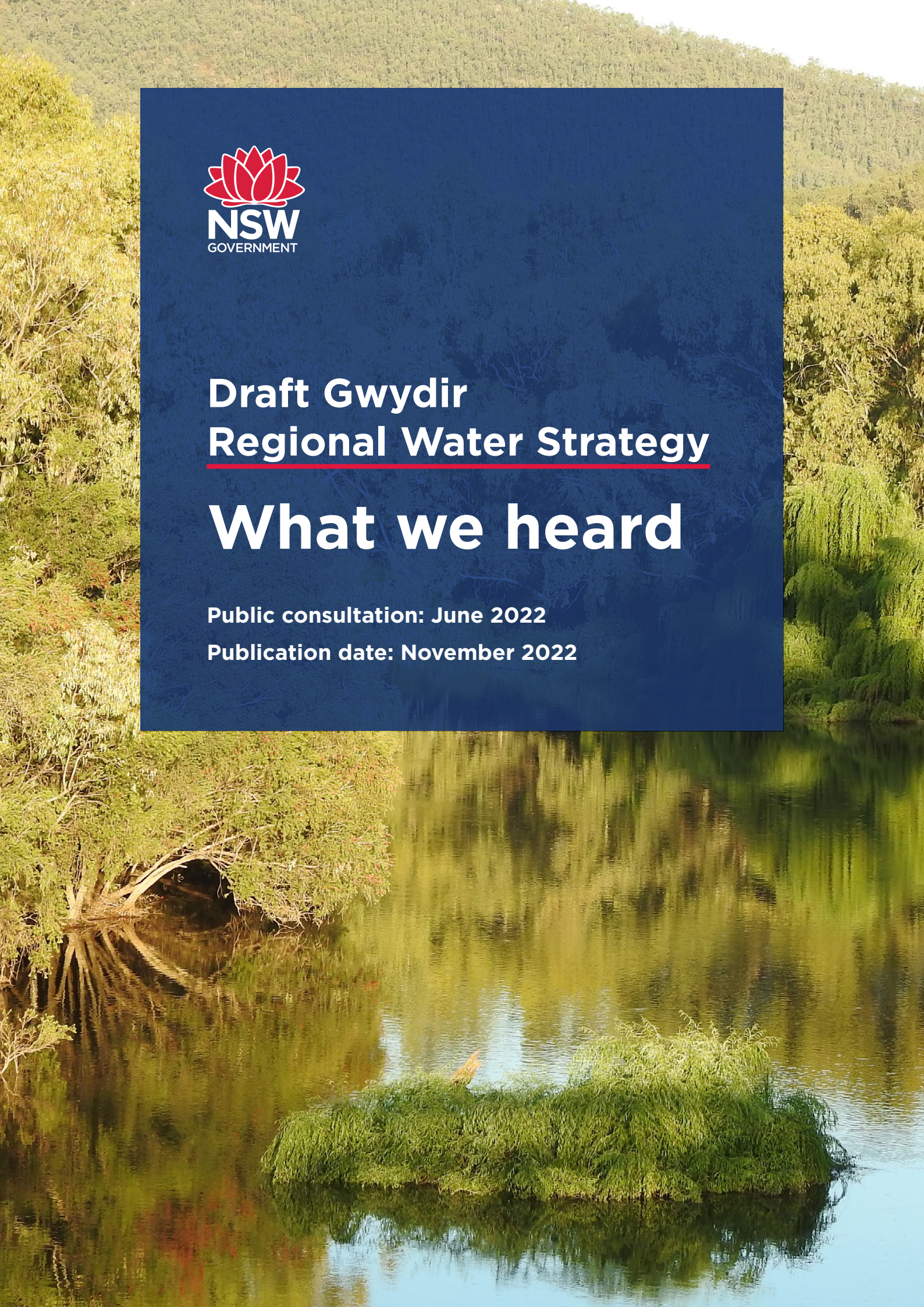

NSW GOVERNMENT

Draft Gwydir Regional Water Strategy

What we heard

Public consultation: June 2022

Publication date: November 2022

Find out more: water.dpie.nsw.gov.au/plans-and-programs/regional-water-strategies

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Cover image: Image courtesy of Belinda Collingburn, Department of Planning and Environment. Gwydir River, Bingara

Acknowledgments: The NSW Government acknowledges First Nations people as its 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 Gwydir region as having an intrinsic connection with the lands and waters of the Gwydir Regional Water Strategy area. The landscape and its waters provide the First Nations people with essential links to their history and help them to maintain and practice their traditional culture and lifestyle.

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

Under this regional water strategy, 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, present and emerging 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 strategy, we commit to helping support the health and wellbeing of waterways and Country by valuing, respecting and being guided by First Nations people/Traditional Owners, who know that if we care for Country, it will care for us.

We acknowledge that further work is required under this regional water strategy to inform how we care for Country and ensure First Nations people/Traditional Owners hold a strong voice in shaping the future for Indigenous/Aboriginal and non-Aboriginal communities.

Contents

Introduction

The NSW Government is taking action to improve the security, reliability, quality and resilience of the state's water resources for current and future generations.

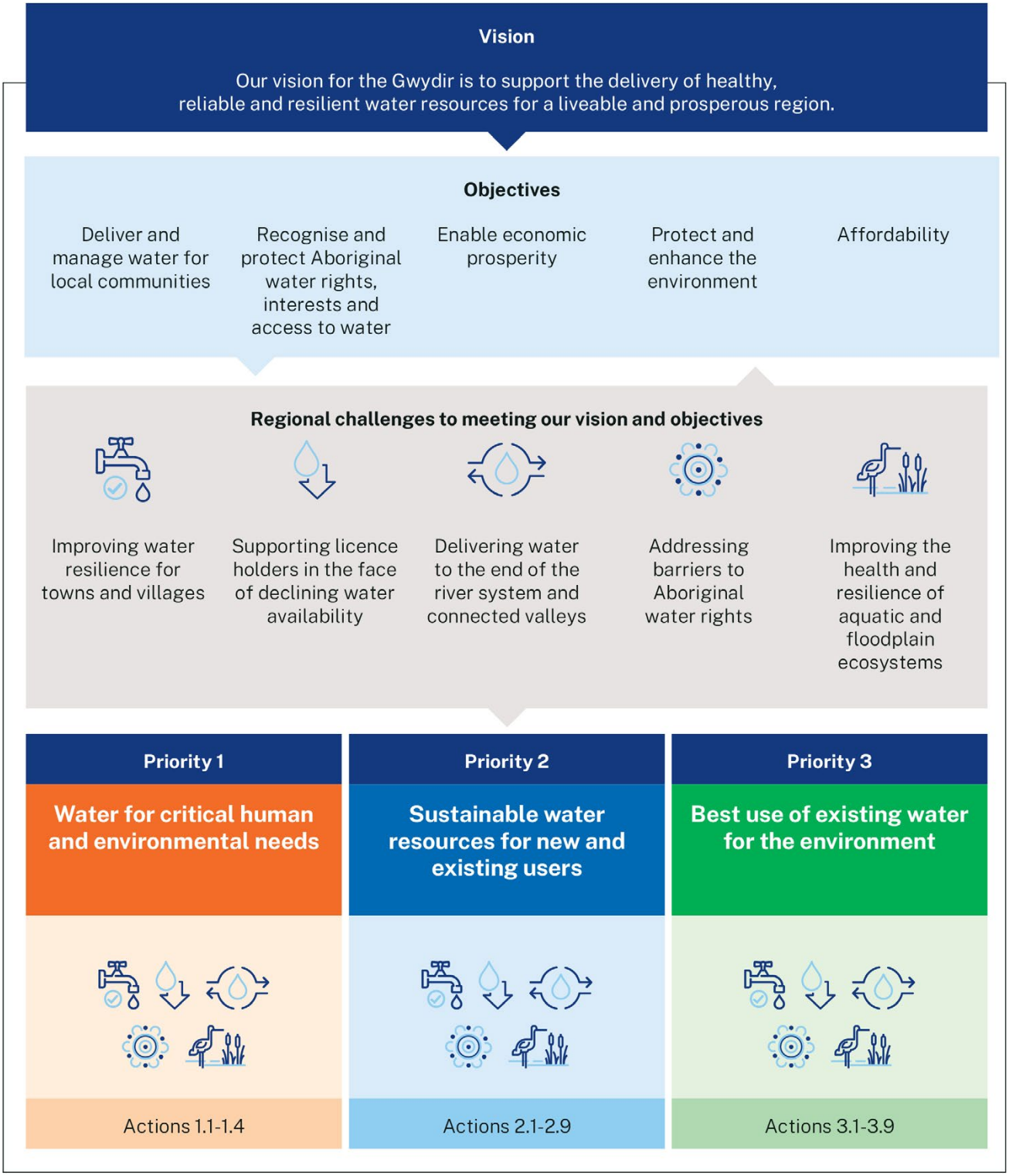
As part of this program of investment and reform, the NSW Department of Planning and Environment (the department) has prepared a number of regional water strategies across NSW.

Figure 1 *Map of NSW regional water strategy regions*

The regional water strategies adopt a long-term approach to strengthening and building the reliability and quality of the State's water resources for the next 20 years. They combine climate evidence and economic and ecological analysis, with input from water service providers, local councils, communities, Aboriginal people, and other stakeholders.

They consider how much water a region will need to meet future demand, the challenges and choices involved in meeting those needs, and the actions that need to be taken to manage water availability and security risks.

