

Draft Regional Water Strategy

North Coast:
Shortlisted Actions – Executive Summary

May 2022



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Cover image: Image courtesy of Destination NSW. Scenic aerial overlooking the Bellingen River, Fernmount.

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Acknowledging Aboriginal people

The NSW Government acknowledges Aboriginal people as Australia's first people and the traditional owners and custodians of the country's lands and water. Aboriginal 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 practise the oldest living cultures on earth.

The NSW Government acknowledges the Anaiwan, Biripi, Bundjalung, Dunghutti, Githabul, Gumbaynggirr and Yaegl people as having an intrinsic connection with the lands and waters of the North Coast Regional Water Strategy area. The landscape and its waters provide the Anaiwan, Biripi, Bundjalung, Dunghutti, Githabul, Gumbaynggirr and Yaegl people with essential links to their history and help them to maintain and practise their culture and lifestyle.

The NSW Government recognises that the Traditional Owners were the first managers of Country and that incorporating their culture and knowledge into management of water in the region is a significant step for closing the gap.



Artwork

Image courtesy of Nikita Ridgeway.
Aboriginal Brand Guidelines.

The NSW Government is committed to ensuring the North Coast region has healthy, reliable and resilient water resources so it remains a place where people want to live, work and play, both now and for future generations. This means ensuring that we make the best use of existing water resources and prepare for the future uncertainty presented by a more variable and changing climate.

The North Coast region lies within the traditional lands of the Anaiwan, Biripi, Bundjalung, Dunghutti, Githabul, Gumbaynggirr and Yaegl nations. It is located east of the Great Dividing Range and includes the catchments of the Clarence, Macleay, Bellinger, Nambucca, Hastings and Camden Haven rivers, as well as the waterways of the Coffs Harbour area. The landscape transitions from the New England Tablelands in the west, through rugged gorges to undulating foothills and floodplains before reaching the coast and its lagoons, wetlands, estuaries and beaches.

Like all regions across Australia, the North Coast faces a more variable and changing climate. As the population grows, there is an increasing demand for water for human consumption, agriculture and industrial uses. This increased

demand drives land use and water resource development that can disrupt natural water cycles and put ecosystems under greater stress.

In parallel with this, future climate changes are expected to increase the risk of less available, less reliable and poorer quality water.

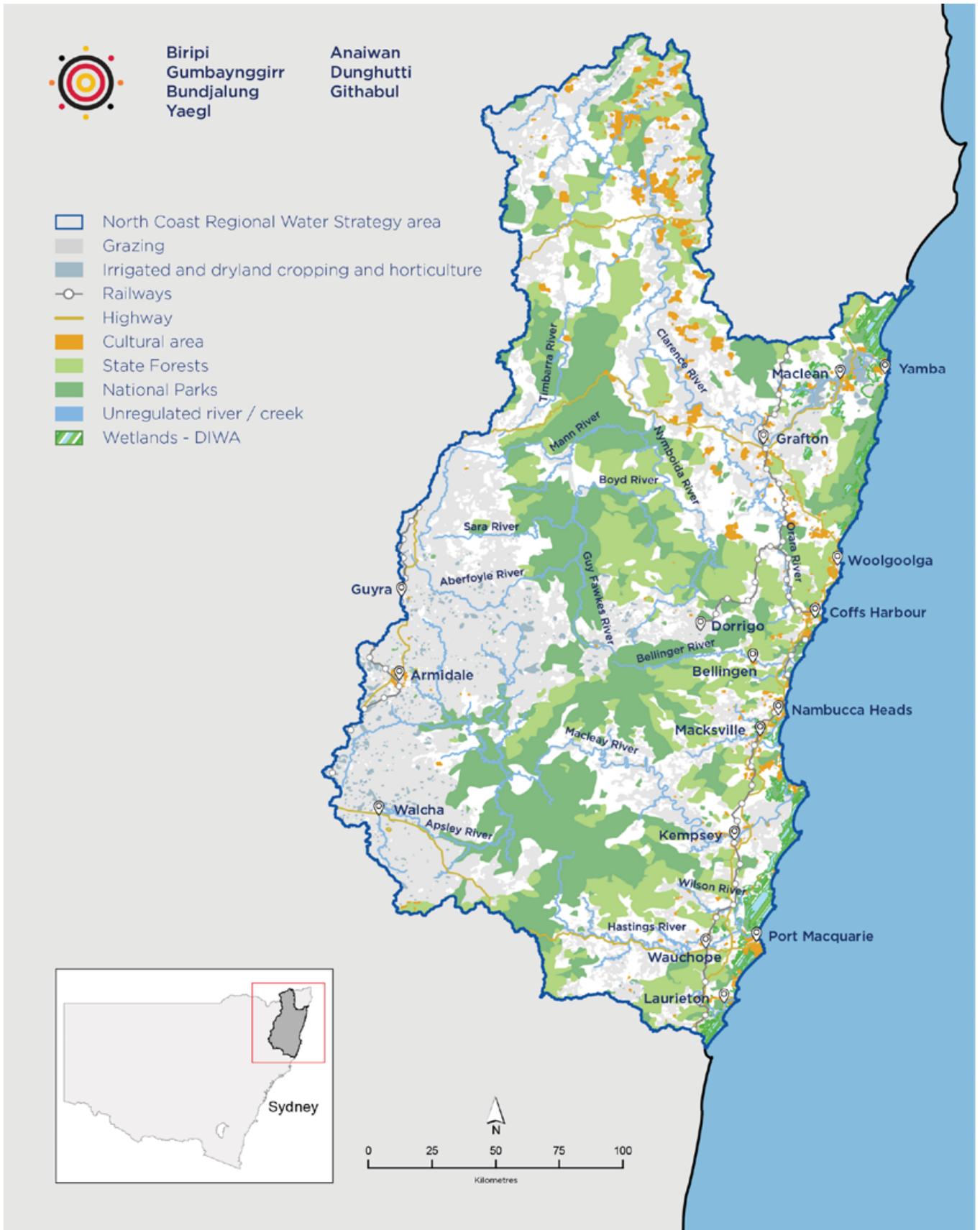
We need to prepare now for the transition to a scenario where we do more with less water, make smarter decisions about our water use and management, armed with better knowledge and information, and protect our most critical water needs.

