

Draft Regional Water Strategy

Namoi:
Shortlisted Actions – Executive Summary

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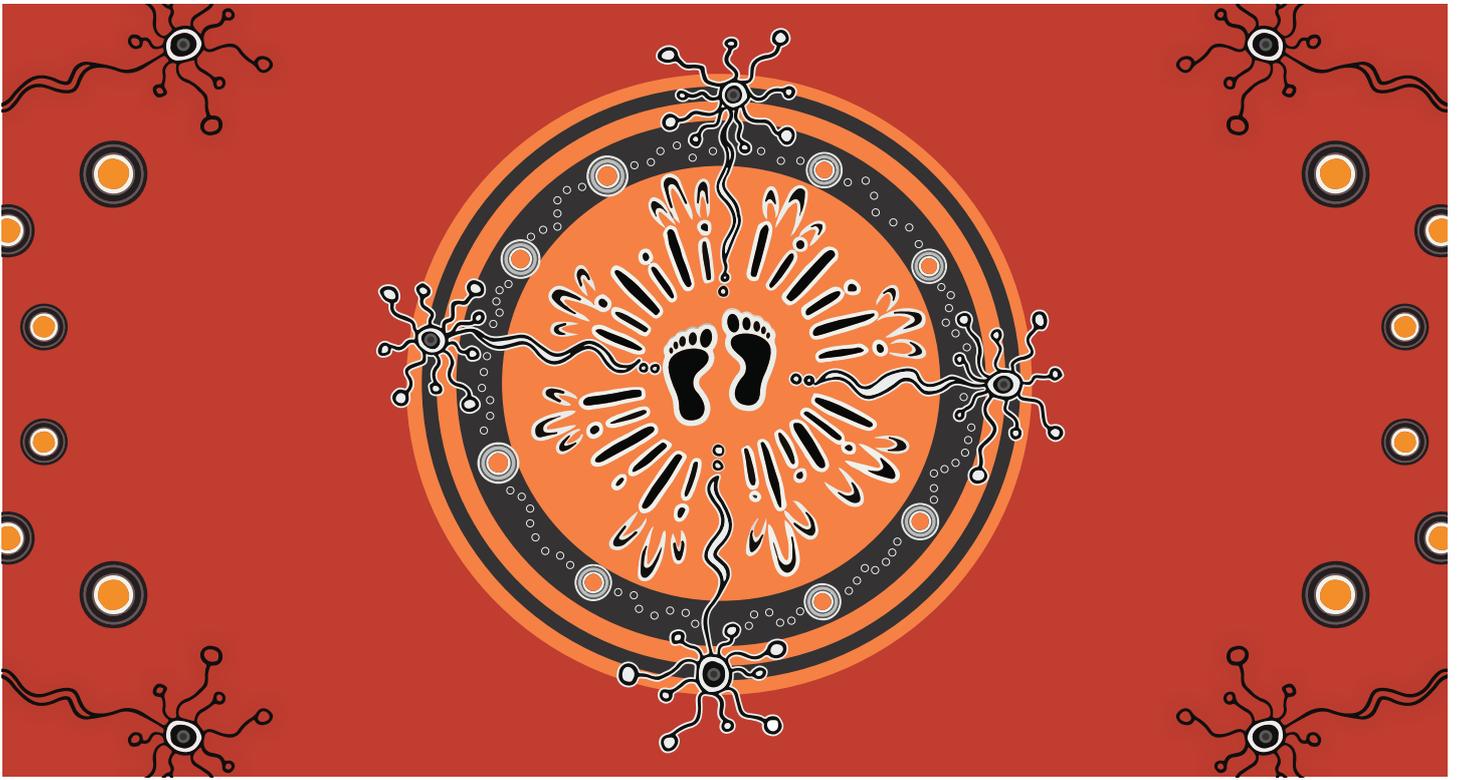
Cover image Image courtesy of Tim Haeusler, Department of Planning and Environment. Gulligal Lagoon, Namoi.

More information water.dpie.nsw.gov.au/plans-and-programs/regional-water-strategies

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Acknowledgement of Country

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. **We have recognised that 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 Gomeroi/Kamilaroi/Gamilaroi/Gamilaraay Nations as having an intrinsic connection with the lands and waters of the Namoi 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 for 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 **Traditional Owners/First Nations People**, 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.

The NSW Government is committed to the Namoi region having healthy, reliable and resilient water resources so that it remains a place where people want to live, work and play both now and for future generations. To do this, we need to make the best use of existing water resources and prepare for future uncertainty presented by a more variable and changing climate.

The Namoi region

The Namoi region is in northern inland NSW, where the landscape changes from hills and mountains in the east to flat alluvial plains in the west. It is a part of the Murray–Darling Basin and lies within the traditional lands of the Gomerroi/Kamilaroi Nation whose people have been caretakers of the Namoi region for over 60,000 years.

The region's main regional centre is Tamworth, the largest regional centre in north west NSW and an important economic and cultural hub for services and employment. Gunnedah and Narrabri are other important strategic centres in the Namoi Valley.

The Namoi region is one of the most productive agricultural areas in NSW, hosting extensive livestock, dryland and irrigated cropping operations, and an agribusiness cluster for chicken, meat and eggs around Tamworth. The region is also one of NSW's most important mining districts and is home to ecologically and culturally significant lakes and lagoons, wetland complexes and floodplains.

The Namoi region relies heavily on surface water and is also one of the most groundwater-dependent regions in the Murray-Darling Basin. These water sources support towns and recreation, cultural needs, environmental needs, agriculture, mining and industry use.

The region's environment, residents and businesses are tested during climate extremes. For example, between 2017 and early 2020, severe drought conditions saw:

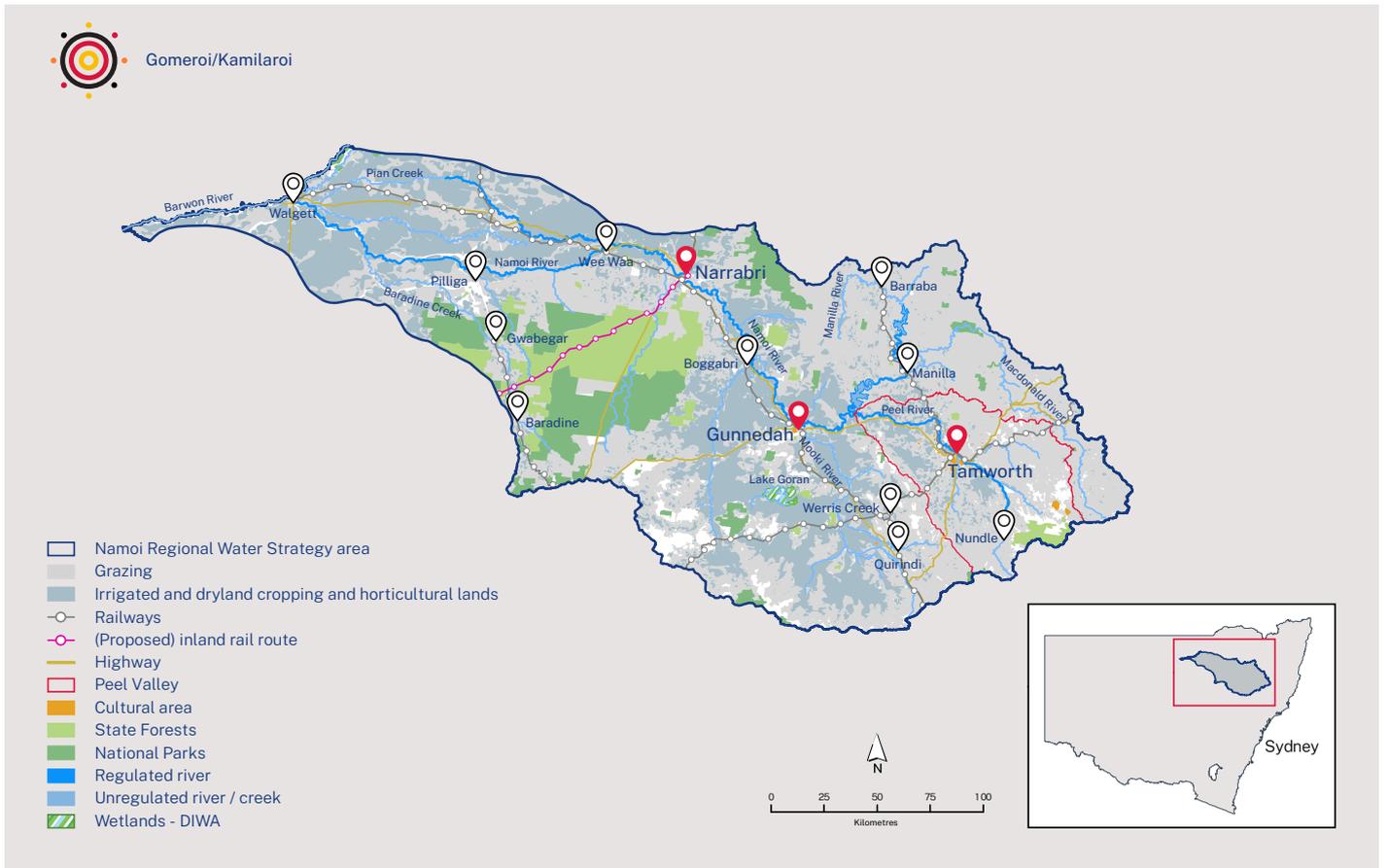
- lower parts of the Namoi river stop flowing
- Tamworth's town water supply fall to critical levels
- gross domestic product in the New England north west region fall 15% below average
- sharp declines in groundwater levels in some groundwater sources.

The drought was followed by floods. We know that extreme droughts and floods will happen again. We need to be prepared so that critical needs in the region are protected, the environment can recover and regional industries and towns can grow sustainably.



Chaffey Dam in the Peel Valley.

Figure 1. Map of the Namoi region



Pilliga Cave, Pilliga Nature Reserve.

What is the purpose of the consultation paper?

The NSW Government is developing 12 regional water strategies that bring together the best and latest climate evidence with a wide range of tools and solutions to plan and manage each region's water needs over the next 20 to 40 years.

The Draft Namoi Regional Water Strategy, including a long list of options, was released for public consultation in March 2021.¹ Since then, we have taken on board stakeholder feedback, conducted further analysis to prioritise the challenges and shortlisted actions to help meet these challenges.

This consultation paper presents the outcomes of this work. Apart from the existing government commitment around a new Dungowan Dam, no decisions have been made on the proposed shortlisted actions. We are seeking your views on the best actions for the region before a final strategy and implementation plan are developed.



Image courtesy of Destination NSW. Farmer herding livestock, Barraba.

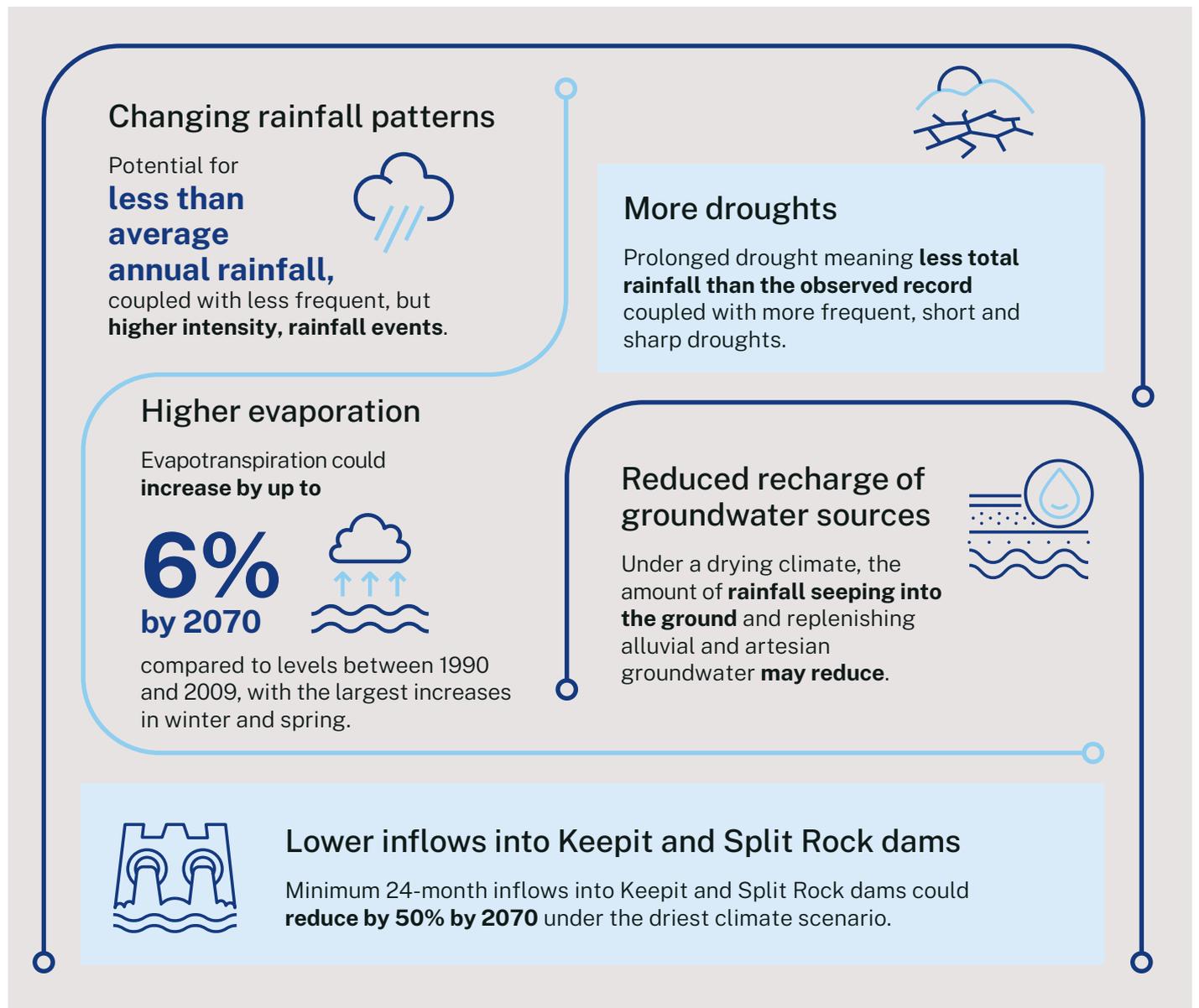
1. www.dpie.nsw.gov.au/water/plans-and-programs/regional-water-strategies/what-we-heard/namoi-regional-water-strategy