Figure 2 *Gwydir Regional Water Strategy: overview of strategy vision, objectives, water security challenges and priorities*



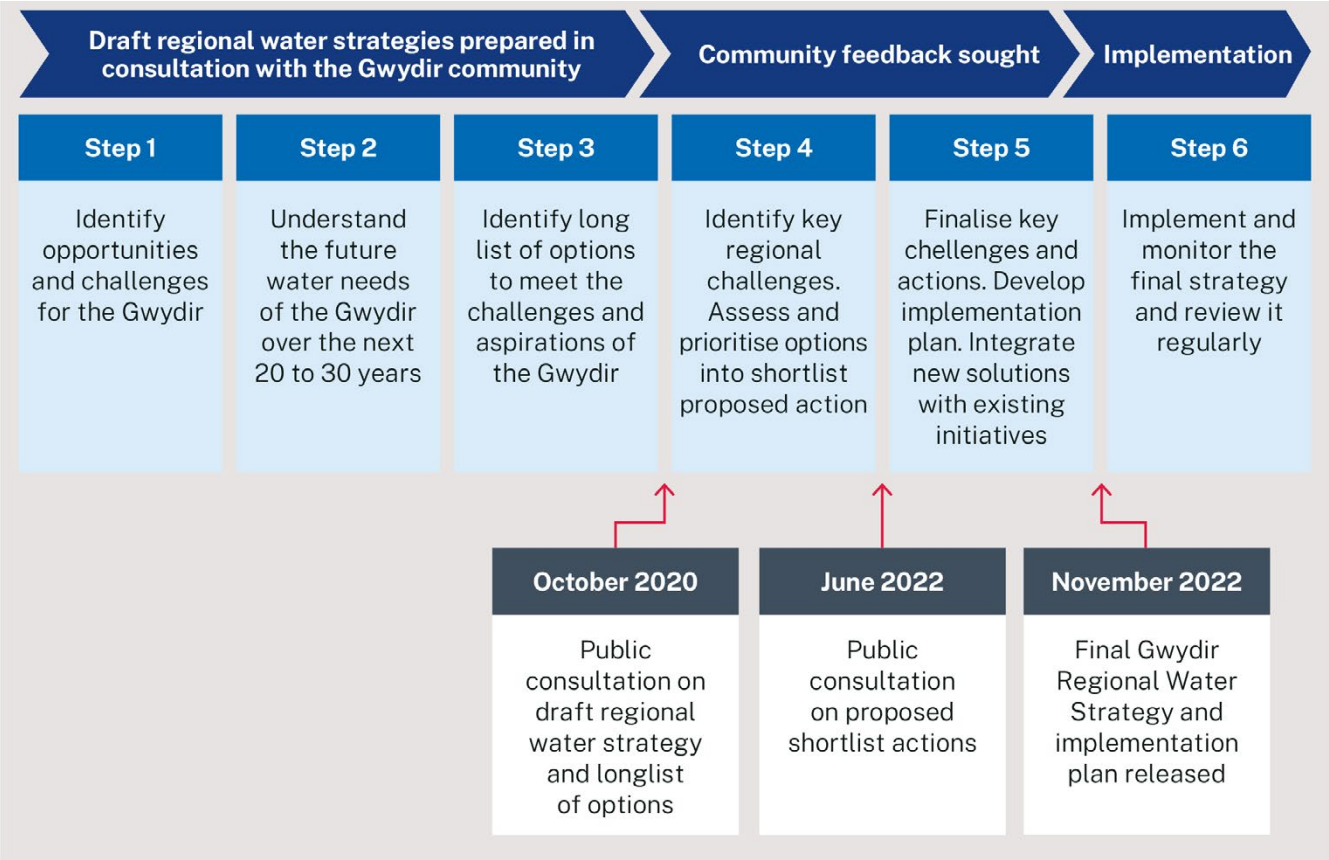
Consultation

The purpose of consulting with the community during strategy development was to share information and gather feedback to shape the strategy and implementation plan over a 3-year phased engagement approach.

How we engaged

The department has taken a staged approach to developing the Gwydir Regional Water Strategy (strategy) which has been informed by community engagement at each step.

Figure 3 *Regional water strategies implementation*



Public consultation phase 1 (September 2020)

The draft strategy was placed on public exhibition from 25 September to 13 December 2020. It included a detailed analysis of the challenges and opportunities in the region, as well as a long list of options the potential to address the challenges and opportunities.

The feedback received during public consultation phase 1, and the department's response to this feedback, is published in the Gwydir Region Draft Regional Water Strategy What We Heard (2021) report.

Following the first round of consultation, and further technical analysis and modelling, the long list of 40 options was distilled into a number of 3 priority areas and 22 shortlisted actions designed to address the water security challenges specific to the Gwydir region.

Public consultation phase 2 (June 2022)

A second draft strategy—comprising an Executive Summary and Consultation Paper—was placed on public exhibition from 1 June to 29 June 2022.

During Public Consultation phase 2, the department engaged with:

- Aboriginal communities
- Local councils
- Landholders
- Business and industry groups
- Peak organisations
- Community members and organisations.

A timeline of engagement activities is shown below:

Figure 4 *Public consultation phase 2 timeline of activities*

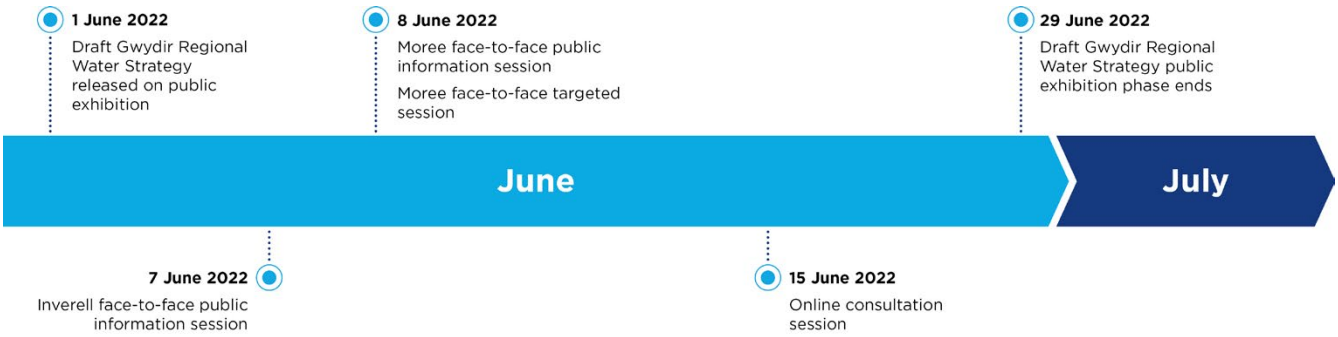


Figure 5 *Public consultation phase 2 engagement at a glance*

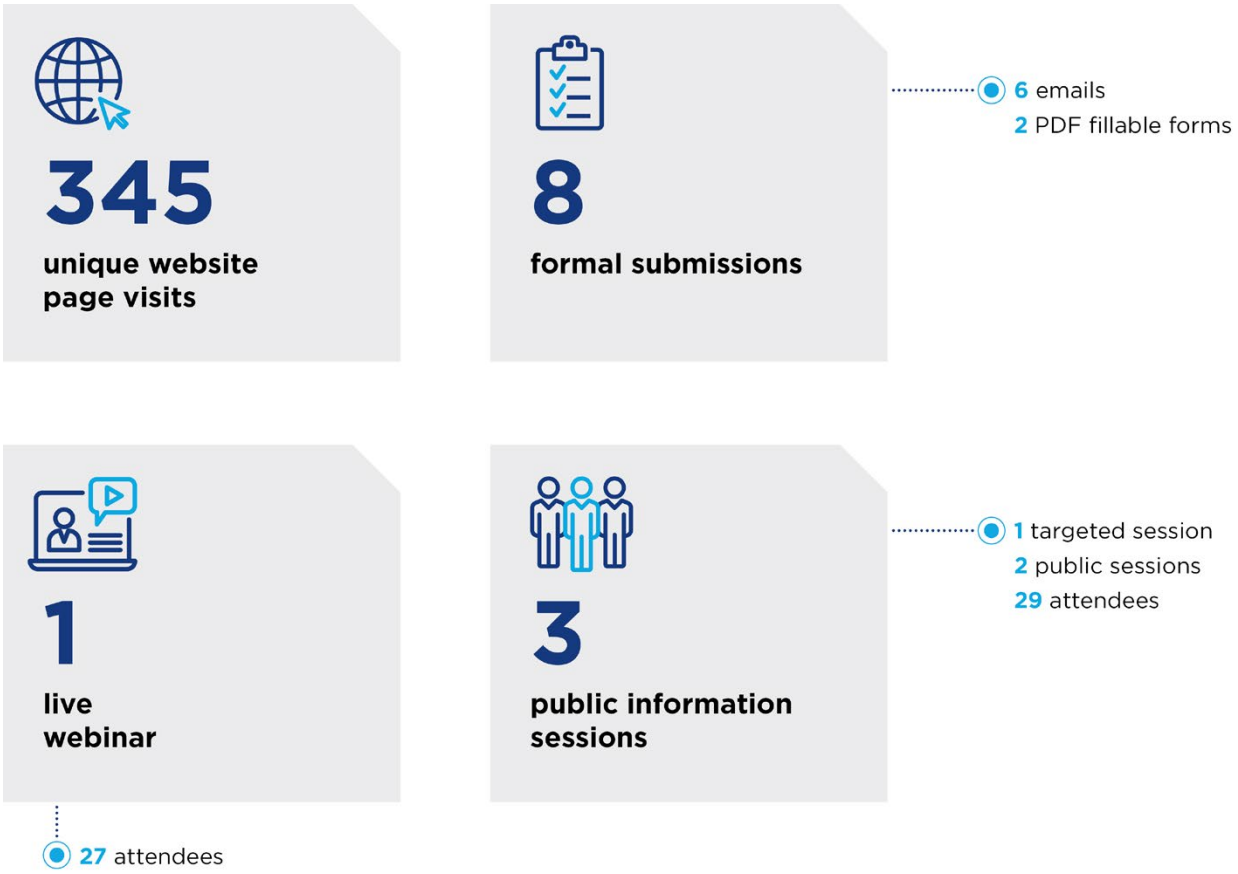
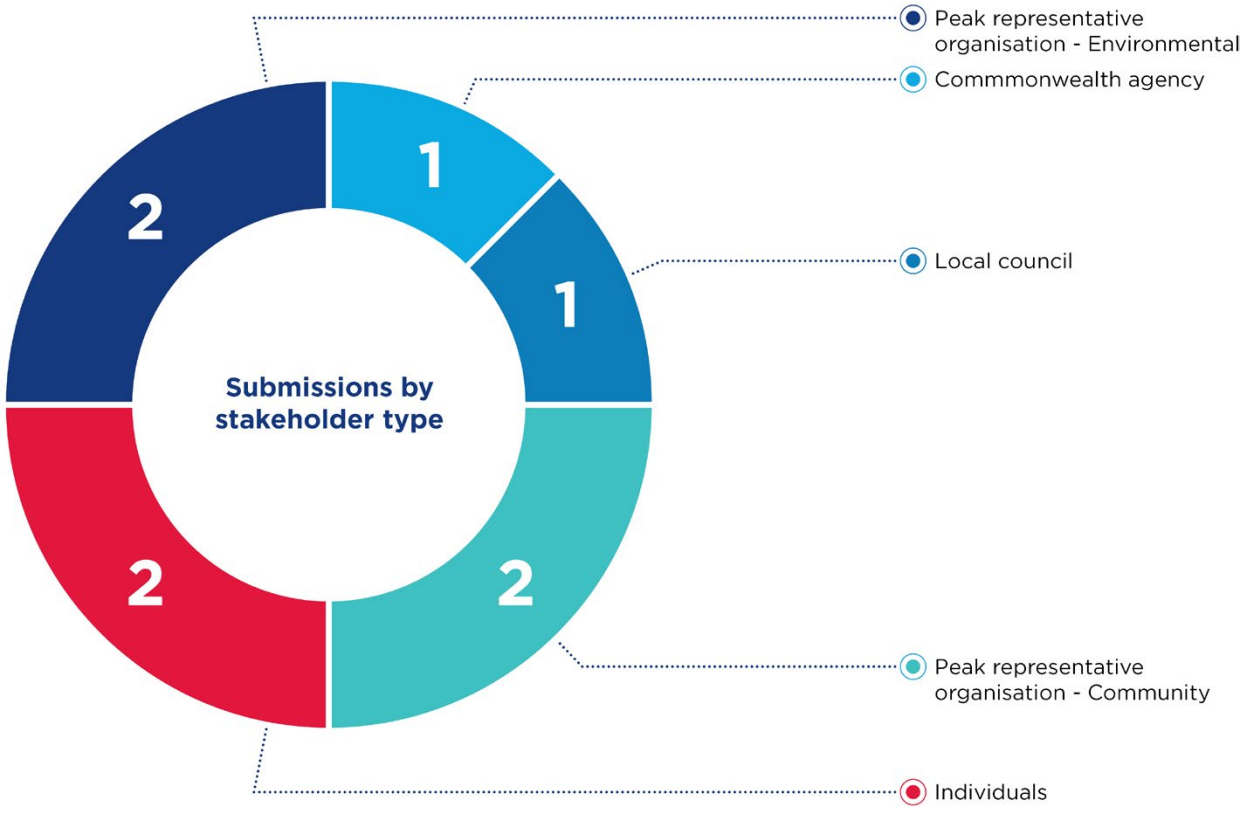


Figure 6 *Public consultation phase 2 overview of submissions by stakeholder type*



Summary of key themes raised

The department received a range of general feedback on the draft strategy. Themes broadly aligned with those raised during public consultation phase 1, with the exception of an additional two themes relating to improving connectivity within and between catchments and improving strategy implementation and oversight.

Table 1: *Summary of feedback by theme*

Theme	Public consultation phase 1	Public consultation phase 2
	**Climate and modelling** Stakeholders expressed interest in the development of the new climate data sets and updated modelling but raised some concerns about how it would be used in future decision making.	**Climate risks and modelling** There was support for improving the availability and accuracy of modelling and data. This was seen as particularly important to better manage environmental water flows and develop more efficient water use practices. Further investigation to better understand water flows, connectivity and groundwater recharge was recommended to increase the accuracy of modelling.
	**Aboriginal water rights and connection to Country** There was broad support for the recognition of Aboriginal people's water rights, interests and access to water. There was recognition that the inclusion of Aboriginal knowledge of land and water management could enhance the outcomes of many of the proposed options.	**Aboriginal knowledge, water rights and connection to Country** There was support for acknowledging and including traditional knowledge and expertise in developing water management policy. There was also strong support for increasing Aboriginal business opportunities, with limited access to the wetlands identified as a key barrier to achieving this.
	**New and existing water infrastructure** There were mixed views, with strong opposition to the proposed Lower Gravesend Dam and some support for cost-effective infrastructure that supports water security and reliability for communities.	**New and existing water infrastructure** Not progressing major infrastructure projects was generally supported.
	**Environment and ecosystem health** Strong support for protecting the environment and ecosystems. There was strong opposition to progressing with infrastructure options. Many stakeholders supported of water efficiency and water saving options, and improving water quality. Feedback focused on the need to consider downstream connectivity and end-of-system flow needs.	**Environment and ecosystem health** There was widespread support for taking a holistic, connected approach to catchment ecosystems, with a recommendation that additional consideration of the role that the wetlands play for migratory and semi-aquatic species. Identifying and remediating floodplain structures that impact the delivery of environmental water was a key priority.

Theme	Public consultation phase 1	Public consultation phase 2
	Improving connectivity was not raised as a key theme in public consultation phase 1.	**Improving connectivity** Connectivity was a major theme with broad support for actions that increased connectivity within and between catchments. Protecting connectivity was recognised as being vital for social and environmental health, with the remediation of floodplain structures that impacted the delivery of flows downstream noted as being of key importance.
	**Entitlement reliability and risk management** Comments related to potential climate change risks on future water availability and entitlement reliability. Stakeholders also emphasised the need to better understand the risks to develop appropriate mitigation strategies and to be better prepared for a possible future with less water.	**Water security, reliability and risk management** Improving urban and industry water efficiency was strongly supported, recognising that drought and dry conditions were likely to become more common due to climate change. However, there were also concerns about: • including water-intensive industries in economic diversification actions • increasing the availability of high security licences due to potential impacts on environment and other water users • fully implementing the NSW Floodplain Harvesting Policy.
	**Groundwater** Strong support for improving groundwater knowledge, particularly the relationship between surface water and groundwater sources. Concern that groundwater sources could be over-allocated and stressed in future extreme weather events.	**Sustainable use of groundwater** The role of groundwater in providing water security to small regional towns was recognised. There was widespread support for creating transparent policy to ensure that groundwater was managed and used equitably and sustainably. It was noted that the strategy should align with the NSW Groundwater Policy.
	Strategy implementation was not raised as a key theme in public consultation phase 1.	**Strategy implementation** There was a desire to see the final strategy put into action, with an emphasis on ensuring that there was clarity, consistency and alignment between the draft strategy and other relevant policy documents.

The following sections summarise the feedback received for each of these themes, as well as for the priorities and proposed actions identified in the strategy and consultation paper.

About this report

This report summarises feedback received during public consultation. The department received 8 formal submissions and over 50 people participated in engagement sessions about the strategy.

Feedback from formal submissions and fillable forms, as well as in-person feedback provided at public information sessions, is summarised in the following sections:

- Feedback by theme
- Feedback on challenges, priorities and actions
- Feedback on options not shortlisted
- Suggested additional actions.

In June this year, the department also commissioned market research to obtain a cross-section of Gywdir resident views on key actions outlined in the draft strategy. This feedback is reported separately in the Qualitative research section.

The department has also provided a Response to feedback which explains how the feedback received has been incorporated into the final Gwydir Regional Water Strategy and Implementation Plan. This is outlined in full at the conclusion of this report.

Feedback by theme

Image courtesy of James Faris, Department of Planning and Environment, Bunnor Waterhole, Gwydir Wetlands

Feedback by theme

Theme 1: Climate risks and modelling

Feedback focus: Provide accessible information and modelling to better understand the flow of water through the catchment and to predict and prepare for future climate risks.

There was support for improving the availability and accuracy of modelling and data. This was seen as particularly important to better manage environmental water flows and develop more efficient water use practices. Further investigation to better understand water flows, connectivity and groundwater recharge was recommended to increase the accuracy of modelling.

Support	Concern
Accuracy of forecasting While there was acknowledgement of the significant improvements in water modelling, it was noted that forecasting always needs to be considered with some caution and carefully interpreted due to the range of data sources. There was widespread support for investing in continuously improving the accuracy of water modelling to support more efficient water management. It was recommended that further work to understand the connectivity between the Mehi and Carole Creek systems into the Barwon-Darling would increase model accuracy.	**Use of modelling and data** Concern about whether modelling used to protect the needs of the community and environment could be trusted. Water users stated that the current forecasting was not accurate enough for them to rely on, and the variability of the climate means that forecasting methods will always be subject to a high level of uncertainty. As a result, they will wait until water is in their accounts before making any business/water use decisions.
Access to modelling and data Strong support for making information on the impacts of climate change and in-event flow forecasting available, including for use beyond industry and business.	**Access to modelling and data** Concern that the volume of tributary inflows assigned to Tributary Utilisation Rates had not been made available.
Understanding water flow in the catchment It was noted that flooding is one of the biggest risks to business, with support for better flood mitigation modelling. Support for improving hydraulic and hydrodynamic modelling to better understand low flows and inform better environmental water management. Using existing public remote sensing datasets and emerging remote sensing technologies was recommended to enhance understanding of water flows during wet periods.	