The regional water strategy provides an opportunity to set the region up so it is prepared for a changing climate. This will help keep the North Coast an attractive place to live, work and visit.

Photography

Image courtesy of Destination NSW.
Dangar Falls, near Dorrigo.

Figure 1. Map of the North Coast region



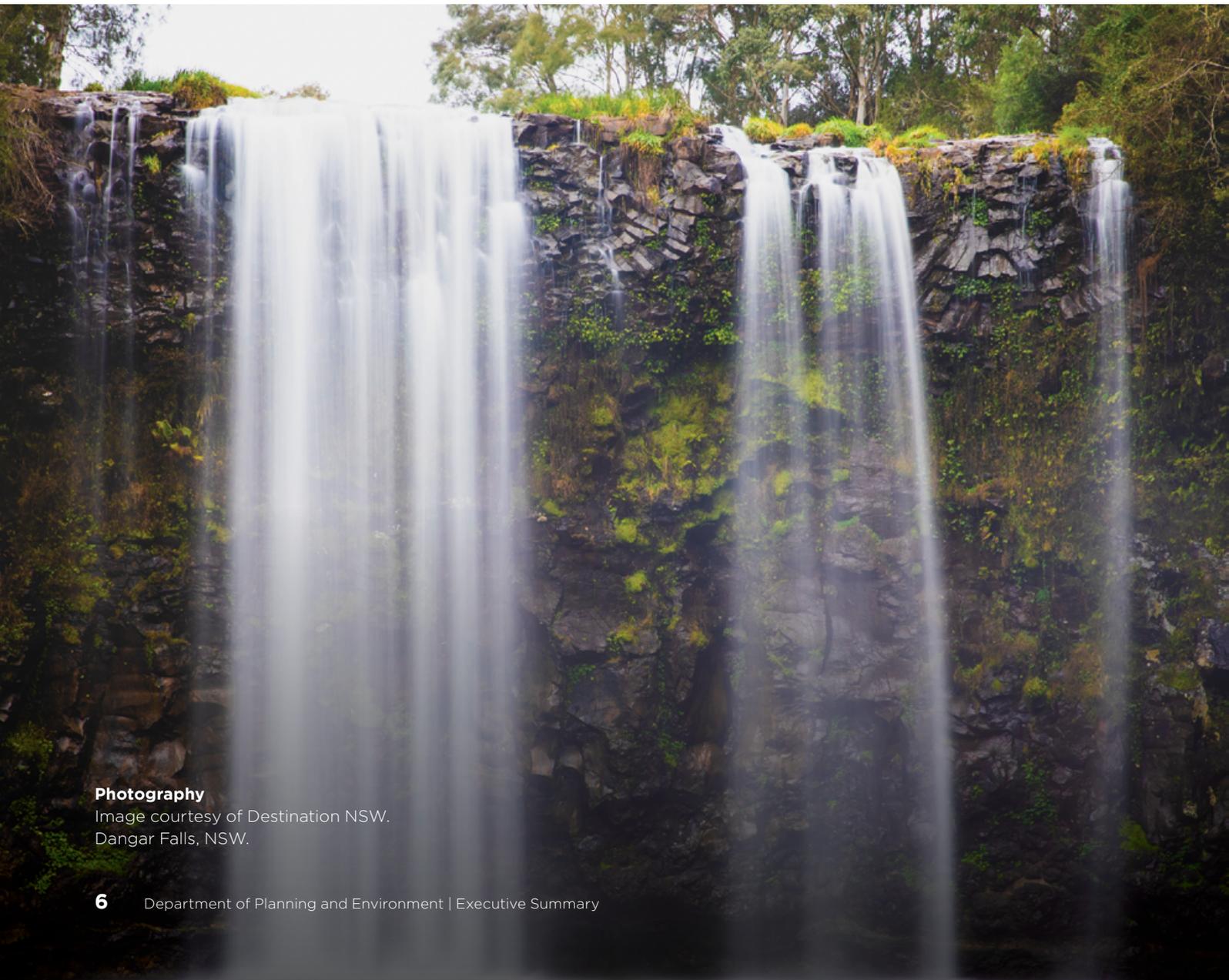
What is the purpose of the consultation paper?