What the future climate could look like in the Namoi region

We don't know for certain what the future climate will be like. It may be similar to what we have experienced in the past or it might be drier than we have seen in our lifetimes. Our analysis of different climate projections tells us that extremes could become more extreme

– wet periods could be more intense, droughts could become hotter and longer, and there could be higher evaporation rates and more unpredictable rainfall and river flows (See Figure 2). We need to plan for this uncertainty and fully understand the future risks we face.

Figure 2. What the future climate could look like in the Namoi region



Where should we focus first?

The Draft Namoi Regional Water Strategy identified current and future water-related challenges and opportunities. Following feedback from public consultation and further technical analysis, we have identified 5 key challenges we propose should be the initial focus for the region. Other water challenges described in the Draft Namoi Regional Water Strategy are important and will be revisited in future reviews of the strategy, which are expected to occur every 3 to 4 years.



Addressing Tamworth's long-term water security risks

Tamworth is an important regional employment and services hub that supports much of northern inland NSW. Over the next 20 years, Tamworth is anticipating significant economic and population growth which will need access to reliable supplies of water. Even without growth, there is a real and urgent risk that Tamworth could run out of water in a severe and prolonged drought, going from full dams to running out of water within 6 years. The townships of Manilla and Barraba, in the Tamworth Local Government Area, are also at risk of running out of surface water in future extreme droughts.

The proposed new Dungowan Dam and transfer pipeline could nearly halve the risk of Tamworth running out of water. It will also improve the resilience of Tamworth's water supply in droughts worse than what we have experienced in our past without impacting the average allocation for general security licence holders.

However, in the long term, without additional action to reduce demand or improve supply, the risks to Tamworth's water supplies increase as the city's demand on water sources grows in a changing climate. We need to start planning now for additional short- and long-term projects that can support Tamworth as it grows.



Addressing water security risks of regional towns across the Namoi Valley

The Namoi Valley is one of the most groundwater-dependent regions in the Murray-Darling Basin. For most towns in the Namoi region, groundwater is the only reliable source of water available. The long-term success of these communities is directly linked to the sustainability of the region's groundwater sources.

There is uncertainty about water security for the region's groundwater-dependent towns in severe drought. During dry periods, groundwater use increases as surface water becomes scarce, causing short term declines in groundwater levels. Some places are also experiencing long-term declining trends in groundwater levels, which are exacerbated during droughts.

Due to the complexity of the aquifer systems, our knowledge about how these aquifers will behave under climate change is limited. To improve our understanding and sustainable use of these water sources, we need further data, modelling and investigations.



Supporting a growing regional economy in a future of potentially reduced water availability

The Namoi region is one of the most productive agricultural and mining areas in NSW. Together, these industries provide employment for over 33% of the region's workforce and account for around 25% of its economic output.

The productivity of primary industries is closely linked to the availability of water. As water availability decreases, so does production and employment.

In the coming decades, the local economy is expected to grow and diversify with increasing intensive agriculture, renewable energy and gas dependant businesses. This will be stimulated by initiatives such as the inland rail project, the Narrabri gas project, the Northwest Renewable Energy Zone, Namoi Regional Job Precinct and the Narrabri Special Activation Precinct. Reliable water is essential for attracting new high value industries to the region and for sustaining and expanding existing industries, such as the intensive agricultural industry.

There is a possibility there could be consecutive years of low or no water availability for general security licences in future droughts even without a dry climate change scenario. We need to identify innovative ways to support existing industries during periods of low water availability, while also making sure that future industries that enter the region can operate in times when water is scarce.



Improving the health and resilience of aquatic ecosystems

The Namoi region supports a rich and diverse range of water-dependent plants, animals and ecosystems. This includes over 40 waterbird species and 20 native fish species (including 5 threatened species), as well as floodplains, wetlands and endangered ecological communities. The region is home to a range of groundwater-dependent ecosystems, such as river red gums, which have been in decline in the Murray–Darling Basin and the wetlands surrounding Lake Goran.

The Namoi River system is also an important contributor to flows into the Barwon–Darling and supplies around 24% of the water that reaches the Menindee Lakes over the long-term.

Land use changes and water extraction have changed river flows, resulting in less water in rivers and wetlands. On average, there is less water flowing to the end of the Namoi River system and cease-to-flow periods have increased in the middle and end of the system.

Physical structures, such as dams and weirs, restrict the ability of native fish to move. Coupled with changes to water quality and drying of drought refuges during dry periods, this limits the ability of native fish and birds to survive and bounce back after periods of drought.

The potential onset of a drier climate may mean fewer opportunities to use water allocated for the environment to replenish river reaches and floodplains and limit the drying-up of flowing water habitats. We need to do more to support the resilience of the region's ecosystems, improve overall waterway health and work out how we can best protect water-dependent species, communities and habitat.



Dismantling barriers to Aboriginal water rights

The Gomeroi/Kamilaroi people have lived in the Namoi region for over 60,000 years and have always had connections with the region's lands and waters. Maintaining these links is essential for preserving cultural identity and way of life.

The historical dispossession of land and the effect of colonial era settler laws continue to impact Aboriginal people's rights and access to water.

Private land, fences and locked gates prevent Gomeroi/Kamilaroi people from accessing Country and water, carrying out cultural practices and using traditional knowledge to care for and manage waterways. In addition to this, government consultation processes do not complement Aboriginal governance and result in limited involvement of Aboriginal people in water consultation processes or water management decisions.