Theme 2: Aboriginal knowledge, water rights and connection to Country

Feedback focus: Increase participation of Aboriginal people in water management and opportunities for Aboriginal-owned and led businesses and place-based initiatives.

There was support for acknowledging and including traditional knowledge and expertise in developing water management policy. There was also strong support for increasing Aboriginal business opportunities, with limited access to the Gwydir Wetlands identified as a key barrier to achieving this.

Support	Concern
Aboriginal water rights Support for improving better water outcomes for Aboriginal people, noting that Aboriginal people's water rights need to be reflected in all of the objectives.	**Adequate consultation** It was suggested that an interim Aboriginal Water Strategy be developed to give time for further consultation with Aboriginal stakeholders to identify all cultural impacts.
Cultural water Creating licences specifically for the use of cultural water to enable Aboriginal communities to manage water to support their local values and sites was recommended. Improving the health of the catchment and increasing water security was recognised as essential to improving outcomes for Aboriginal people.	**Access to Gwydir Wetlands** The deep spiritual and historical connection between Aboriginal people and the Gwydir Wetlands was emphasised, as well as the need to allow for greater involvement of traditional owners in managing the Gwydir Wetlands. Concern that Aboriginal people were not able to access parts of the Gwydir Wetlands that held cultural significance. This was noted as a key barrier to business and recreational opportunities.
Tourism and business Strong support for improving business opportunities for Aboriginal people. The development of an Aboriginal-led tourism industry was mentioned as having potential. Providing training and development programs, such as partnerships combining existing businesses with Aboriginal knowledge, was identified as being critical to achieving this.	
Collaboration It was noted that collaboration between Aboriginal and non-Aboriginal communities was essential to build resilience.	

Support	Concern
Consultation and participation Strong support for improving consultation with Aboriginal communities and increasing representation of Aboriginal people in water management.	

Theme 3: New and existing water infrastructure

Feedback focus: Assess the impact of new and existing infrastructure and clearly communicate the costs and benefits.

Not progressing major infrastructure projects was generally supported.

Support	Concern
Major infrastructure General support for not progressing with the construction of Gravesend Dam and other major infrastructure works, such as enlarging Tareelaroi Weir. This was primarily due to concerns that these would disrupt the natural hydrology and ecology of the region. Support for investigating how upgrades to Tareelaroi Weir could improve water delivery to the Mehi and Carole systems from Copeton Dam.	
On-farm dams Support for adopting more efficient on-farm water storage practices to reduce pressure on groundwater. This included the recommendation to increase on-farm storage heights to enable the storage of several years' water. There were also suggestions to consider how existing private on-farm storages could be used collaboratively with state water managers and environmental water holders to more efficiently deliver water to the lower ends of the river system.	

Theme 4: Ecosystem health and water quality

Feedback focus: Take a holistic approach to understanding and improving the health of the catchment's ecosystems.

There was widespread support for taking a holistic, connected approach to catchment ecosystems, with a recommendation that additional consideration of the role that the wetlands play for migratory and semi-aquatic species. Identifying and remediating floodplain structures that impact the delivery of environmental water was a key priority.

Support	Concern
Holistic approach to the catchment General support for ensuring that the strategy adopts an holistic perspective to managing the catchment. There were suggestions to consider semi-aquatic and migratory wildlife, years between high and low flows, and the overall health of the river beyond adding more water.	**Block releases** Concern over the role of block releases during dam and drought operations with the potential impact on the flow regime of the system.
Native vegetation It was noted that the river needs the right vegetation, with support for reintroducing native trees and plants.	
Fish and river ecosystem Strong support for introducing measures that protect fish health. Ensuring that fish movements were enabled both upstream and downstream and considering the life cycles of smaller fish species were noted as important. To support this action, the removal of floodplain structures that impact fish health, installing fish diversion screens and the measurement and mitigation of coldwater pollution were identified as critical.	

Support	Concern
Environmental water Environmental water requirements and the use of held environmental water were widely discussed. It was requested that new rules be developed to ensure that environmental water needs were met, with conservation areas and ecosystems that rely upon fresh water supply guaranteed supply through their Plans of Management. Consideration of the floodplain was also recommended.	
Remediating floodplain structures Strong support for remediating unapproved floodplain structures.	
Environmental health Widespread support for protecting and rehabilitating significant environmental regions, with concern over the negative impacts that clearing and infrastructure have had on the environment. It was also recommended that greater attention and resourcing be given to areas previously identified in Catchment Management Plans, and to commence remediation and protection activities as soon as possible. Support for only using Held Environmental Water (HEW) during dry periods.	

Theme 5: Improving connectivity

Feedback focus: Undertake actions that protect and improve connectivity within and beyond the catchment.

Connectivity was a major theme with broad support for actions that increased connectivity within and between catchments. Protecting connectivity was recognised as being vital for social and environmental health, with the remediation of floodplain structures that impacted the delivery of flows downstream noted as being of key importance.

Support

Improving the connectivity of the catchment

Strong support for improving connectivity in the region, with an emphasis on ensuring that any changes were fair.

Connectivity was recognised as being of vital importance for ecological and social wellbeing.

This was commonly identified as the key priority for the region, and which needed to be implemented prior to the finalisation of floodplain harvesting licences.

It was recommended this included an assessment of 'hot spot' structures identified in the Gwydir Floodplain Management Plan and considered approved floodplain structures that have a major impact downstream.

Support for increasing awareness on the impacts of the Western Regional Water Strategy to connectivity within the Gwydir and Border Regions catchments.

It was recommended that the draft Strategy give more consideration to water across all catchments, with further consultation on these issues supported.

Some stakeholders suggested that end-of-system flow targets and triggers for cease-to-pump be used to improve connectivity with Barwon-Darling.

Support was expressed for including Aboriginal water rights in the development of triggers.

Support for using rules rather than temporary water restrictions to provide water users with greater certainty. However it was noted that rules may not always be applicable and that temporary restrictions were useful at certain times.

Concern

Gwydir flow contribution

Concern at a statement in the strategy that Gwydir flows make up approximately 6% of water in the Barwon-Darling river system, as previous assessments have estimated closer to 12%.

Support	Concern
North-West Flow Plan Support for implementing North-West Flow Plan rules when their trigger conditions are met and for developing new rules to enable all Environmental Watering Requirements to be met.	**Closed systems** It was noted that the Lower Gwydir and Gingham watercourses were closed systems and that diverting water through the Mehi and Carole rivers would provide greater benefit.
Cultural Water Strong support for recognising the needs and traditional knowledge of Aboriginal people, noting that cultural water needed to be included in the discussion on connectivity.	**Menindee Lakes** General concern expressed over the 195 GL trigger in Menindee Lakes, which was seen to be too low to produce social and environmental benefits in times of river stress and would have a negative impact downstream. Concern that connectivity would be influenced by the water management policies of neighbouring regions.
	Clarity on first flush access Request for greater clarity around rules and access arrangements for unregulated users and first flush rules.
	Environmental water Concern that using HEW to meet connectivity objectives would be difficult as its delivery capacity is restricted.

Theme 6: Water security, reliability and risk management

Feedback focus: Identify efficient, locally-appropriate opportunities to manage water risk and reliability.

Improving urban and industry water efficiency was strongly supported, recognising that drought and dry conditions were likely to become more common due to climate change. However, there were also concerns about:

- **including water-intensive industries in economic diversification actions**
- **increasing the availability of high security licences due to potential impacts on environment and other water users**
- **fully implementing the NSW Floodplain Harvesting Policy.**

Support	Concern
Drought operations General support for providing clarity and certainty for environmental needs during drought operations, with the recognition that droughts are likely to become more extreme due to climate change. Support for updating the Gwydir Incident Response Guide and preparing a Gwydir Valley Drought Management Plan to clarify when, how and why drought operations are triggered. It was recommended that planning be undertaken for flood periods, to ensure that when surplus water was available it could be used productively.	**Drought operations** Concern that water use for businesses was included in the management of drought operations. Respondents stated the importance of prioritising critical human and environmental needs above industry in periods of severe drought under the *Water Management Act* (2000).

Support	Concern
High security licences Support for limiting high security licences to entitlements along the Gwydir to establish small permanent crops or other plantings to diversify income.	**High security licences** Strong opposition to increasing the availability of high security licences and converting low security licences to high security. This was primarily due to the view that this would have a major impact on the environment by decreasing the amount of environmental water available and impacts to the reliability of remaining general security licences, particularly during drier periods. Concern that increasing high security licences was not feasible for the area given the inconsistency of flows and high security licences have traditionally been difficult to utilise during drought periods. Concern that the diversion of water to certain areas would disrupt connectivity flows and decrease the availability of water for other users in water sharing arrangements. Concern was expressed that keeping water in too small an area increases the likelihood of crop disease.
Diversification and economic resilience General support for enabling diversification and resilience initiatives. However, there were queries about whether industries other than agricultural industries could survive in the region. Support for identifying appropriate water efficient industries for the region, such as industrial hemp.	**Diversification and economic resilience** Suggestions that efforts to diversify industries should not focus on permanent water-intensive industries, such as nut plantings.
Recycled water General support for trialling recycled water options as they become more economically viable.	**Event-based trade of supplementary flows** Mixed response to enabling event-based trade of supplementary flows, with concern that environmental impacts must be fully considered and assessed, and that event-based trading could be difficult to measure and administer properly.