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 North Coast Regional Water Strategy, including a long list of options, was released in March 2021.¹ Since public consultation on the Draft North Coast Regional Water Strategy, we have taken on-board what we heard, undertaken additional analyses to prioritise the key challenges in the region that need to be tackled first and have shortlisted the options into proposed actions to help address these challenges.

The consultation paper presents the outcomes of this work. No decisions have been made on the shortlist of proposed actions. The consultation paper seeks your views on what the best actions are to set the region up for the future before a final strategy and implementation plan are developed.

1. Full descriptions of the region, its water resources and water needs are provided in the draft strategy, which can be viewed and downloaded at www.dpie.nsw.gov.au/water/plans-and-programs/regional-water-strategies/what-we-heard/north-coast-regional-water-strategy



Photography

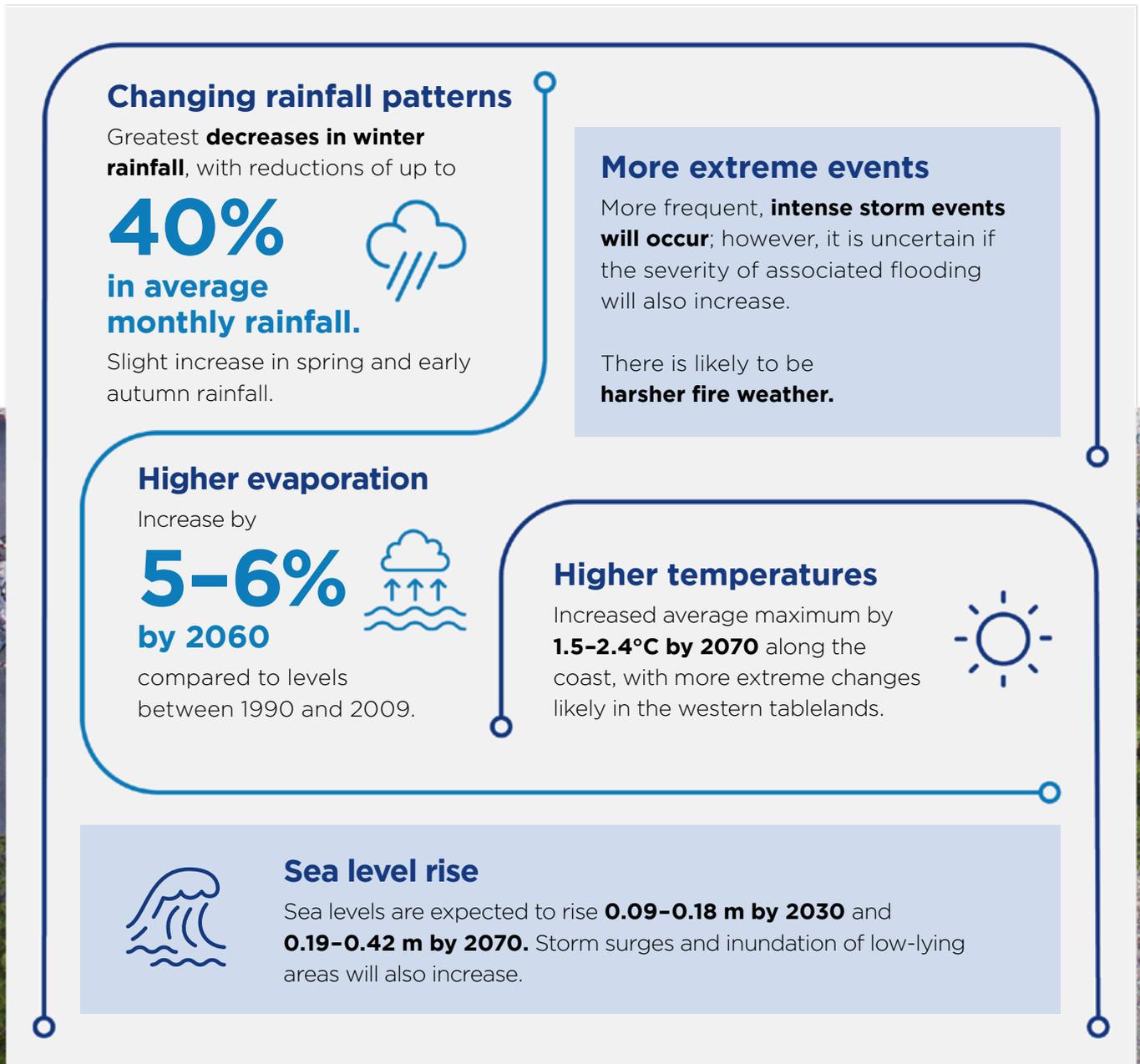
Image courtesy of Destination NSW.
Dangar Falls, NSW.