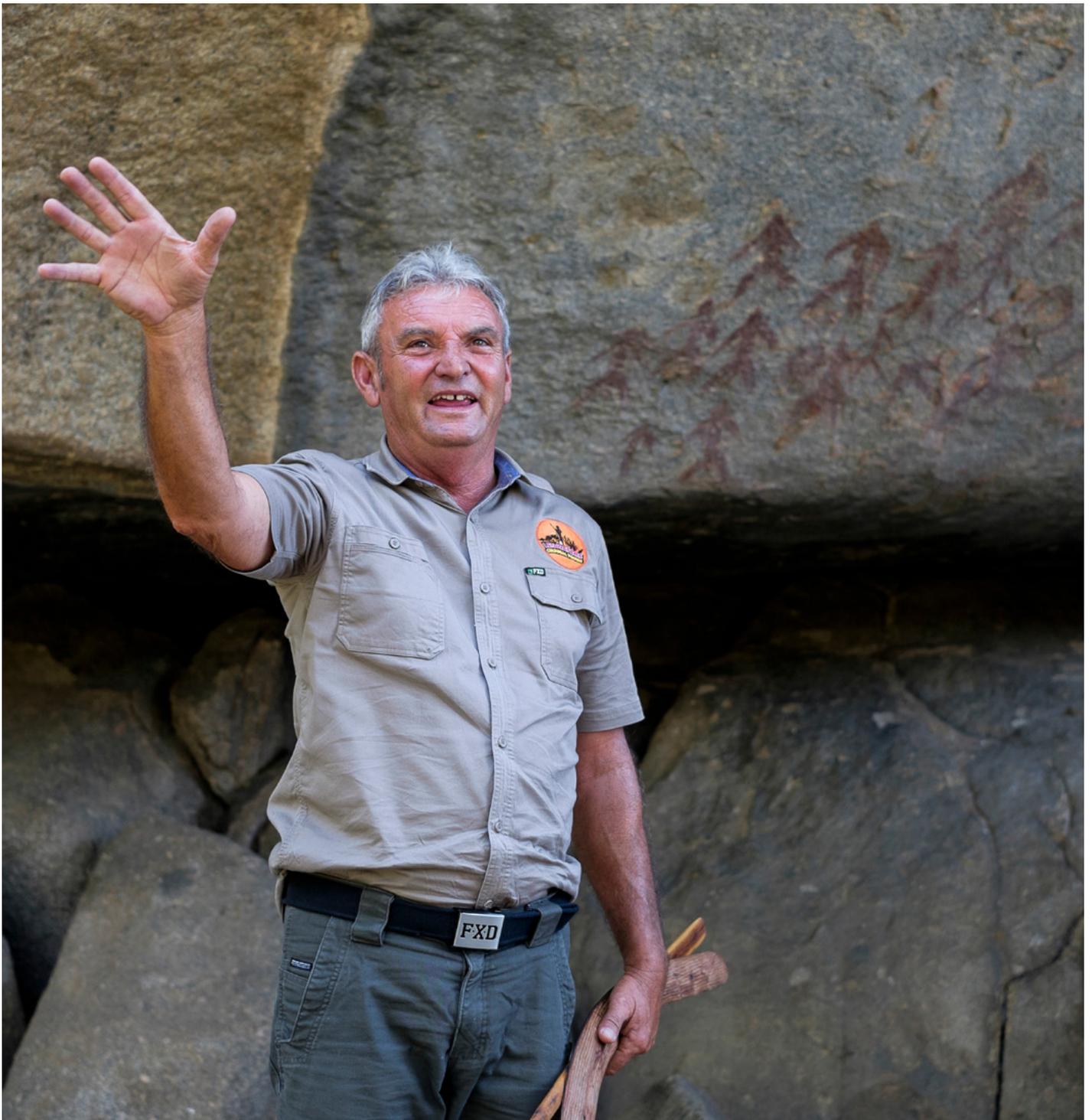


Image courtesy of Destination NSW. Len Waters Aboriginal Cultural Tours, Tamworth.

Addressing the challenges

We need to prepare now for a future where water sources and services may come under even greater stress. We need to use the knowledge we have gained during the most recent drought to find smarter and better ways of managing our water resources so that communities, industries and vital natural assets in the Namoi region can thrive.

Importantly, there are limits on how much water can be sustainably taken from rivers and groundwater sources without causing short- and long-term impacts, such as other users being deprived of reasonable access to water and permanent damage to ecosystems. Surface water and most groundwater resources in the Namoi region are fully committed or over-committed and there is a risk of reduced water availability in the long term. This means that any new infrastructure or policy change that results in additional water or improved security being provided to one group of water users may lead to changes in the timing of water availability for other groups.

Getting the balance right means recognising these limits and trade-offs and understanding the stresses on the region's water resources and natural environment. While we may have to make some difficult choices, there are also opportunities to improve water governance and access for Aboriginal people, enhance town and on-farm water efficiency and develop alternative water supplies that do not add further pressures to finite water resources. There are also opportunities in the Namoi region to restore river, wetland and floodplain habitats.

There is no single action that we can take to address the challenges ahead. We have identified three regional priorities to meet the key challenges in the Namoi region. Each priority is supported by a suite of proposed actions. In shortlisting these actions, we have considered the Murray–Darling Basin Plan rules, including those relating to sustainable levels of water take, and the risks posed by the future climate.



Harvesting cotton in the Namoi Valley.

Priority 1: Supporting the long-term water needs of Tamworth and other towns in the region

A portfolio of actions are needed to support Tamworth's water security over the long term, reduce uncertainty for groundwater dependent towns and improve water security for growing strategic centres in the region. In addition to the proposed new Dungowan Dam, the shortlisted actions under this priority focus on:

- confirming the level of water security needed to support large regional towns and whether we need to move towards planning for an 'enduring level of supply' approach – i.e. delivering a level of demand that we can be confident of supplying indefinitely, irrespective of the intensity and duration of drought
- demand management and water efficiency measures
- advanced water treatment and re-use for industrial water demand reliant on town water supplies
- longer-term water augmentation for Tamworth that need further investigation which include inter-basin transfers, further advanced water treatment facilities and changes in storage reserves
- improving knowledge of groundwater systems at local council level scales.

Having reliable and sustainable access to groundwater allows communities to endure extreme climates.

These actions will help towns in the region to make the best use of the available water resources, and better respond to the needs of a growing population and the risks associated with climate change.