Support	Concern
Town water efficiency Strong support for initiatives that improve the management and efficiency of town water use and reduce demand.	**Floodplain harvesting** There were concerns that the proposed Floodplain Harvesting licensing framework would not effectively protect environmental needs because it: • locks in an environmentally unsustainable level of water diversion from floodplains and downstream • allows for 5 years of entitlement to be captured at once • excludes rainfall runoff from licences • proposes to licence works prior to the removal of unapproved floodplain works. If pursued, it was noted that floodplain harvesting would need to be rigorously monitored, with clear cease-to-flow triggers in environmentally sensitive areas such as Gingham, Lower Gwydir, Mallowa and Ballin Boora.
Industry water efficiency Further assessment of emerging industries, such as subsurface irrigation technologies and evaporation control options such as floating solar farms, was considered important.	**Urban water reliability** Concern that councils would have difficulty implementing water reliability and efficiency measures due to resourcing challenges.
Urban water reliability and security General support for increasing water reliability to towns, with the recognition that this plays a key role in creating economic opportunities (especially as part of the Moree Special Activation Precinct).	
Copeton Dam drought reserves Support for investigating how much water should be set aside in Copeton Dam for dry periods. It was noted that storage management and allocations would need to be reviewed to account for climate change impacts.	**Copeton Dam drought reserves** Concern that reserving water in Copeton Dam for dry periods could have a negative impact on connectivity flows if this was applied too regularly. It was recommended that this should only occur during extreme dry conditions.

Theme 7: Sustainable use of groundwater

Feedback focus: Develop clear guidelines for the sustainable and equitable use of groundwater.

The role of groundwater in providing water security to small regional towns was recognised, there was widespread support for creating transparent policy to ensure that groundwater was managed and used equitably and sustainably. It was noted that the strategy should align with the NSW Groundwater Strategy.

Support	Concern
Groundwater policy The reliance of smaller towns on groundwater was recognised, with a need to ensure water security and quality is maintained. Widespread support for developing transparent and consistent policy on the sustainable use of groundwater. It was noted that this policy must recognise ecologically sustainable limits and assess the relationship between groundwater, surface water and first flush flows.	**Demand, access and security** Concern over the ability of local government to meet increased demand for groundwater while resources were depleting.
Managed Aquifer Recharge (MAR) Support for MAR, conditional on further investigation into the costs and benefits, where water would be extracted from and flow to, and information what this action (Action 2.5) would mean for water users and the environment. Support for fast tracking the regulatory framework for MAR, and investigating and modelling recharge of groundwater aquifers, and what this would look like in practice.	**Managed Aquifer Recharge (MAR)** Concern that the development of the NSW Groundwater Strategy should be completed prior to the finalisation of any actions relating to MAR.
Water quality Support for improving groundwater quality through treatment.	

Theme 8: Strategy implementation

Feedback focus: Ensure that the final strategy assesses a range of factors when determining implementation, evaluation and review.

There was a desire to see the final strategy put into action, with an emphasis on ensuring that there was clarity, consistency and alignment between the draft strategy and other relevant policy documents.

Support	Concern
Implementation Support for implementing the strategy and progressing actions beyond 'identify'.	**Clarity and drafting** There was concern from some that the language used in the strategy is unclear and does not promote accountability. It was suggested that the term 'least-cost' could be reworded in way that better emphasises value.
Further consultation Support for further consultation on key issues, such as those relating to connectivity across regions. It was recognised that engaging with a balance of stakeholders was essential to ensure that everyone, not just landholders, contributed to the outcomes of the strategy.	
Policy alignment and reference General emphasis on the need to align the strategy with other documents that were currently being developed. These primarily included the NSW Groundwater Strategy and the Aboriginal Water Strategy. Other documents referenced included the Murray Darling Basin Fish Strategy, the Town Water Risk Reduction Program and the Water Efficiency Framework and Program. Connectivity was also recognised as a key objective within the Basin Plan, and an expected outcome of the Basin-wide Environmental Watering Strategy.	

Feedback on challenges, priorities and actions

Image courtesy of Department of Planning and Environment. Windmill, Warialda NSW

Feedback on challenges, priorities and actions

The strategy identifies 5 water-related challenges specific to the Gwydir region. It identifies 3 priority areas to address these challenges:

1. Water for critical human and environmental needs
2. Sustainable water resources for new and existing users
3. Best use of existing water for the environment

This section summarises the feedback that was received during public consultation phase 2 about these priorities and actions. It has been collated from submissions, survey-style fillable forms and engagement session inputs.

However, it should be noted that indications of support for specific priority areas and actions reflect the sentiment of those who explicitly referenced this in their feedback. It does not indicate general support from all who made a submission, completed a fillable form or provided input at engagement sessions.

Priority 1: Water critical for human and environmental needs

The actions shortlisted under this priority will:

- Support local councils to provide secure and affordable town water supplies that are resilient to changing climate conditions
- Review how we share water considering long-term climate forecasts
- Improve flows from the Gwydir region for needs in the Barwon-Darling River.

There was strong support for ensuring that water for critical human and environmental needs was available. Urban water efficiency was noted as being important, with support for a range of measures to reduce residential and industrial water demand. Developing transparent, sustainable groundwater policy was also noted as being important to achieve this; however, there was some concern that local government was not adequately resourced to implement water efficiency measures and improve water security as groundwater levels decline.

Actions nominated by respondents as those they felt should be implemented first are denoted as such in the table below.

Actions		Comments
1.1	**Investigate source augmentation for Uralla's water supply**	There was support for all measures aimed at making supply of water to urban areas more efficient, with some submissions applauding the inclusion of the results of the Z-Net Uralla project. Recycling water was identified as an option for improving regional water use efficiency and reducing reliance on groundwater. There was support for encouraging local government to reduce water demand at all levels. However, there was also concern that council would struggle to implement water efficiency measures due to resourcing challenges. State government assistance was requested to achieve this.

Actions		Comments
1.2	**Support urban water efficiency measures in Moree**	There was support for all measures aimed at making supply of water to urban areas more efficient. Recycling water was identified as an option for improving regional water use efficiency and reducing reliance on groundwater. There was support for encouraging local government to reduce water demand at all levels. However, there was also concern that council may struggle to implement water efficiency measures due to resourcing challenges. State government assistance was requested to achieve this.
1.3	**Develop and publish clear policy on how the region's groundwater resources will be managed sustainably into the future**	There was support for finalising the NSW Groundwater Strategy prior to developing regional policy on groundwater use. It was also noted that any groundwater policy must comply with the *NSW Water Management Act* 2000. There was some concern about whether local councils would be able address water security and demand challenges in the face of declining groundwater levels. Sustainability and transparency were identified as critical to the development of any groundwater policy. It was recommended that further investigation into groundwater processes be undertaken as reliance on this water source will increase in a drier future climate.

Actions	Comments
1.4 Investigate ways to improve connectivity with the Barwon-Darling River on a multi-valley scale	Connectivity to Menindee Lakes and the Barwon-Darling was supported; however, it was noted that water management policies of surrounding catchments should also be taken into account. Connectivity outcomes were identified as being particularly important for environmental and ecological health, such as maintaining healthy refuge pools during dry times. Gwydir in particular was recognised as being a key contributor to these flows. The 195 GL trigger in Menindee Lakes was viewed as too low to achieve benefits lower in the catchment. It was recommended that strong end-of-system flow targets and triggers for cease-to-pump events be used to improve connectivity across the region. It was recommended that T3 flows should be investigated, with emphasis on the Lower Gwydir and Gingham systems. There were mixed views on the use of HEW to support connectivity outcomes. Some stakeholders suggested that HEW should not be used to provide base flows in regulated systems or for town water supply in unregulated systems. Other stakeholders suggested that it should be the role of HEW to support connectivity outcomes with the Barwon-Darling. It was emphasised during information sessions that any connectivity actions must demonstrate a measurable outcome. There was general support for rules-based changes over temporary water restrictions. It was suggested that the impact of connectivity targets on water sharing plans and licences be investigated before floodplain harvesting entitlements are finalised. It was requested that an investigation into whether Barwon-Darling Long-Term Watering Plan environmental water requirements were met as a result of the embargo on Supplementary and Barwon-Darling licences in 2007 and 2008, and the impact that restricting floodplain harvesting would have had. Concern at a statement in the strategy that Gwydir flows make up approximately 6% of water in the Barwon-Darling river system, as previous assessments have estimated closer to 12%. *This action was nominated as a priority for implementation.*

Priority 2: Ensure water resource development and use is sustainable and equitable

The actions shortlisted under this priority will:

- facilitate access to higher security, or alternate sources of water, while observing legislated limits to take
- explore opportunities to make sure the water entitlement and access framework can cater to the development of emerging industries
- support Aboriginal people to be more involved in water management, by both sharing their traditional knowledge and contributing to decision making.

There was widespread support for investing in information and initiatives to help people make better decisions about water use. Ensuring that environmental outcomes did not come at the cost of efficiency was important to some, with mixed views about increasing event-based trade of supplementary events. There was opposition to increasing the availability of high security licences, with concern that this would impact other licences and the environment. Improving the participation of Aboriginal people in water management to improve self-determination and cultural outcomes was widely supported.

Actions nominated by respondents as those they felt should be implemented first are denoted as such in the table below.