What could a more variable climate mean?

The region has a variable climate with many years of low flows interspersed by high flow events. 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 what we have seen in our lifetimes. It could be more variable with extremes of wet and dry and severe droughts that are more pronounced or more frequent than in the past.

We need to plan for this uncertainty and fully understand the future risks we face.

Figure 2. What the future climate could be like in the North Coast region



Photography

Image courtesy of Clarence Valley Council.
Clarence River, NSW.

What should we focus on first?

The Draft North Coast Regional Water Strategy identified current and future water-related challenges and opportunities. Following feedback from public consultation and further technical analysis, we have identified 6 key challenges that we propose should be the initial focus for the region. Other regional water challenges described in the Draft North Coast 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.



Declining catchment and river health

Poor catchment and riparian management, combined with changes in catchment and river hydrology, are affecting river health, hydrologic connectivity and raw water quality.



Aboriginal people's rights and access to water

Historical dispossession of land, effects of colonisation and government water management processes continue to impact Aboriginal people's access to water and their ability to care for Country.



Competition for low flows

Competition for water during low flow periods is restricting access for landholders and industries and placing many of the region's waterways under stress.



Water security for North Coast region industries

The viability and growth of regional industries is constrained by the uncertainty of future access to secure water supplies.



Saltwater intrusion into freshwater sources

Changes in catchment hydrology and sea level rise are projected to significantly impact coastal waterways and aquifers. We need to better understand the magnitude of this threat and how best to manage it.



Water availability for North Coast towns and communities

The reliability of town water supply sources is likely to be reduced with projected climate change.

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 drought to find smarter, better ways of managing our water resources so that communities, industries and vital natural assets in the North Coast 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 water users being deprived of reasonable access to water and permanent damage to ecosystems. In the North Coast region, the issuing of additional surface water entitlements is generally not permitted 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 water user or group of users will lead to some water being taken off another user.

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 for Aboriginal people; improve water use efficiency and use water more effectively; restore river, wetland and floodplain habitats and develop less climate dependent water sources that can improve water supply without adding to the pressures on finite water resources.

There is no single action, or region-wide infrastructure solution, that we can take to address the challenges ahead. We have identified 3 regional priorities to meet the 6 key challenges for the region. Each regional priority has a suite of supporting actions that complement each other.

Photography

Image courtesy of Destination NSW.
Nambucca Heads, NSW.

PRIORITY 1: Take a holistic approach to land and water management

To continue to protect and enhance the region's waterways, groundwater systems and the ecosystems they support, we need to ensure our management systems and decision-making processes use a whole-of-catchment approach. To achieve this, we propose 10 actions to:

- incorporate Aboriginal knowledge and culture into land and water management
- undertake whole-of-catchment planning, decision making and project delivery
- support local landholders to adopt best practice land use and water management
- improve our understanding and management of the region's water resources.