Priority 2: Supporting a growing regional community under a more variable and uncertain future climate

The Namoi region is one of the most productive agricultural and mining regions in Australia. Agriculture and mining will continue to underpin the regional economy in coming decades; however, declining water availability could reduce productivity and have flow-on impacts on the regional economy.

The actions shortlisted under this priority focus on strengthening the resilience of the regional economy and its ability to adapt to a drier, more severe future climate.

To support future industries and investments, the actions shortlisted under this priority will:

- provide a better understanding of our groundwater resources and their sustainability, and transparently manage them
- improve the evidence and information base to support decision making, risk management and innovation
- explore opportunities to make sure the water entitlement and access framework can cater to the development of emerging industries, facilitating access to higher security water while observing legislated limits on water take
- support Aboriginal people to be more involved in water management by sharing their traditional knowledge and contributing to decision making.

Priority 3: Improving the health and resilience of water-dependent ecosystems

Changes to river flows and land use have impacted the health and resilience of water dependent ecosystems across the Namoi region. The potential for longer and more severe droughts will increase the risk of ecosystem damage.

Managing these risks in the Namoi region will need coordinated and cooperative action across all parts of the community, as well as a better understanding of how potential future climate scenarios might impact on different parts of the environment.

The actions shortlisted under this priority will:

- achieve shared benefits from water delivery and maximise environmental, social, cultural and economic outcomes when water is used
- limit or remove pressures and impacts directly related to water infrastructure - complementary catchment management activities are often needed to achieve environmental watering outcomes
- improve the health of water resources through better land management
- build knowledge and understanding of the region's water-dependant ecosystems and the impacts of climate change on their health and resilience
- investigate ways to improve connectivity with the Barwon–Darling River on a multi-valley scale.

The proposed actions to support these priorities are listed in the tables in Attachment A. We want your views on whether these actions are the best way to set the region up for the future.

These proposed actions can help to position the Namoi region for a future where well-managed, sustainable water resources are available for thriving communities, towns, industries, places and ecosystems. They can give us a better understanding of the vulnerabilities of the region, put in place measures to improve the region's resilience and establish the conditions for using our existing water resources more efficiently, effectively and sustainably.

Implementing some of the actions may involve difficult decisions and may impact when water is available for different uses. Many of the shortlisted actions will need more detailed analysis and engagement. By starting to consider the benefits and implications of implementing the actions now, we will be in a better-informed position to make difficult decisions, should the need arise.

When will the actions be implemented?

A critical feature of the final Namoi Regional Water Strategy will be to identify clearly what actions and investments are needed now and those that will or may be needed further into the future. The strategy considers a 20-year timeframe, aiming to chart a progressive journey that enables us to meet existing challenges, identify and prepare for foreseeable emerging challenges and lay the groundwork for adapting to future uncertainties and changed circumstances.

Following public consultation, we will develop an implementation plan that will set out when we plan to commence each action and what we plan to achieve by when. The implementation plan will also identify key partners in delivering these actions, including local councils, other government agencies, local community groups and local Aboriginal communities.

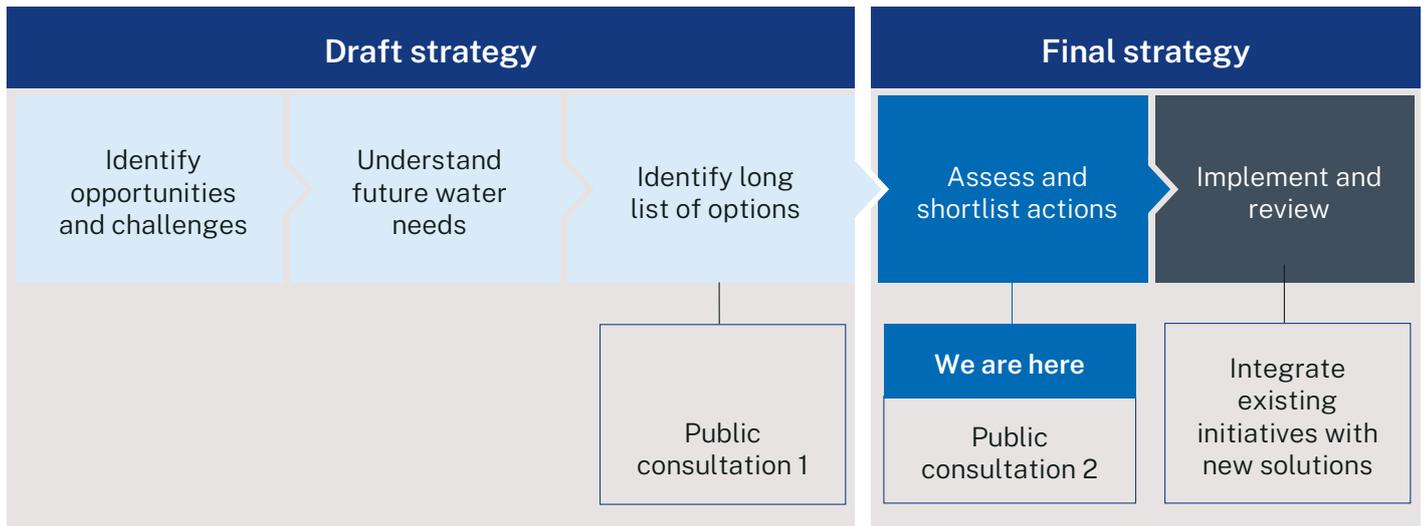
Not all actions will be commenced at once, and funding will be a key consideration in planning when and how the actions will be implemented. The regional water strategies will be a key tool in securing funding as future opportunities arise.

We want your feedback on which actions should be prioritised for implementation over the next three to five years, and which ones should be implemented in the medium or longer term.



Pelicans landing on Lake Keepit, NSW.

Figure 3. Namoi Regional Water Strategy delivery timeline



Your voice is important. The Namoi Regional Water Strategy: Shortlisted actions – consultation paper is on public exhibition from 22 August to 18 September 2022.

You can also have your say by providing written feedback to the Department of Planning and Environment by midnight on Sunday 18 September 2022 via:

Web: www.dpie.nsw.gov.au/water/plans-and-programs/regional-water-strategies/public-exhibition

Email: regionalwater.strategies@dpie.nsw.gov.au

We would also be interested in your thoughts on:

- whether any of the actions in this consultation paper should not be shortlisted and why?
- how actions should be staged, and which actions should be implemented first?

Please note that all submissions will be published on the Department of Planning and Environment’s website, unless you let us know in your submission that you do not wish the content to be released.

We will be holding community engagement sessions to give participants an understanding of the context for the regional water strategy and an overview of the key challenges, priorities and proposed actions. Face-to-face sessions will be held subject to COVID-19 restrictions and risks; otherwise, they will be held online. Details of these sessions can be found at the website listed above.