Actions		Comments
2.1	**Improve public access to climate information and water availability forecasts**	There was support for improving the transparency and currency of climate information and water availability forecasts. It was noted that this should be provided to all in the community, not limited to businesses. There was also interest in accessing the volume of tributary inflows assigned to Tributary Utilisation Rates.
2.2	**Support adoption of on-farm water efficiency measures**	On-farm water efficiency measures were supported; however, it was noted that this should not come at the cost of fish health and floodplain integrity. There was interest in exploring subsurface irrigation technology rather than flood irrigation. Evaporation control was also a key issue and was often discussed in relation to on-farm storages. Floating solar farms was proposed as a potential solution to manage this issue. There was also interest in exploring regenerative agricultural techniques.
2.3	**Assess the potential costs and benefits of event-based trade of supplementary flows**	While there was some support for this action, respondents were keen to understand how this would impact downstream users, long-term average environmental share, and the environment. Other stakeholders suggested that addressing administrative issues around trading in the Gwydir region should be completed before this action is implemented. Request for further information about type of supplementary flows being proposed and for this action to also consider unregulated flows. *This action was nominated as a priority for implementation.*

Actions		Comments
2.4	**Increase the availability of high security water access licences**	There was some support for this action due to its potential to support the Moree Special Activation Precinct; however, most people opposed it due to fears it could negatively impact the environment and reliability of supply for other users. As environmental water is held under general licensing, there was concern that industrial uses were being prioritised over the environment. There was also concern that this could impact other general licences and reduce connectivity by concentrating water in certain areas.
2.5	**Investigate managed aquifer recharge in the Gwydir region**	There was support for this action, conditional on it being implemented following the development of the NSW Groundwater Strategy. More information was requested around how this would be implemented, including where the water would come from and resulting environmental impacts. Some stakeholders suggested fast tracking a MAR regulatory framework.
2.6	**Develop ongoing arrangements for participation of local Aboriginal people in water management**	There was strong support for actions that recognised and respected the knowledge and needs of Aboriginal people. Encouraging Aboriginal business opportunities and youth training initiatives was seen as important. It was suggested that a first step towards implementing these actions should be to establish capacity building partnerships. Creating licences designed to allow Aboriginal people to manage water to realise cultural and economic benefits was supported. *Action 2.6 and 2.7 were nominated as priorities for implementation.*
2.7	**Support place-based initiatives to deliver cultural outcomes for Aboriginal people**	
2.8	**Support Aboriginal business opportunities in the Gwydir region**	
2.9	**Ensure the water management framework can support sustainable economic diversification**	There was support for encouraging the diversification of regional industries. However, it was noted that these should be locally appropriate and not include water-intensive industries. There were queries about what level of diversification can be achieved given new government investments, such as the Moree Special Activation Precinct, that rely on the agricultural base of the region. It was recommended that emerging and water-efficient industries be recognised and supported.

Priority 3: Best use of existing water for the environment

The actions shortlisted under this priority will:

- reduce the impact of infrastructure on water-dependent ecosystems and species
- reduce constraints that limit what can be achieved from water for the environment
- amend river operations so water in the system can achieve multiple benefits.

There was support for achieving better environmental outcomes across the catchment. Removing high priority unapproved floodplain structures that had an impact on downstream users and local ecology was commonly raised as being the priority action for the region. There were concerns around implementing the Floodplain Harvesting Policy in its current form as it was not viewed to be environmentally sustainable and lacked mechanisms to ensure compliance.

Actions nominated by respondents as those they felt should be implemented first are denoted as such in the table below.

Actions		Comments
3.1	**Fully implement the NSW Floodplain Harvesting Policy**	Some stakeholders opposed this action in its current form due to a concern that it would not result in environmentally sustainable outcomes and would adversely impact catchment ecology. This included preventing the replenishment of off-channel drought refugia and the ecological role that these refugia play. It was recommended that the removal of 'hotspot' or unapproved floodplain structures should occur prior to granting floodplain licences. Ensuring that the environmental and social impacts of floodplain harvesting are fully understood and accompanied by strong monitoring and measurement tools were seen as critical to successfully delivering this action. *This action was nominated as a priority for implementation.*
3.2	**Invest in continuous improvement to water modelling in the Gwydir region**	This was supported as a way of better understanding and maintaining critical environmental values and help water managers to efficiently use limited resources. This included better understanding of low flows across wetland systems to inform environmental water management and building a more comprehensive understanding of connection flows from Mehi and Carole Creek into the Barwon-Darling.
3.3	**Provide clarity and certainty for environmental needs during drought operations**	There was support for this action to protect the critical needs of the environment and people, as required under the *Water Management Act* 2000. Support for updating the Gwydir Incident Response Guide and preparing a Gwydir Valley Drought Management Plan to help identify drought conditions. *This action was nominated as a priority for implementation.*

Actions		Comments
3.4	**Mitigate the impact of water infrastructure on native fish**	There was strong support for initiatives aimed at improving fish passage, including: removing floodplain structures, installing fish diversion screens, and mitigating cold-water pollution.
3.5	**Identify regionally significant riparian, wetland and floodplain areas to protect or rehabilitate.**	This action was supported, noting that priority areas had been previously identified in Catchment Management Plans. Providing greater resourcing to implement the findings of these plans was recommended. There was support for not increasing infrastructure such as dams and weirs, and for implementing stronger land-clearing and floodplain management regulation, and rules in Water Sharing Plans to protect environmental water. *This action was nominated as a priority for implementation.*
3.6	**Remediate unapproved floodplain structures**	This was viewed as a top priority for the region, with submissions noting that this should be finalised before floodplain harvesting works occur. There was concern that these structures redirect environmental flows away from areas that need them. It was recommended that this action also include the removal of 'hotspot' structures that were identified in the Gwydir Floodplain Management Plan, and where approved floodplain structures impact neighbours or downstream ecosystems. *This action was nominated as a priority for implementation.*
3.7	**Modify or remove physical and operational barriers to delivering water for the environment in the western Gwydir catchment**	This action, including the implementation of the Gwydir Reconnecting Watercourse Country project, was supported. *This action was nominated as a priority for implementation.*
3.8	**Protect ecosystems that depend on groundwater**	This action was supported.
3.9	**Assess gaps in the flow regime that are preventing achievement of environmental water requirements and identify cooperative actions to reinstate them**	This action was supported. *This action was nominated as a priority for implementation.*

Feedback on options not shortlisted

Some respondents provided feedback on actions that had not been shortlisted from the original long list:

Options	Feedback
Option 1 Enlargement of Tareelaroi Weir	There was general support for not shortlisting options 1 and 2.
Option 2 New Lower Gravesend Dam on the Gwydir River downstream of Warialda Creek	

Suggested additional actions

Some respondents nominated additional actions for consideration as part of the feedback process:

Actions	Feedback
Conservation areas	Support for ensuring that supply of environmental water is embedded into Plans of Management for conservation areas/ RAMSAR sites that contain freshwater dependent ecosystems.
Flood water management	Support for developing water sharing plans that address how to make better use of flood and surplus water during wet periods, as well as how to manage water during dry periods.
Copeton Dam reserve	Support for investigating how much water should be set aside in Copeton Dam for dry periods and for investigating the policy on depleting Copeton Dam during years of low rainfall.
Use of private on-farm infrastructure	Support for collaboratively using private on-farm storages to more efficiently deliver water to the end of the system, or hold water for environmental needs at certain times.

Qualitative research

This is an image from the Border Rivers. Image courtesy of Bron Powell, Department of Primary Industries - Fisheries. Macintyre River, NSW

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Qualitative research

In June 2022, the department commissioned market research with 22 Gwydir residents to obtain a cross-section of views on key actions outlined in the strategy. This qualitative research comprised 2 online group discussions with participants between the ages of 25 and 44, and 2 online group discussions with participants aged between 45 and 65.

Research participants also met the following criteria:

- Permanent residents or residents who had lived in the region part-time for over 10 years
- Approximately even mix of females and males per group
- Good mix of ages within the age ranges specified
- Participants from culturally and linguistically diverse and Aboriginal or Torres Strait Islander backgrounds
- A shared interest in Gwydir regional water management issues
- Did not include people who had already participated in previous stakeholder consultation about the strategy.

The market research focused on a subset of the shortlisted actions in the Draft Gwydir Regional Water Strategy: Consultation Paper. A summary of participant feedback is provided below.

Gwydir region qualitative research outcomes

Key themes raised

Action 1.1: Support urban water efficiency measures in Moree

Residents understand the overall aims, but many struggle to understand what the proposed actions are, due to the language and terminology used:

- many don't understand what a 'framework' is nor what a 'water efficiency framework' would entail
- a good proportion questioned what a 'diversified portfolio of water sources' means and some misinterpret it

Regardless of comprehension issues, the action's underlying intent resonates with residents because:

- they agree that a secure and resilient water supply for residents and industry is critical
- they believe there is a need to conserve groundwater (and use it efficiently) due to the critical role that groundwater plays in Gwydir
- they agree that it would be wise to investigate and develop other water sources to help 'future-proof' the town

But the language and level of detail provided around the action, and residents' perceptions of council, trigger cynicism:

- many residents feel that the language used to describe the proposed action is hard to understand and lacking in substance
- many have a poor relationship with council and government which drives criticism and suspicion

Key themes raised

Action 1.4: Investigate ways to improve connectivity with the Barwon-Darling River on a multi-valley scale

Residents with connections to the land better understand this action than other residents do.

