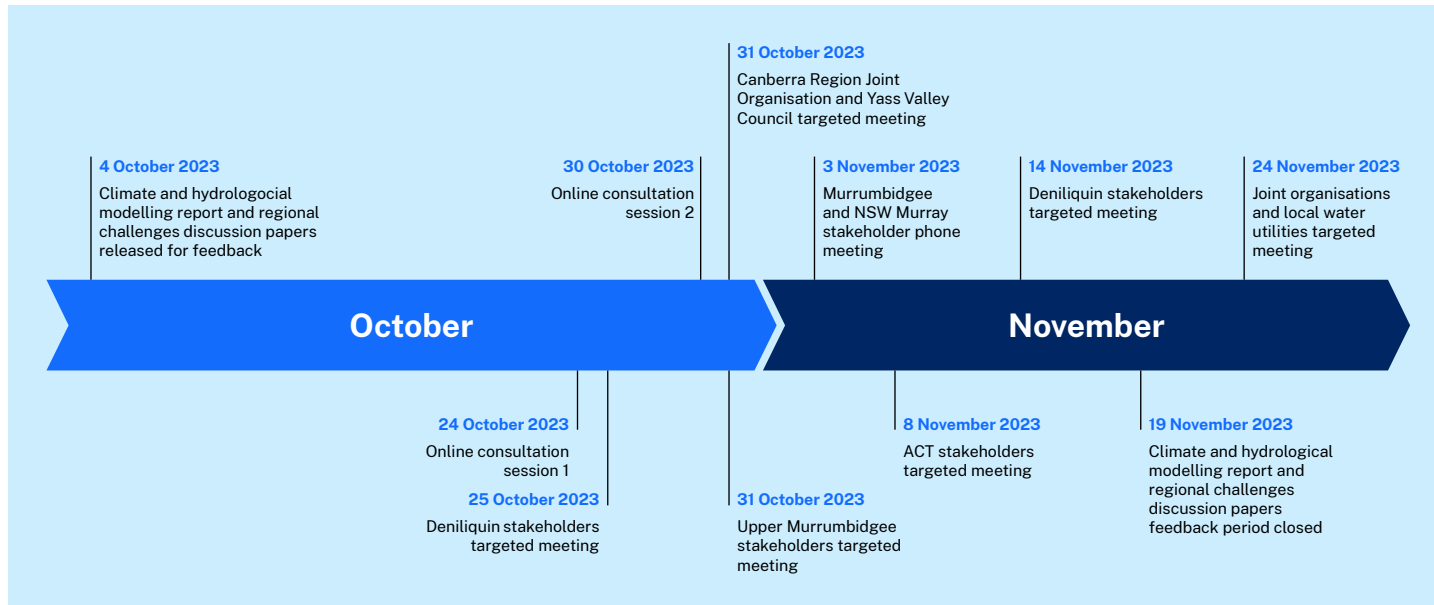
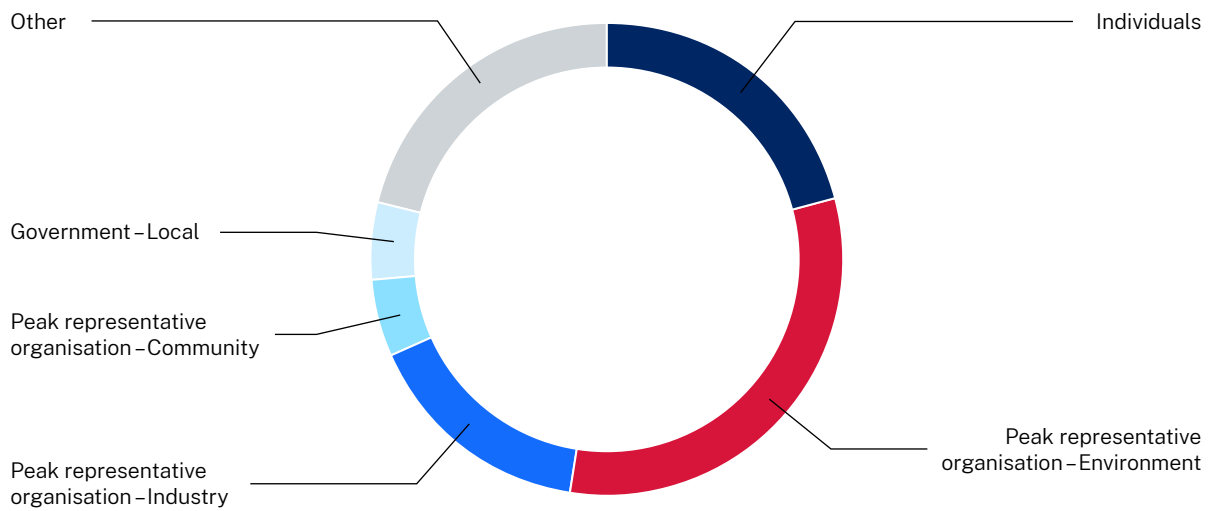