Mt Kaputar, NSW.



Image courtesy of Gerhard Koertner, Department of Planning and Environment.
Rock cliff next to creek, Warrabah National Park.

Attachment A: Namoi Regional Water Strategy – shortlist of proposed actions

Figure 4. Water security challenges and priorities for the Namoi region

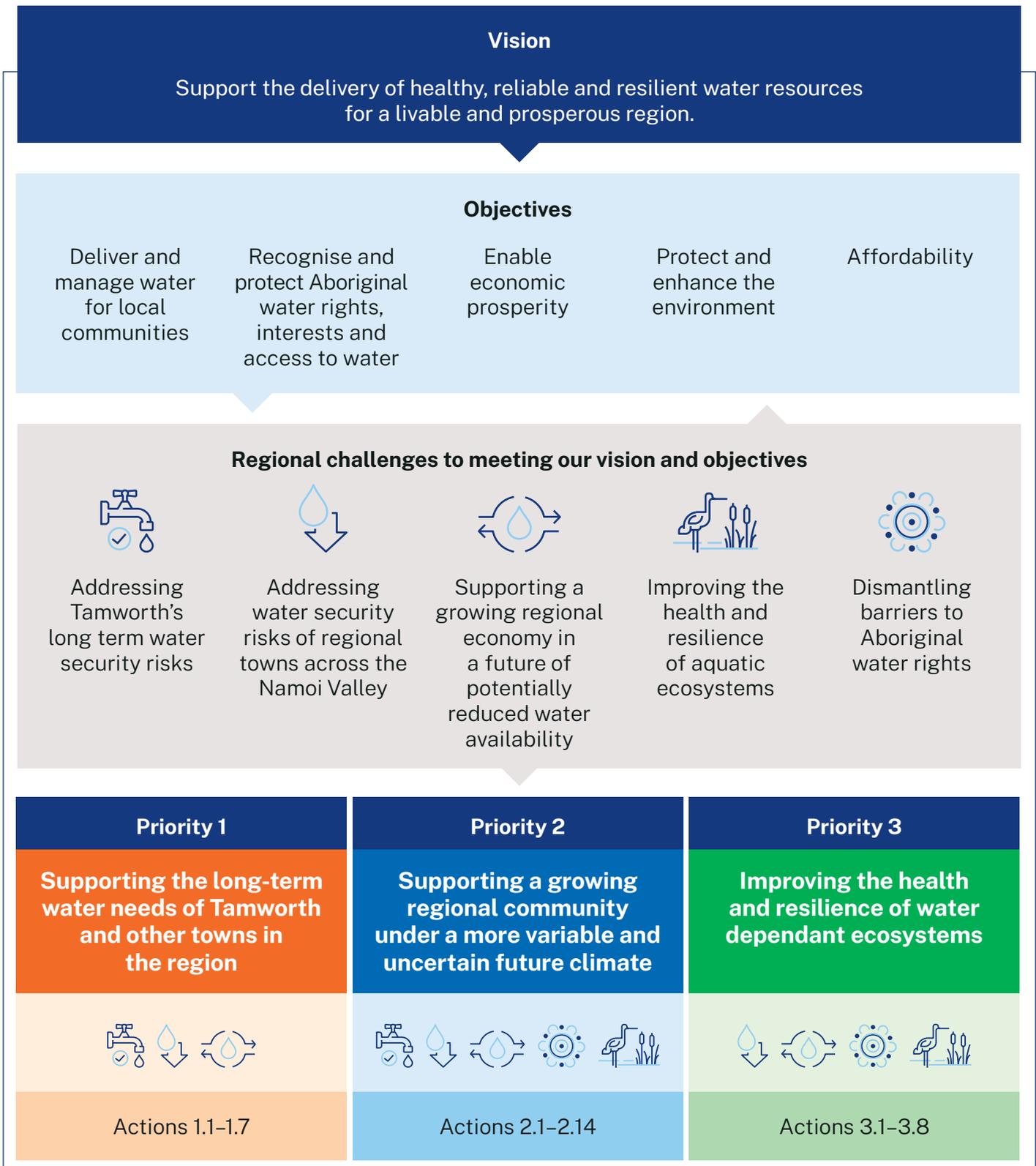
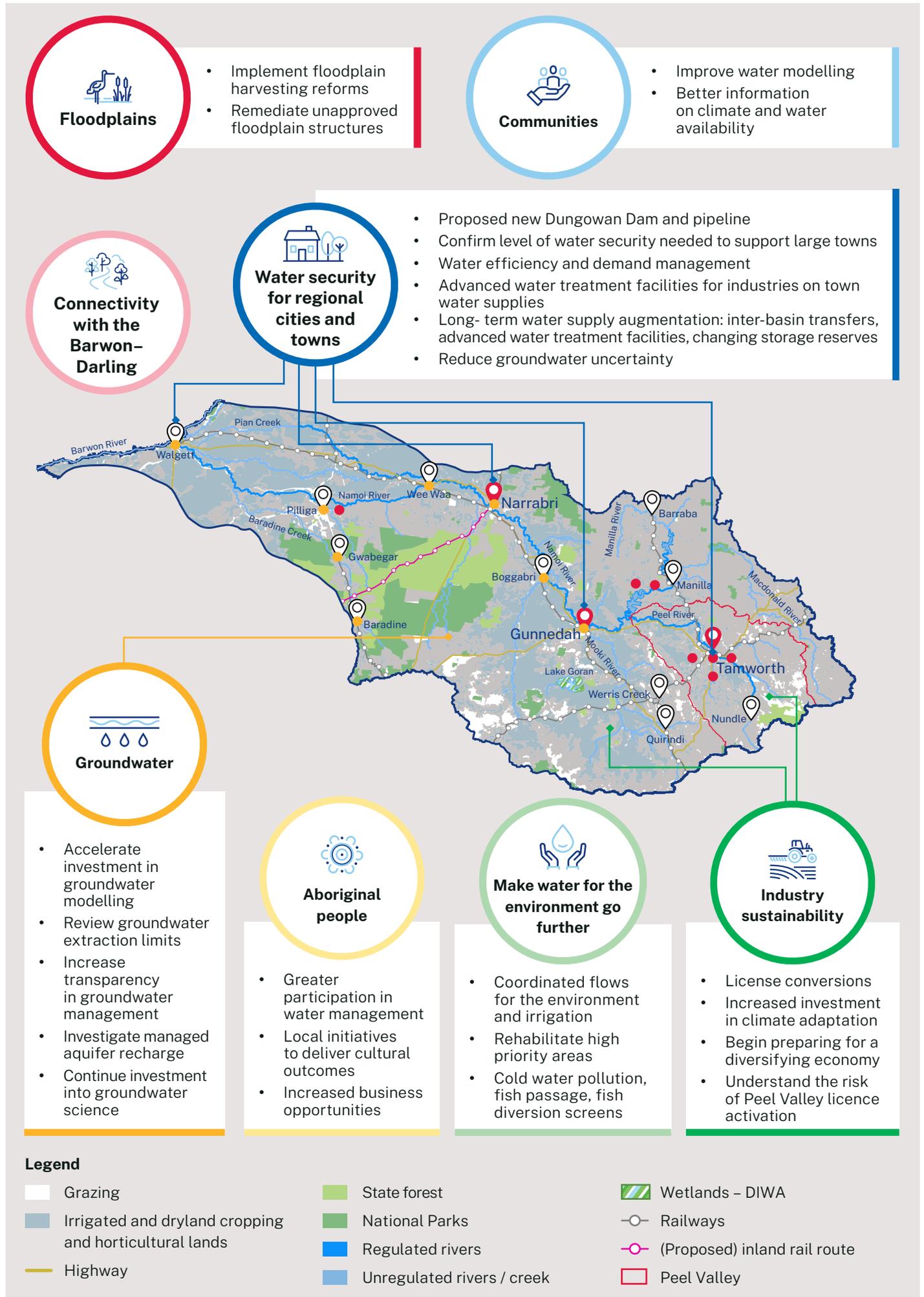