While the overall aim seems worthy, many of the proposed actions seem disconnected from residents' concerns:

- Residents living in towns are very concerned that the connectivity options could harm Gwydir's economy because they believe it will harm Gwydir's agricultural industry
- Landholders see the options as being harmful in that flooding caused by free-flowing rivers and environmental flows could leave them with valuable productive land under water.

Residents' concerns with this proposed action leads them to question its credibility:

- Landholders believe that their productivity will suffer from too little, or too much water
- Town-based residents tend to side with landholders and believe it could harm the agricultural sector, and therefore the economy
- Many landholders believe that some of the proposed options will be ineffective, particularly water licence 'buy backs' in particular
- Some criticise government's ability to deliver due to a poor relationship with government and cynicism around the relationship between 'party politics' and water
- Some believe that the environmental benefits can't be fully realised without the co-operation of the other Murray-Darling basin states.

Action 2.1: Improve public access to climate information and water availability forecasts

Residents have a reasonable understanding of the overall idea but are unsure how the information will be different to that which already exists.

Many residents also question the quality of the information, and landholders worry about how it will be used:

- Residents question whether government can deliver accurate information. Negative beliefs about government, and specifically the Bureau of Meteorology's funding, resources, modelling and forecasts, were used to justify these doubts
- Landholders worry that the data will be used to justify decisions/regulations that disadvantage farmers, or that it will lead government to rely on the data and consult with and listen to landholders less frequently.

Key themes raised

Action 2.7: Support place-based initiatives to deliver cultural outcomes for Aboriginal people

Residents have a fair understanding of this action, but some terminology is unclear (e.g. 'placed-based initiative').

The action's underlying aims resonate well with many residents because they agree that:

- Aboriginal knowledge and tradition needs to be recognised and respected
- Projects should be led by Aboriginal organisations and communities in the region
- Culturally significant sites should be protected
- Aboriginal people have traditional knowledge to care for and manage waterways, and that water is an important part of their cultural practice
- Private land ownership can prevent Aboriginal people from accessing water.

Residents are open to place-based initiatives but have several questions that they want satisfied, particularly around governance and outcomes.

Action 2.8: Support Aboriginal businesses opportunities in the Gwydir region

The broad aim is understood, but the connection between business opportunities and water is unclear to many non-Indigenous residents.

The aim resonates well, but the lack of detail makes it hard for many residents to assess its value to the community without more examples of the types of Aboriginal business opportunities this might support.

Many residents question whether the proposed action will deliver its intended outcomes, and some are suspicious about what it means for their water entitlements:

- Many agree that Government-funded programs in the past have not delivered economic or social outcomes for Aboriginal people
- Landholders are also concerned that this may lead to purchase of water entitlements and what it may mean for them.

Key themes raised

Action 3.5: Identify regionally-significant riverbank, wetland and floodplain areas to protect or rehabilitate

The aim is understood by most, but residents make assumptions about the types of actions that may be implemented to achieve it:

- Most residents imagine that restoration of riparian areas, wetlands and floodplains will involve the restoration of native plant and animal species, and improvement in water quality
- But landholders also assume that the restoration will involve a strong emphasis by Government on the frequency and volume of environmental flows which concerns them greatly.

The action is therefore relevant, but primarily due to residents' concerns around it (rather than agreement with it).

Landholders, in particular, are highly critical of the proposed action:

- They believe government prioritises environmental outcomes over agriculture
- They have poor trust in government and assume that some of these actions will be harmful to their livelihood—due to the assumption that it will involve damaging environmental flows
- They feel that government has not properly consulted nor genuinely listened to their concerns when it comes to these types of actions
- They typically believe that government tends to forge ahead with actions of this type regardless of landholder concerns.

Response to feedback

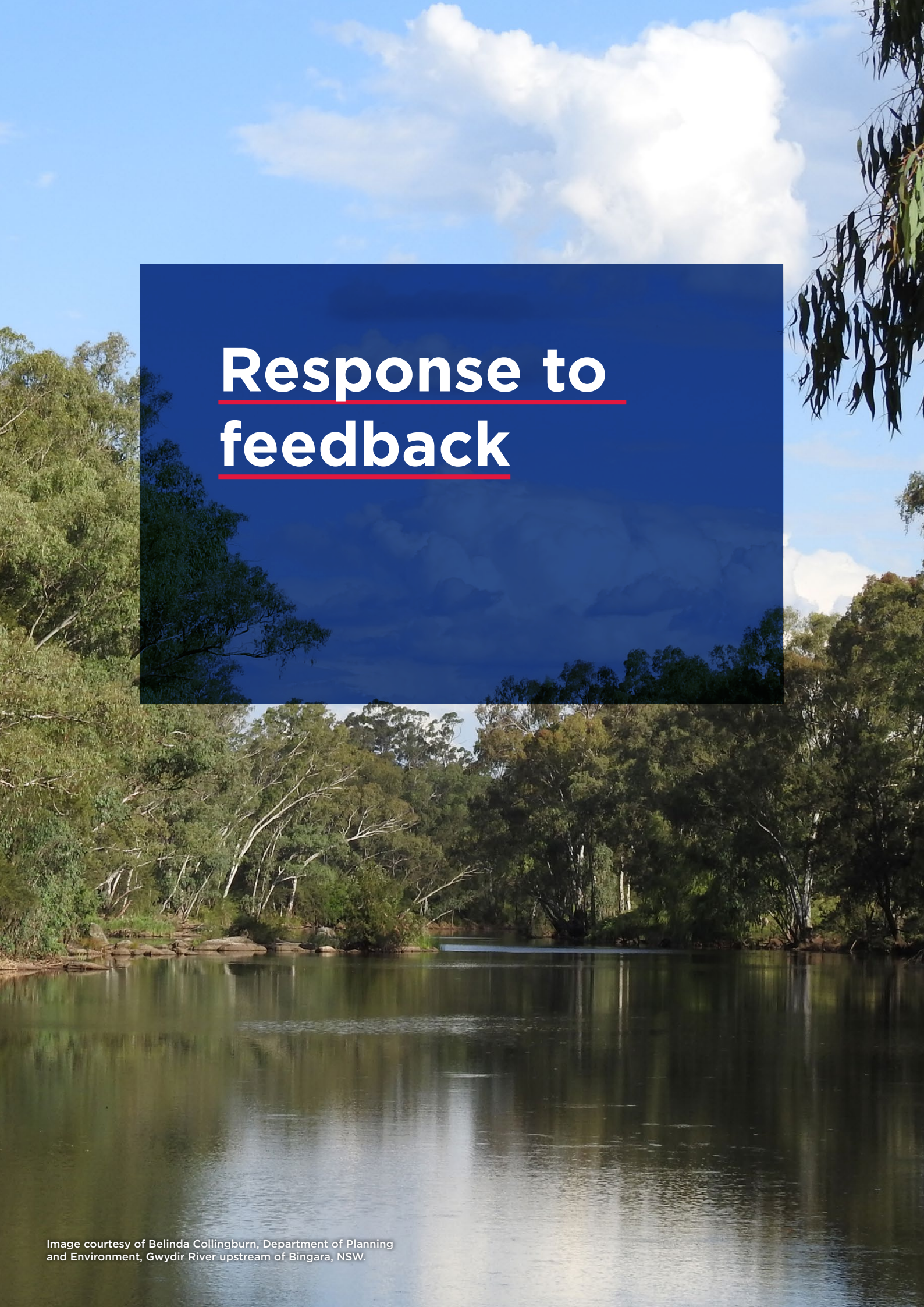

Image courtesy of Belinda Collingburn, Department of Planning and Environment, Gwydir River upstream of Bingara, NSW.

Response to feedback

The development of regional water strategies has been a multi-year, multi-step process. Consultation with a range of stakeholders has been fundamental in building our understanding of the key challenges the Gwydir region is facing and in identifying the actions we can undertake that are best suited to addressing these challenges.

The initial phase of regional water strategy development helped the NSW Government identify issues that are consistent challenges across the state. These state-wide issues have been included as priority focus areas in the NSW Water Strategy.

Many options that were identified in the first draft of the Gwydir Regional Water Strategy have become part of the implementation priorities of the NSW Water Strategy because of their broader implications for water management. For the same reason, other options will be progressed through the NSW Groundwater Strategy and the Aboriginal Water Strategy when they are finalised.

The Gwydir Regional Water Strategy and Implementation Plan take into account the challenges, priorities and actions that are covered within these other strategies. Although, at the time of publication, these strategies are being completed, there has been close collaboration to ensure that consistency and timing is built into the implementation of the Gwydir Regional Water Strategy.

Your feedback has been used to refine the actions and help us prioritise implementation timing.

Publication and use of new climate data and hydrologic modelling

Regional resilience and the ability to respond effectively to the impacts of climate change remain a high priority for stakeholders. The proposed actions were strongly supported; however, there were some concerns about the application of a 'one-size fits all' assessment and the use of 'worst-case scenario' modelling.

The worst-case climate change data set used in the regional water strategies is not a forecast of how climate change is expected to eventuate, but it is one possible future outcome. This scenario may not occur but using this 'worst-case' scenario helps us to plan strategically and to focus on the key challenges facing a region. It also helps us understand how different options might work in a very dry climate in the future.

This longer-term worst case scenario may not be appropriate for implementing short term actions. We will need to complete more refined assessment of climate change risk when we implement many of the regional water strategy actions. These additional assessments will be based on both the action's planning horizon and the latest climate science.

We have also published the climate data sets developed for the Gwydir Regional Water Strategy on the Sharing and Enabling Environmental Data (SEED) environmental data sharing hub. Making this data available in a usable format will be critical for the community, local councils and water utilities, businesses, environmental interests and landholders, to make better decisions regarding water and is a priority for the NSW Government.