Figure 4 Engagement at a glance during 2023 consultation

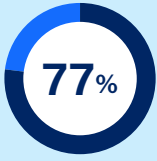


Figure 5 Overview of survey and submissions by stakeholder type during 2023 consultation

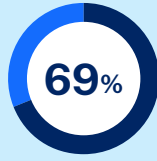




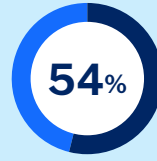
## Key survey statistics



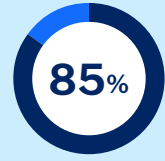
of survey respondents live in the NSW Murray and Murrumbidgee regions



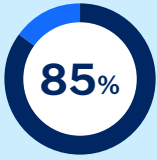
of survey respondents are interested in water management



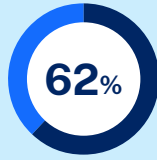
of survey respondents are interested in water for agriculture and emerging industries



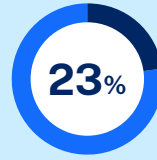
of survey respondents provided feedback on the Murrumbidgee challenges



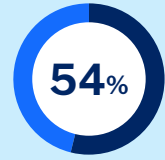
of survey respondents work in the NSW Murray and Murrumbidgee regions



of survey respondents are interested in water for the environment



of survey respondents provided feedback on the NSW Murray challenges



of survey respondents provided feedback on the climate and hydrological modelling



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# Feedback by priority area



Image courtesy of Destination NSW - Bethanga Bridge, Bellbridge



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# Feedback on the climate and hydrological modelling

There was widespread understanding of the three climate scenarios (63% of survey respondents); however, 83% of survey respondents did not think the three selected climate scenarios are reasonable. Requests were made for additional information about the climate and hydrological modelling (43% of survey respondents) and further consideration of key results within the climate and hydrological modelling report (57% of survey respondents).

## Both regions

- There was concern that the long-term climate forecast would mean reduced water availability for general security licence holders.
- Some respondents felt there was a focus on the worst-case dry climate scenario, expressing a desire for the modelling to further consider both wet and dry periods and increased climate variability.
- Understanding why the three climate scenarios have been used for the regional water strategies but not for NSW water sharing plans, was considered important by some.
- It was suggested that further information should be provided about the definition of cease-to-flow, as well as why a cease-to-flow volume of 1 ML per day has been used in the modelling.
- There was some concern about the technical nature of the climate and hydrological modelling report, and perception that the document is difficult to understand. It was suggested that further consultation be conducted about the modelling with community members and modelling experts.
- There was interest in understanding the following:
  - assumptions used in the modelling about carryover
  - whether the interaction between surface water and groundwater was considered in the modelling
  - the process for selecting the three climate scenarios
  - the rationale for using the A2 family of SRES scenarios.

## NSW Murray region

- Understanding how significant the evapotranspiration of the NSW Murray region will be if the dry future climate scenario eventuates, and what options have been considered to alleviate the impact of this, was considered important.