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

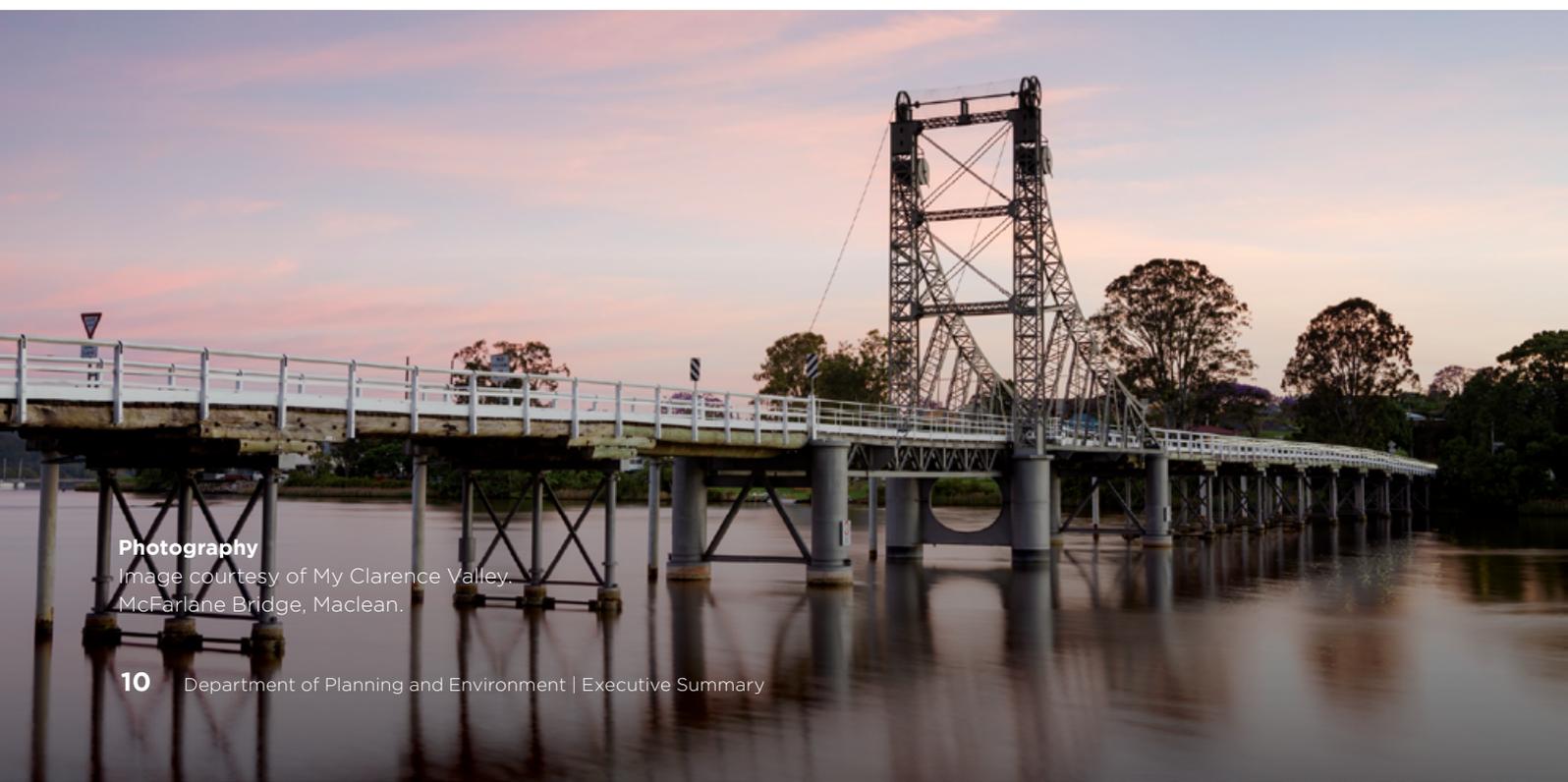
Sustainable water management means that we meet the water needs of the present without compromising the ability of future generations to do the same. To ensure that water management is sustainable and equitable across the region, we propose 7 actions to:

- reduce the impact of water infrastructure on native fish populations
- better manage competing demands for water.

PRIORITY 3: Prepare for future climatic extremes

We need to prepare for future climate changes – particularly extended drier periods – to help build a stronger and more resilient region. To ensure the region and its community are well prepared for these challenges, we propose 5 actions to:

- support local councils and water users to manage risks
- optimise use of existing water supplies
- investigate alternative water supplies.



Photography

Image courtesy of My Clarence Valley.
McFarlane Bridge, Maclean.

The shortlist of proposed actions to support these priorities are in Attachment 1 in this executive summary. We want your views on whether these actions are the best way to set the region up for the future.

These priorities and actions can improve the North Coast region's readiness to adapt to a more variable climate and support the difficult decisions we need to make to deliver healthy, reliable and resilient water resources for the region's future.

These proposed actions can help us position the North Coast region for a future where well managed, sustainable water resources are available for thriving people, industries, places and ecosystems. They can enable us to better understand the vulnerabilities of the region, put in place measures to improve the region's resilience and use our existing water resources more effectively.

Implementing some of the actions will involve difficult decisions and may impact the amount of water available to existing water users. Many of the proposed 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 North Coast Regional Water Strategy is making sure we 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 coming 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 effectively delivering these actions, including local councils, government agencies, local community groups and local Aboriginal communities.