As a first step we will improve understanding and modelling capability of return flows from floodplains. The first initiative is to improve in-event forecasting capabilities. This includes looking at methods and data to identify and undertake pilot projects which will test the methodology and suitability for valley-wide application. This will be a multi-year program.

Aboriginal water management, business and place-based initiatives

Strong support for recognising Aboriginal peoples' water rights, interests and access to water remains a key theme, as does ensuring that Aboriginal knowledge and experience are integrated into long-term land and water management.

In response, the NSW Government is developing an Aboriginal Water Strategy which will provide a state-wide framework and priorities to improving Aboriginal people's rights and access to water.

The Gwydir Regional Water Strategy will support these priorities through 3 place-based actions to support Aboriginal communities. The priorities for the Gwydir are to:

- establish local level governance arrangements
- maintain cultural knowledge with on-ground projects
- identify and address local access to Country issues.

Implementing these actions will support participation of Aboriginal people in water management, encourage increased opportunities for Aboriginal owned and led businesses, and place-based initiatives. Establishing an effective governance, engagement and knowledge sharing process is the first step to fundamentally improving Aboriginal people's involvement in water management.

Access to the wetlands within the Gwydir will progress cultural and economic opportunities.

New and existing water infrastructure

In this round of the Gwydir Regional Water Strategy no new major infrastructure have been identified as being suitable to progress within the NSW Government Treasury Business Case process. This relates to major infrastructure such as new dams, weirs or major pipelines.

The majority of feedback supported not progressing Gravesend Dam or the enlargement of Tareelaroi Weir. These options were assessed in the first round of development of the Gwydir Regional Water Strategy in accordance with NSW Treasury Guidelines. Under these guidelines the benefits of an option are assessed based on how it changes the outcomes in a 'base' case. The base case is developed by reflecting existing economic activity, physical infrastructure and operating rules. The options were assessed on how they changed the base case for extractive water users, such as improvement in reliability under a variety of scenarios. These changes were quantified in dollar terms so the options could be compared. More detail on the analysis of these projects has now been published in the following reports:

- Gwydir RWS – Economic basecase
- Gwydir RWS – Detailed economic assessment
- Gwydir RWS – Hydrologic analysis of options

We acknowledge the feedback that the weighting of the calculation of the economic benefit may preclude assessing other overall benefits to communities of this type of development.

We will, when assessing the impact of new and existing infrastructure, clearly communicate the costs and benefits of new project proposals.

Ecosystem health and water quality

Feedback on the draft Gwydir Regional Water Strategy supported and accepted that ecosystem health, including water quality, was important to ensure economic, social and community well-being. Many submissions reinforced the need for a holistic approach to ecosystem management.

We acknowledge that for this to be achieved there needs to be an integrated approach to addressing activities that impact on river systems such as land management and the riparian zone. How river flows are managed is also an integral part of the robustness and resilience of the aquatic ecosystem and its water quality.

To achieve maintenance and improvement in ecosystem health and water quality it is important to understand all aspects of the flow regime. It will also require the coordination and cooperation of multiple government agencies to achieve improvements including accounting for the impacts of climate change and variability. Local landholders and Aboriginal communities will play a key role in implementation.

Improving connectivity

Connectivity within the region is just as important as connectivity with the rest of the Murray-Darling Basin.

Connectivity within the region needs to be managed during periods of drought and within all types of flows. Ensuring that water is not unduly constrained and can reach floodplain ecological assets is important.

Equally, infrastructure throughout the region that impedes the movement of aquatic native species and impacts on water quality needs to be addressed to improve connectivity.

Removal of and/or modifications to instream and floodplain structures will mitigate impacts on connectivity and improve aquatic environments.

The implementation of the NSW Fish Passage Strategy will remediate fish passages at 5 priority sites and the Improving Floodplains Connection Program will remove or remediate unapproved structures in 3 priority areas in the Gwydir floodplain that are altering the flow of floodwaters in the region and potentially impeding the delivery of water to ecological assets and floodplain areas.

The contribution of the Gwydir to the Barwon-Darling is also acknowledged. Actions that seek to improve flows need to be targeted and realistic. Our data tells us that there have always been extreme dry conditions and periods of no flow in the Barwon-Darling. It is not possible through management to maintain a constantly flowing river and we have limited ability to break up drought induced extended cease-to-flow periods. As such, the connectivity actions proposed in the Western Regional Water Strategy focus on enabling water to flow across connected river valleys and downstream at important times for specific achievable outcomes. Further analysis on connectivity options is being undertaken and will be presented in the final Western Regional Water Strategy. It is anticipated that the relevant connectivity actions will be considered as part of the Water Sharing Plan for the Barwon-Darling Unregulated River Water Source 2012 review in 2023.

Water security, reliability and risk management

During consultation there was strong support for actions that enable water users to better manage their own water security risks.

We recognise that there are a variety of mechanisms that ensure water security and reliability is placed within risk-based decision making frameworks. We acknowledge that some of these mechanisms are the responsibility of government to provide the framework under which people who have an interest in water can make decisions about their own risk in water security and reliability. It is the government's role to ensure that there is appropriate planning for droughts and floods and support economic diversification and on-farm and industry efficiency.

Water security for towns and industries is a critical feature of government's role in water management. It is government's role to enable the movement of water to the best value which includes ensuring that the in-stream and floodplain environments are protected. Aboriginal rights and interests also need to be incorporated into a risk management framework.

The Implementation Plan allows for the identification of efficient, locally appropriate opportunities and tools to manage water risk and reliability. Based on consultation outcomes, we have prioritised actions to:

- continuously improve water modelling in the Gwydir
- update the Extreme Events Policy and develop a valley river operation plan
- finalise the vulnerability assessment for crops in the Gwydir to understand how industries may need to adjust under a more variable climate.

Sustainable use of groundwater

We appreciate there are close links between surface water and groundwater. It is a source of water supply for many communities and industries - in some places it is the only source of water. In other communities it plays a key role during periods of drought. Equally important is the role groundwater plays in maintaining our rivers, streams, wetlands and ecosystems.

Ensuring sustainable extraction and management of groundwater is critical to the resilience of the Gwydir region. Recognising Aboriginal knowledge in managing groundwater and incorporating Aboriginal people's rights to and interests in groundwater is also key to sustainable use. We acknowledge that this resource needs to be managed within a well-defined evidence-based framework to ensure sustainable use of groundwater over the next 20 years.

Implementation of groundwater actions within the Gwydir region will be undertaken in line with the NSW Groundwater Strategy when it is finalised. The CSIRO has undertaken initial research to identify MAR opportunities. We will develop and deliver a NSW MAR Policy and management framework in consultation with key stakeholders. A feasibility study will identify and scope potential pilot sites within the Gwydir region consistent with the NSW Groundwater Strategy framework.

Floodplain Harvesting

The licensing framework for floodplain harvesting commenced in the Gwydir valley on 15 August 2022. Under the new rules, floodplain harvesting is not permitted unless water take is accurately measured.

Licensing and managing floodplain harvesting within legal limits will deliver environmental and downstream benefits by reducing floodplain harvesting take to within the water source legal limits. It is expected to deliver an increase of up to 40 GL in average annual flood volume across the Gwydir valley floodplain in years when floods occur.

A quantity of the foregone diversions in the Gwydir (proposed at approximately 9.7 GL/year) will remain in the terminal Gwydir Wetlands, providing localised environmental benefits. The RAMSAR listed Gwydir Wetlands is where we expect to see significant (up to 140%) improvements in outcomes for water birds, native fish and native vegetation.

This will provide greater resilience for the diverse habitats and species supported in the Gwydir Valley and the northern Murray-Darling Basin.

As part of the reform, unprecedented statutory protections will be introduced to prohibit floodplain harvesting take when there is less than 195 GL being stored in Menindee Lakes, until rivers are again running close to their full capacity.

The proposed licensing framework allows floodplain harvesting licence allocations and water sharing plan rules to be changed based on improved data and information without triggering compensation under the *Water Management Act* 2000.

The core recommendations of the Select Committee Inquiry into Floodplain Harvesting were to restrict, manage and measure floodplain harvesting within legal limits in Water Sharing Plans and under the Basin Plan. This cannot be achieved without licensing.

The Murray Darling Basin Authority have now published their independent assessment of revised models for the Gwydir valley validating the work of the NSW Government.

Finalising and implementing the strategy

An Implementation Plan is attached to the Gwydir Regional Water Strategy. It outlines the timing, responsibilities and funding sources to enable implementation of the actions within the strategy. The Implementation Plan does not provide a detailed scoping plan for each individual action. Rather, it prioritises and sequences the delivery of actions over the 20-year life of the strategy and beyond. The regional water strategies will be a key tool in seeking funding as future opportunities arise. Funding will be key to when and how actions will be implemented.

We are not able to implement all actions at once. The focus of the first stage of implementation will be on preparing for the next drought and setting up frameworks to support resilience within and across catchments. This will prioritise the health and resilience of towns, the environment and outcomes for Aboriginal people.

It is our intention that progress of the regional water strategies will be publicly reported on annually. This will ensure implementation is transparent and accountable. It will also allow the strategy to continue to adapt and change to address changing and emerging issues.

The Gwydir Regional Water Strategy will be reviewed at least every 5 years. This is in recognition that government priorities may change. This could involve new developments in infrastructure and assessments to deliver key outcomes, advances in technology, improvements in modelling, access to new information and changes to legislation.

More information:

www.dpie.nsw.gov/regional-water-strategies

NSW GOVERNMENT

Image courtesy of Belinda Collingburn, Department of Planning and Environment, Copeton Dam