Figure 5. Location of Namoi Regional Water Strategy – Shortlisted actions



Priority 1

Supporting the long-term water needs of Tamworth and other towns in the region

Legend



Addressing Tamworth's long-term water security risks



Addressing water security risks of regional towns across the Namoi Valley



Supporting a growing regional economy in a future of potentially reduced water availability



Dismantling barriers to Aboriginal water rights



Improving the health and resilience of aquatic ecosystems

Proposed action

Summary

Challenges addressed

Government commitment

New Dungowan Dam and pipeline

The proposed new Dungowan Dam project will replace the existing 6.3 GL dam with a 22.5 GL dam and construct a new pipeline connecting the dam with Tamworth.



Immediate measures

Action 1.1

Confirm the level of water security needed to support large regional towns

Develop guidelines on whether water security planning for large regional towns should be guided by an 'enduring level of supply' approach.



Action 1.2

Improve drought management planning for towns

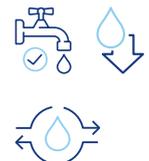
Update planning and preparation for how to respond when droughts occur.



Action 1.3

Adopt a stronger focus on water efficiency and demand management for towns

Support local water utilities in investing in measures to improve the efficiency of supplying water for domestic, commercial and industrial water uses, and encourage water users to minimise demands for water.



Proposed action	Summary	Challenges addressed
<p>Action 1.4 Progress advanced water treatment facilities for industries reliant on town water supplies</p>	<p>Progress water treatment facilities to support growth of industries connected to town water supplies without increasing overall water demand on existing water sources.</p>	
<p>Action 1.5 Reduce uncertainty in groundwater security for regional towns</p>	<p>Support local water utilities undertake local level investigations to understand and improve the security of groundwater supplies using the latest data.</p>	
<p>Longer term planning</p>		
<p>Action 1.6 Plan for the next long term water supply augmentation as Tamworth grows</p>	<p>Assess in detail the following options for which only high level investigations have been completed to date:</p> <ul style="list-style-type: none"> • additional water treatment facilities • pipeline from Namoi Valley dams to Tamworth with an increased storage reserve • pipeline from Manning Valley to the Peel Valley • increase the water reserved for Tamworth in Chaffey Dam. 	
<p>Action 1.7 Addressing water related skills shortages in small councils</p>	<p>Support councils to address key training and skills gaps that can support delivery of water for communities.</p>	

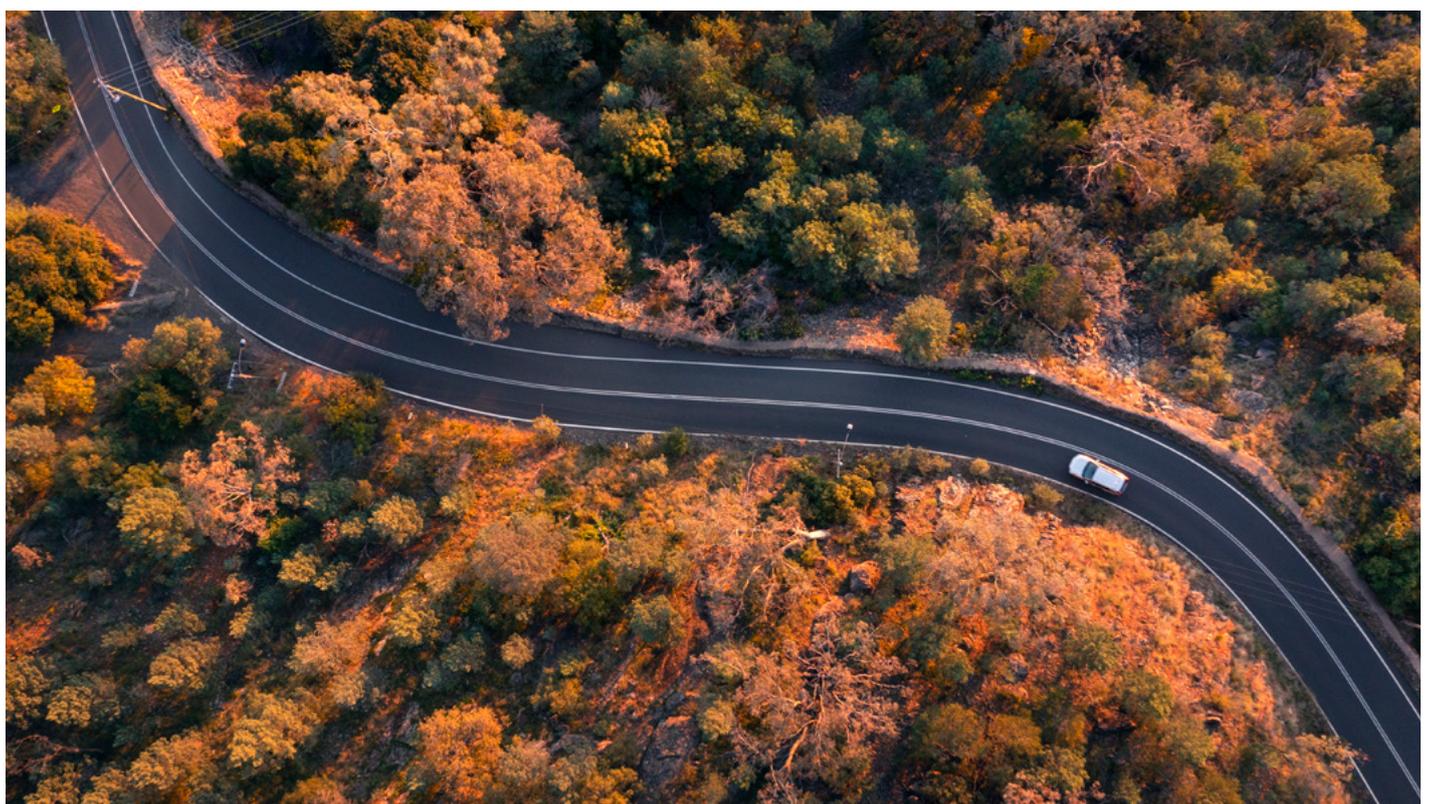


Image courtesy of Destination NSW. Scenic drive, Tamworth.