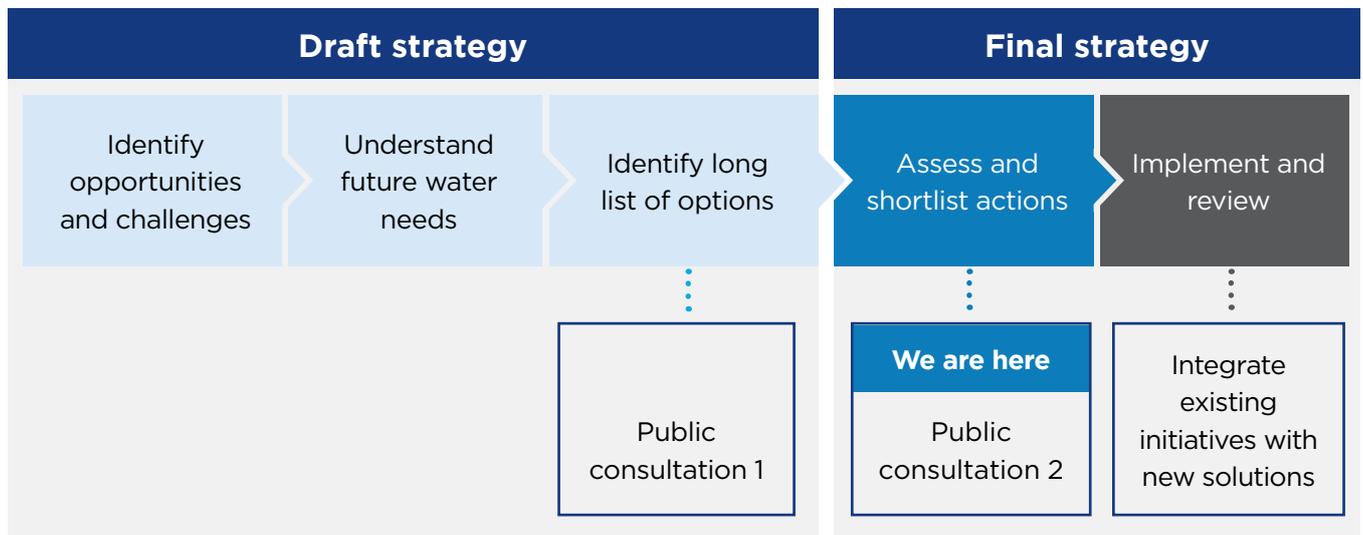
Not all actions will be commenced at once, and funding will be a key consideration in planning when and how the actions will be implemented. The regional water strategies will be a key tool in securing funding as future opportunities arise.

We want your feedback on which actions should be prioritised for implementation over the next 3 to 5 years, and which ones should be implemented in the medium or longer term.

Photography

Image courtesy of Destination NSW.
Bellingen River, Fernmount.

Figure 3. Regional water strategy delivery timeline



How to have your say

Your voice is important. The North Coast Regional Water Strategy: Shortlisted Actions for the North Coast region – Consultation Paper is on public exhibition from 23 May to 19 June. Supporting information is available at www.dpie.nsw.gov.au/water/plans-and-programs/regional-water-strategies/upcoming-public-exhibition/north-coast-regional-water-strategy

You can also have your say on the proposed actions by providing written feedback to the Department of Planning and Environment by midnight on 19 June 2022 via:

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

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

We are interested in your thoughts on:

- whether any of the actions in the 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 proposed priorities and 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.

Photography

Image courtesy of Clarence Valley Council. Bridge, Clarence River.

Attachment 1: North Coast Regional Water Strategy – shortlist of proposed actions