## Murrumbidgee region

- There was concern that the modelling does not adequately consider the impact of climate change on ecological communities in the Murrumbidgee catchment.
- Providing further information about the assumptions that underpin the modelling about operation of Tantangara Dam was considered important, as was understanding alternative options for dam operation.

# Feedback by challenge

Clearly identifying the challenges for the regions is an essential step in assessing what tools and solutions are needed to manage the water needs of the NSW Murray and Murrumbidgee regions over the next 20 years and beyond. Addressing these challenges will help to meet the vision and objectives for the regional water strategies.

This section summarises feedback by each of the regional challenges explored in the discussion papers for the NSW Murray and Murrumbidgee regions.

Since the public and targeted consultation in 2023 the draft strategies have undergone further development which have resulted in significant changes to the key challenges in both regions. Feedback received in this report is based on the previous challenge structure.

The four key challenges that feedback was received on were::

**Challenge 1:**

Ensuring water supplies for regional centres, towns and communities in a changing climate

**Challenge 2:**

Improving the health and resilience of aquatic and floodplain ecosystems

**Challenge 3:**

Addressing barriers to Aboriginal water rights and access

**Challenge 4:**

Supporting agriculture and emerging industries.



Image courtesy of Alesha Jewel Bradford-Lake Mulwala



# Challenge 1: Ensuring resilient water supplies for regional centres, towns and communities in a changing climate

Population growth, land use, growth in strategic regional locations and climate change are placing the regions' water sources under pressure. A drier future climate could also reduce the reliability of water sources. There is growing awareness that regional NSW needs to not only build its capacity to respond and recover from water-related shocks and stresses, but also to change its relationship with water to create an environment for the region to thrive.

## Consultation feedback

### Both regions

- There was some support for installing off-stream infrastructure and using recycled water where appropriate. Investigating demand management measures and improving urban runoff capture and storage was also suggested.
- It was noted that the Common Planning Assumptions can underestimate population projections, and this should be considered in the modelling and analysis.
- Understanding the impact of climate change on town water security currently, not just in terms of future water security, was considered important.
- Exploring how to harness water use opportunities during and following years of high rainfall and dam inflows was considered important.
- Considering the nuances between major urban areas and smaller locations was suggested, instead of applying data and information across the whole region.

### NSW Murray region

*33% of survey respondents either agreed or strongly agreed with Challenge 1.*

- It was suggested that groundwater is currently being effectively managed in the NSW Murray region, with research into the integration of groundwater and surface water already conducted. However, others commented that improved management and further investigation is needed.

### Murrumbidgee region

*67% of survey respondents either agreed or strongly agreed with Challenge 1.*

- There was concern about the security of town water in areas around Canberra, particularly in the context of population growth.
- Reflecting the interactions between NSW and the ACT in the strategy, in the context of water supply and demand in the Upper Murrumbidgee and NSW towns, was considered important.
- There was concern that the Murrumbidgee Water Sharing Plan has not been updated to consider water security in the context of natural disasters and climate change.
- It was suggested that information in the modelling report about Yass Water Supply should be updated to reflect results of the yield analysis made in the Integrated Water Cycle Management Strategy and the department's water security pilot project, which are contrary to the information outlined in the report (i.e., the findings indicate a reduction in secure yield). It was also suggested that the case study be expanded beyond the town to the Yass Valley.
- It was suggested that information should be provided about the integration of surface water, land management and groundwater in the Murrumbidgee strategy.
- It was suggested that the significant interaction between the Murrumbidgee catchment and Snowy Hydro operations are further emphasised in the strategy. Stakeholders commented on the potential risk to critical human water needs, ecological, cultural and socio-economic values in the Upper Murrumbidgee catchment, and increased pressure on the channel of the Tumut River.

## Challenge 2: Improving the health and resilience of aquatic and floodplain ecosystems

Development has affected ecosystem health in the NSW Murray and Murrumbidgee regions and connected valleys, contributing to changes in flow variability, water quantity and water quality. The challenge is to protect and enhance the region's water-dependent ecosystems by using water effectively during wet and dry periods.