Priority 2

Supporting a growing regional community under a more variable and uncertain future climate

Legend



Addressing Tamworth's long-term water security risks



Addressing water security risks of regional towns across the Namoi Valley



Supporting a growing regional economy in a future of potentially reduced water availability



Dismantling barriers to Aboriginal water rights



Improving the health and resilience of aquatic ecosystems

Proposed action

Summary

Challenges addressed

Better information to support decision making and risk management

<p>Action 2.1 Invest in continuous improvement to surface water system modelling in the Namoi region</p>	<p>Continue to improve and expand the river system models that underpin water management planning in the Namoi region.</p>	
<p>Action 2.2 Accelerate investment in groundwater modelling in the Namoi region</p>	<p>Fast track the development and expansion of the groundwater system models that underpin water management planning in the Namoi region.</p>	
<p>Action 2.3 Improve the participation of Aboriginal people in water management in the Namoi region</p>	<p>Investigate ways to improve the participation of Aboriginal people in water management through new approaches, programs, partnerships and funding.</p>	
<p>Action 2.4 Improve public access to climate information and water availability forecasts</p>	<p>Design and deliver suitable training and information products and communication platforms.</p>	
<p>Action 2.5 Undertake research to inform reviews of groundwater extraction and condition limits</p>	<p>Increase our knowledge of groundwater resources to inform future decisions on sustainable groundwater extraction and condition limits.</p>	

Proposed action	Summary	Challenges addressed
Action 2.6 Review the water allocation rules for licences in the Peel alluvium	Review the water allocation rules for aquifer licences in the Peel Regulated River Management Zone of the Peel Alluvium water source, to address concerns about sharing of water between surface water and groundwater users during droughts.	
Action 2.7 Understand risks associated with potential future activation of underused licences in the Peel Valley	Investigate the risk of unused licences being activated in the Peel and plan a response to this risk, so that current water users will have time to make adjustments if this proves necessary.	
Increased flexibility to support existing and future industries		
Action 2.8 Make provision for voluntary licence conversions	Enable licence holders to change a portion of general security licences to high security licences.	
Action 2.9 Support the development of new water related Aboriginal business opportunities in the Namoi region	Invest in Aboriginal run businesses and initiatives that address water access needs or identify new water-related business opportunities.	 
Action 2.10 Improve outcomes for Aboriginal people through place base initiatives	Support the continued development of tailored, place-based initiatives to improve water and other outcomes for Aboriginal people in the Namoi region.	  
Making existing water go further		
Action 2.11 Support increased investment and research into industry climate adaptation	Continue to invest in research and technology that supports more efficient use of water by industries.	
Action 2.12 Increase transparency in the management of groundwater resources in the Namoi region	Publish guidance on how and when the NSW Government will make decisions about risks associated with activation of inactive licences and declines in groundwater levels in this region.	 
Action 2.13 Investigate managed aquifer recharge in the Namoi region	Develop a regulatory framework for Managed Aquifer Recharge and provide guidance on the feasibility of locations in the Namoi region.	 
Action 2.14 Ensure the water management framework can support sustainable economic diversification and transitioning economies	Work across government to understand the water supply and demand needs of emerging industries and begin planning for the long-term diversification away from coal dependant economies.	 

Priority 3

Improving the health and resilience of water dependant ecosystems

Legend



Addressing Tamworth's long-term water security risks



Addressing water security risks of regional towns across the Namoi Valley



Supporting a growing regional economy in a future of potentially reduced water availability



Dismantling barriers to Aboriginal water rights



Improving the health and resilience of aquatic ecosystems

Proposed action	Summary	Challenges addressed
<p>Action 3.1 Assess gaps in the flow regime that are preventing achievement of environmental watering objectives and identify cooperative actions to improve ecological outcomes</p>	<p>Investigate opportunities to:</p> <ul style="list-style-type: none"> review relevant water sharing plan rules to improve flexibility and certainty of environmental water in changing climate conditions achieve more natural flow patterns and protect important flows down the system coordinate dam releases with unregulated tributary flows to promote higher flow events, within system constraints. 	
<p>Action 3.2 Identify regionally significant riparian, wetland and floodplain areas to protect or rehabilitate</p>	<p>Strategically target on-ground activities at high-priority locations to restore, conserve and protect critical riparian, wetland and floodplain habitat and species, or areas of high cultural value in the Namoi region.</p>	
<p>Action 3.3 Mitigate the impacts of water infrastructure on native fish</p>	<p>Take action to:</p> <ul style="list-style-type: none"> improve fish passage at priority sites in the Namoi region identify priority river reaches for installation of diversion screens to protect native fish progress cold water pollution mitigation measures. 	
<p>Action 3.4 Fully implement the NSW Floodplain Harvesting Program</p>	<p>Finalise floodplain harvesting access licenses and works approvals in the Upper and Lower Namoi Valley floodplain.</p>	

Proposed action	Summary	Challenges addressed
Action 3.5 Remediate unapproved floodplain structures	Undertake an accelerated compliance program for unapproved floodplain structures in high priority areas of the Upper and Lower Namoi Valley floodplain.	  
Action 3.6 Improve understanding of water use and water quality at priority locations in the Namoi	Review existing monitoring programs and invest in technologies and monitoring that can provide additional information about water quality and water flows at priority locations to improve future planning and management for these systems.	 
Action 3.7 Investigate ways to improve connectivity with the Barwon–Darling River on a multi-valley scale	Develop the most effective coordinated options to improve connectivity across all Barwon Darling tributaries through the Western Regional Water Strategy.	   
Action 3.8 Continue investment in groundwater science in the Namoi region	Address gaps in our knowledge of groundwater dependent ecosystem water requirements, groundwater quality risks and aquifer compaction risks.	 



Image courtesy of Jessica Stokes, Department of Planning and Environment. Pilliga Gilgais.