Figure 4. Water security challenges and priorities for the North Coast region

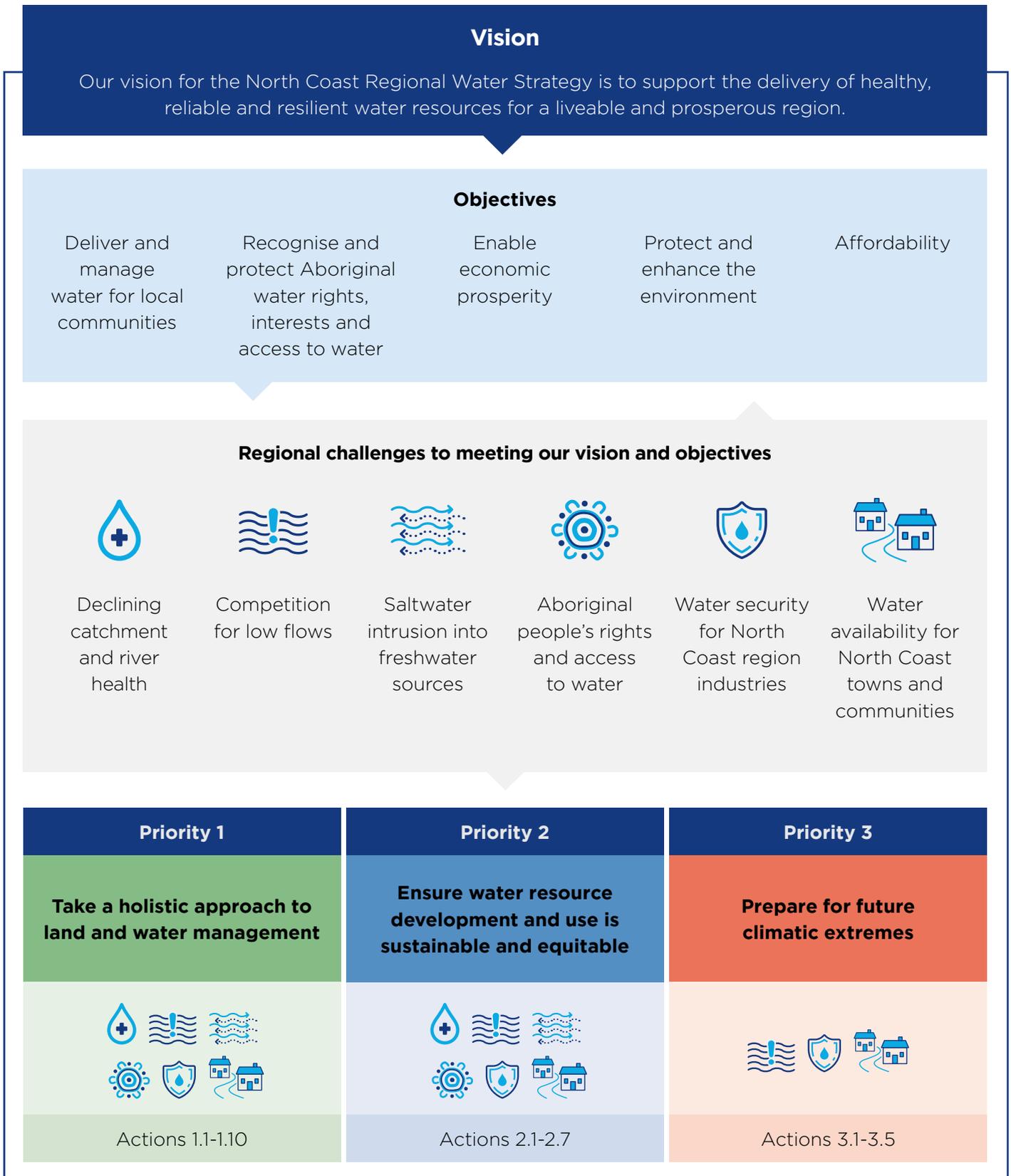


Figure 5. Summary of North Coast proposed actions



Actions not shown on the map are not location specific.

Priority 1: Take a holistic approach to land and water management

- Action 1.1: Develop ongoing collaboration with local Aboriginal people in water management
- Action 1.2: Support place-based initiatives to deliver cultural outcomes for Aboriginal people
- Action 1.3: Support improved governance
- Action 1.4: Deliver a river recovery program
- Action 1.5: Support landholder adoption of best practice land management
- Action 1.6: Assess the vulnerability of surface water supplies to sea level rise and saltwater intrusion
- Action 1.7: Identify environmental water needs to support healthy coastal waterways
- Action 1.8: Characterise and plan for climate change and land use impacts on coastal groundwater sources
- Action 1.9: Protect ecosystems that depend on coastal groundwater
- Action 1.10: Improve monitoring of water extraction

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

- Action 2.1: Improve fish passage
- Action 2.2: Implement fish-friendly water extraction
- Action 2.3: Establish sustainable extraction limits for surface water and groundwater sources
- Action 2.4: Implement daily extraction limits
- Action 2.5: Reduce the take of low flows
- Action 2.6: Support Aboriginal business opportunities
- Action 2.7: Address catchment-based impacts of increased harvestable rights limits

Priority 3: Prepare for future climatic extremes

- Action 3.1: Support local councils to provide a secure and affordable water supply for towns
- Action 3.2: Provide better information about water access, availability and climate risks
- Action 3.3: Review water markets
- Action 3.4: Investigate increased on-farm water storage
- Action 3.5: Increase use of recycled water for intensive horticulture

Take a holistic approach to land and water management

Challenges legend					
					
Declining catchment and river health	Competition for low flows	Saltwater intrusion into freshwater sources	Aboriginal people's rights and access to water	Water security for North Coast region industries	Water availability for North Coast towns and communities

Proposed actions	Description	Challenges addressed
Incorporate Aboriginal knowledge and culture into land and water management		
Action 1.1 Develop ongoing collaboration with local Aboriginal people in water management	Fund existing or new Aboriginal groups to participate in water management processes. These groups will help facilitate culturally appropriate: <ul style="list-style-type: none"> • water knowledge programs • engagement and consultation. 	 
Action 1.2 Support place-based initiatives to deliver cultural outcomes for Aboriginal people	Fund and support Aboriginal organisations and communities to develop tailored projects for their communities. This action would aim to move away from central decision making and develop a flexible program that can be adapted and is driven by the principles of self-determination and collaboration.	 
Undertake whole-of-catchment planning, decision making and project delivery		
Action 1.3 Support improved governance	Develop a new governance approach that recognises stakeholder roles and responsibilities and supports whole-of-catchment planning, coordination, decision-making, and project delivery.	 
Action 1.4 Deliver a river recovery program	Deliver a whole-of-catchment program that prioritises and guides works to improve the health of the region's rivers and the ecosystems they support (including native and threatened aquatic species).	   