### Consultation feedback

#### Both regions

- There was concern about the impact of a reduction in flows on water-dependent fish, plants and other ecosystems.
- Developing individual water management plans for protected areas was considered important.
- Some stakeholders expressed concern about the Reconnecting River Country Program due to potential environmental and economic impacts. Understanding the cost to landholders and the cost-benefit analysis was considered important.
- It was acknowledged that while important, a broader review of water sharing arrangements and environmental water management will take time. Therefore, it was suggested that the following actions occur in the interim:
  - establish flow requirements for fish species
  - monitoring and research of alpine waters
  - on-ground restoration work to stabilise banks.

#### NSW Murray region

*67% of survey respondents indicated they either agreed or strongly agreed with Challenge 2.*

*There was no specific feedback for the NSW Murray region on this challenge.*

#### Murrumbidgee region

*67% of survey respondents either agreed or strongly agreed with Challenge 2.*

- Establishing environmental flow needs for the Upper Murrumbidgee was considered important.
- Provision of additional storage in the Murrumbidgee was suggested to further support the system and maintain flows in dry times (as per the Murray system).
- Concern was expressed that the reduction of flows from dam inflows is impacting the health of the Upper Murrumbidgee, and that future pressures, such as climate change, will further exacerbate this situation.
- There was concern about ecological damage in the Upper Murrumbidgee due to sedimentation and channel armouring smothering fish breeding sites, filling refuge holes and creating barriers to fish passage. Protecting the nine native fish species in the Upper Murrumbidgee River was considered critical.
- It was noted that the Murrumbidgee region contains significant wetlands and habitats which are covered by international treaties and agreements. Meeting related responsibilities under the Federal Water Act and Basin Plan was considered critical.
- It was suggested that the regulated Murrumbidgee River operation rules be made more flexible to allow for improved environmental water management.
- Highlighting opportunities for coordination between NSW and the ACT in the strategy was considered important, from a catchment health and ecosystem function perspective.
- There was concern that Snowy Hydro's operations significantly reduce flows in the Upper Murrumbidgee and Goodradigbee Rivers.

## Challenge 3: Addressing barriers to Aboriginal people's water rights and access

Water is an essential part of Aboriginal people's culture and heritage, but the current water management framework is not meeting the needs and aspirations of Aboriginal people.

### Consultation feedback

#### Both regions

- Mixed views were expressed about increasing Aboriginal people's right to water. Some respondents felt that all stakeholders should have equal treatment by governments, while others commented on the critical importance of Aboriginal cultural considerations and water rights.
- It was noted that water is an essential part of Aboriginal people's culture and heritage, and there is a need to provide greater access to cultural water for Aboriginal community members.
- Listening to Aboriginal people who have lived sustainably with the environment was considered important, as was ensuring that Aboriginal people are involved in water management and decision making processes.
- Establishing support for the operation and maintenance of ageing water infrastructure on Traditional Owner's land was considered important.

#### NSW Murray region

*67% of survey respondents either agreed or strongly agreed with Challenge 3.*

#### Murrumbidgee region

*58% of survey respondents either agreed or strongly agreed with Challenge 3.*



Image courtesy of Destination NSW - Tumut, Kosciuszko National Park



## Challenge 4: Supporting agriculture and emerging industries

Over the next 20 years, agriculture and agribusiness will continue to be key economic drivers for the region and other industries; however, opportunities for other existing and new industries, such as tourism, manufacturing, hydroelectricity, freight and logistics, and renewable energy, are growing and emerging. A dry future climate could reduce water availability for new and existing industries and lead to adverse economic and social impacts. Our challenge is to support sustainable industries to flourish within a capped system in the context of a variable and changing climate.

### Consultation feedback

#### Both regions

- Some stakeholders endorsed supporting agriculture and emerging industries as a key priority.
- There was concern that the dry climate scenario would mean that water is reallocated away from general security licence holders. Understanding the potential impact of a reduction in general water security and other licenced water availability on the agricultural sector was considered important.
- It was suggested that changes to carryover rules can be used to improve general security performance under the climate scenarios.
- Some stakeholders supported further investigation of the trends impacting the reliability of water licences.
- Understanding how the department intends to ensure long term viability of agriculture and agribusiness industries in both valleys was considered important.
- Conduct a review of the allocation framework was suggested, as was an investigation into land use changes and their impact on water availability to prepare for a drying and more variable climate.
- Balancing the water needs of the irrigation sector was considered important, as was encouraging more adaptive irrigated industries that can utilise irrigation water in wetter years and reduce irrigated areas in droughts.
- Some stakeholders suggested that agricultural and emerging industries require support to develop more sustainable practices; however, others felt that these industries were already operating in a way that is environmentally sustainable.
- Support was expressed for exploration of various ways to improve water availability for water entitlement holders, with consideration of the challenges and opportunities of both wet and dry scenarios.
- There was also support for optimising water use during and following wet years, with a desire to understand what options have been considered by the department to date.
- There were suggestions to increase water storage to provide industry with more capacity to manage environmental water, stock and domestic and irrigation entitlements.
- The need for a shared strategic framework for growth and sustainable settlement was highlighted.

#### NSW Murray region

*67% of survey respondents either agreed or strongly agreed with Challenge 4.*

- Some stakeholders suggested additional regulation of the Murray Darling water market and industry water use.
- There was concern that the strategy does not adequately focus on flooding risks in the Murray region, and rather is focused on a drying climate.

#### Murrumbidgee region

*75% of survey respondents either agreed or strongly agreed with Challenge 4.*

- Recognising the contribution of agricultural activities to the local economy in the Upper Murrumbidgee was considered important, as was adequately acknowledging landholders in the strategy.
- It was suggested that the strategy acknowledges the potential water trading arrangements between the ACT and NSW.



# Other consultation feedback

## Both regions

- There was strong support for a more integrated approach across the two regions, particularly between NSW and the ACT. Increased collaboration between councils and government agencies was also supported.
- There was support for increased transparency to strengthen trust in government and decision making. Further information about how the strategy will influence broader water policy was also considered important.
- There was concern about timing of the engagement, noting that the consultation sessions were held at a busy time of year. There was interest in further engagement, including opportunities for face-to-face engagement.
- Aligning the regional water strategies with the State Infrastructure Strategy 2022 was suggested.

## NSW Murray region

- There was interest in understanding how the strategies interact with the Northern Murray Darling Basin strategies. It was suggested that any Basin or Murray River operating strategy would involve cooperation between the Commonwealth, Victoria and South Australian Governments.

## Murrumbidgee region

- Understanding and analysing the complex management arrangements in the Upper Murrumbidgee was considered important,
- Developing a sub-regional plan for the Upper Murrumbidgee to address its specific challenges was suggested by some stakeholders.



Image courtesy of Destination NSW - Goobarragandra River, Tumut



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## Next steps

Development of the draft NSW Murray and Murrumbidgee Regional Water Strategies has been a multi-year, multi-step process.

The department would like to thank stakeholders and community members who participated in the recent engagement process and broader engagement conducted to date.

Feedback received as part of the recent engagement process on the climate and hydrological modelling and draft regional challenges will be used to inform the updated draft strategies, including regional challenges, key priorities and associated actions.

Further consultation is planned for mid-2024 to consider a shortlist of actions to address the key challenges, prior to finalising the strategies.

We encourage stakeholders and community members to continue to engage in development of the regional water strategies process and contribute to the finalisation and implementation of the NSW Murray and Murrumbidgee Regional Water Strategies.



Image courtesy of Destination NSW -Paddle Steamer





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**More information:**

[water.dpie.nsw.gov.au/plans-and-programs/regional-water-strategies](http://water.dpie.nsw.gov.au/plans-and-programs/regional-water-strategies)