Proposed actions	Description	Challenges addressed
Support local landholders to adopt best practice land use and water management		
Action 1.5 Support landholder adoption of best practice land management	Build on existing programs to support private landholders to adopt best practice farm management. This will help improve the health of priority waterways by reducing the discharge of sediment and nutrients from agricultural land.	
Improve our understanding and management of the region's water resources		
Action 1.6 Assess the vulnerability of surface water supplies to sea level rise and saltwater intrusion	Improve our understanding of the risks of saltwater intrusion from sea level rise, changes in catchment hydrology, and extraction to local council water supplies and industries, by developing an integrated catchment model for high priority sites.	
Action 1.7 Identify environmental water needs to support healthy coastal waterways	Define objectives and the amount and quality of water necessary to sustain key, priority surface water and groundwater aquatic ecosystems across the region.	
Action 1.8 Characterise and plan for climate change and land use impacts on coastal groundwater sources	Increase investment in accurately determining the availability and vulnerability of groundwater sources from climate change. Ensure the NSW Government and the community have the necessary information to inform management frameworks, including considering protecting water resources in land use planning decisions.	
Action 1.9 Protect ecosystems that depend on coastal groundwater	Better understand groundwater dependent ecosystems and incorporate knowledge and monitoring programs into current and future water quality and water sharing plans.	
Action 1.10 Improve monitoring of water extraction	Expand on recent NSW Government metering reforms by investigating opportunities to further improve how we monitor water extraction - particularly in managing competition during low flow periods and assessing the impact of extraction limits on water sharing plan objectives.	

Ensure water resource development and use is sustainable and equitable

Challenges legend					
					
Declining catchment and river health	Competition for low flows	Saltwater intrusion into freshwater sources	Aboriginal people's rights and access to water	Water security for North Coast region industries	Water availability for North Coast towns and communities

Proposed actions	Description	Challenges addressed
Reduce the impact of water infrastructure on native fish populations		
Action 2.1 Improve fish passage	Implement the NSW Fish Passage Strategy to replace or remediate 4 high-priority fish barriers in the North Coast region: Nymboida Weir, off Upper Rocky River Road, Dowlings Falls Road and Ewingar Road.	 
Action 2.2 Implement fish-friendly water extraction	Promote and implement the strategic installation of diversion screens on irrigation pumps and diversion offtakes, across priority waterways and irrigation channels.	 
Better manage competing demands for water		
Action 2.3 Establish sustainable extraction limits for surface water and groundwater sources	Review the existing long-term average annual extraction limits for surface water and groundwater sources to ensure they are sustainable; are based on best available science; and protect ecological, economic, social and cultural water needs.	     
Action 2.4 Implement daily extraction limits	Investigate and assess options for implementing daily extraction limits and determine an approach that would cost-effectively ensure the protection of low and medium flows in streams with high competition for water.	     

Proposed actions	Description	Challenges addressed
<p>Action 2.5 Reduce the take of low flows</p>	<p>Investigate and assess options for reducing water extraction during low flows, focusing on the effectiveness of high-flow conversions, adopting low flow bypasses for on-farm dams, and options for landholders to store water extracted from the region's streams under basic landholder rights.</p>	
<p>Action 2.6 Support Aboriginal business opportunities</p>	<p>Support Aboriginal people to develop business opportunities in the North Coast region, some of which may require access to water.</p>	
<p>Action 2.7 Address catchment-based impacts of increased harvestable rights limits</p>	<p>Ensure that any impacts on downstream licence holders and the environment resulting from the uptake of increased harvestable rights are understood at the local scale and potential impacts from any increase are considered (and managed where necessary) in future water sharing plan arrangements.</p>	



Photography

Image courtesy of Destination NSW. Bellbrook, Macleay Valley Coast.

Prepare for future climatic extremes

Challenges legend



Declining catchment and river health



Competition for low flows



Saltwater intrusion into freshwater sources



Aboriginal people's rights and access to water



Water security for North Coast region industries



Water availability for North Coast towns and communities

Proposed actions	Description	Challenges addressed
Support local councils and water users to manage risks		
Action 3.1 Support local councils to provide a secure and affordable water supply for towns	The NSW Government will continue to support local councils across the region, both in integrated water cycle management planning and co-funding infrastructure options to address key risks. This support will include addressing the recommendations of the NSW Government's Town Water Risk Reduction Program.	
Action 3.2 Provide better information about water access, availability and climate risks	Improve existing platforms and products to provide information about water availability and climate change in forms that are suitable to stakeholders to allow better business planning.	
Optimise use of existing water supplies		
Action 3.3 Review water markets	Review water markets to ensure water security, encourage trade efficiencies and allow transparency of information.	
Action 3.4 Investigate increased on-farm water storage	Assess the barriers to constructing on-farm storages, and the value of on-farm storages to landholders, industry and local fire-fighting.	
Investigate alternative water supplies		
Action 3.5 Increase use of recycled water for intensive horticulture	Understand the potential for and barriers to using recycled water for intensive horticulture across the region.	



Photography

Image courtesy of My Clarence Valley.
Scenic country views of the Mann River, Canga.



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