



# Far North Coast Region Draft Regional Water Strategy

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## What We Heard

**Public Consultation**  
December 2021

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**Find out more:** [www.dpie.nsw.gov.au](http://www.dpie.nsw.gov.au)

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## Introduction

The Department of Planning, Industry and Environment (the department) is developing 12 regional water strategies to provide long-term tailored water management solutions for NSW’s regional communities.

Our vision for the Far North Coast Regional Water Strategy is to support the delivery of healthy, reliable and resilient water resources for a liveable and prosperous region. To achieve this, we need to position the region so there is the right amount of water of the right quality available to people, Aboriginal communities, towns, industries and the environment.

The draft Far North Coast Regional Water Strategy (the draft strategy) is one of six draft regional water strategies that were released for public exhibition during the second half of 2020.

An extensive engagement and consultation program, with targeted stakeholders, the

public and First Nations/Aboriginal People, accompanied the release of the draft strategy. This included several face-to-face meetings, an online webinar and opportunities to have a one-on-one phone consultation with the regional water strategies team. Submissions were called for during the public exhibition period.

This report summarises the key issues we heard during the public exhibition and highlights how all feedback received during this period has informed the next steps in the development of the Far North Coast Regional Water Strategy. Public exhibition is only one phase of the broader engagement program that also includes targeted engagement with councils, water utilities and First Nations/Aboriginal People during strategy drafting and finalisation.

Figure 1 illustrates the process for developing the regional water strategies.

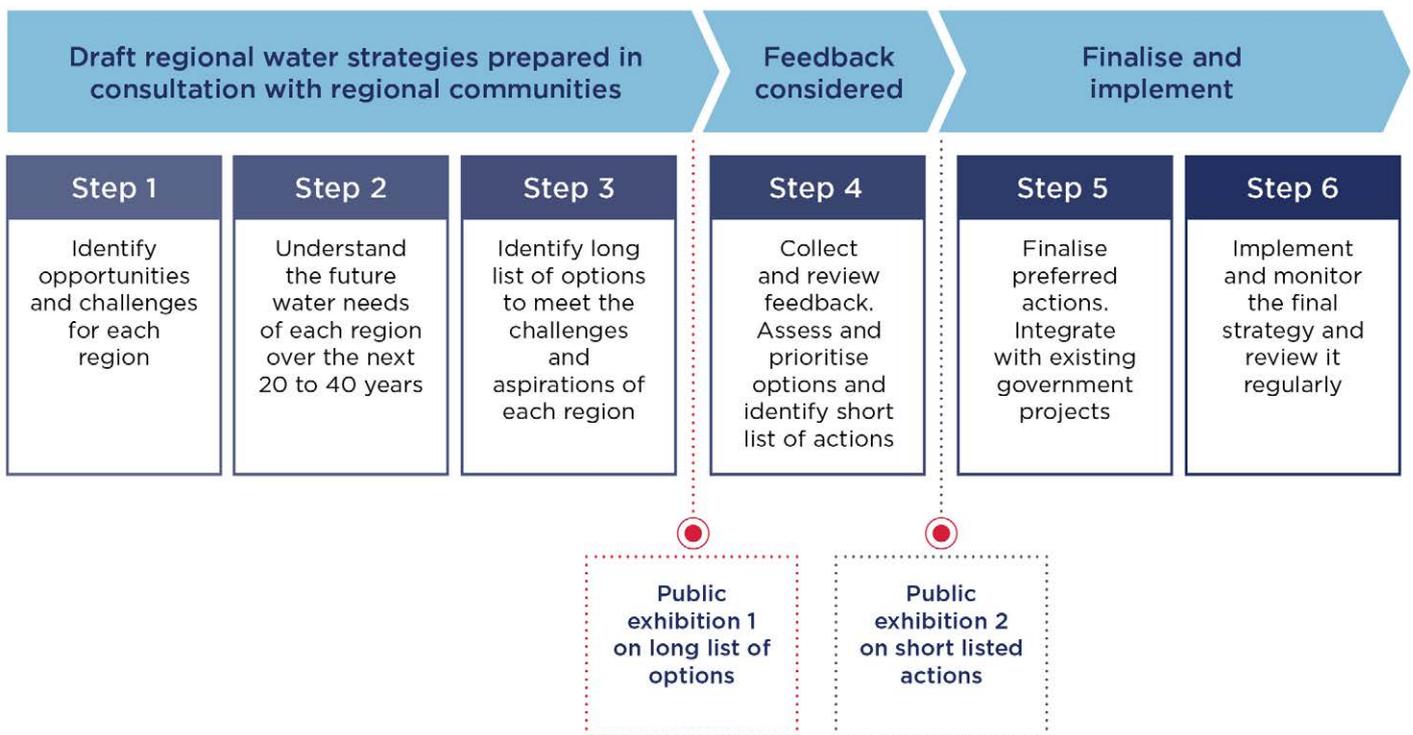


Figure 1: The Department’s approach to the development of the regional water strategies.

## Engagement approach

Our engagement approach for the regional water strategies program is to share information, gather feedback and collaborate with key stakeholders. We took this approach with the Far North Coast Regional Water Strategy to ensure regional communities can influence its development.

The department is using a phased engagement approach, as illustrated in Figure 2. Figure 3 shows the timeline for engagement activities in Phase 2 - Public exhibition.

### How we engaged

The department's engagement program during phase 1 and 2 involved:

- Consultation with joint organisations, councils and local water utilities in the Far North Coast region prior to the draft strategy being released.
- Consultation with First Nations/Aboriginal People in the Far North Coast region prior to the draft strategy being released.
- A live webinar for the general public on 9 November 2020.
- Aboriginal community meetings<sup>1</sup> in Tweed Heads on 11 November 2020.
- Community meetings in Tweed Heads and Lismore on 11-12 November 2020.
- One-on-one phone consultations with three consultations conducted on 15 and 16 November 2020.
- A formal submission process with 245 submissions received.

These methods enabled the department to share information about the regional water strategies program and seek feedback on the draft strategy and the long list of potential options. More targeted and public consultation will be organised in phase 3 and 4 of the engagement program.

### Who we engaged

During the exhibition period from 30 October - 13 December 2020, the department communicated and engaged with:

- First Nations/Aboriginal People and Aboriginal peak bodies
- Local government and bulk water suppliers
- Business and industry stakeholders
- Landholders
- Peak representative organisations
- Individual members of the public.

Feedback was encouraged throughout the consultation period and was captured in each engagement activity as well as in the formal submissions.

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<sup>1</sup>Aboriginal community meeting scheduled for Lismore on 12 November 2020 was cancelled due to Sorry business.

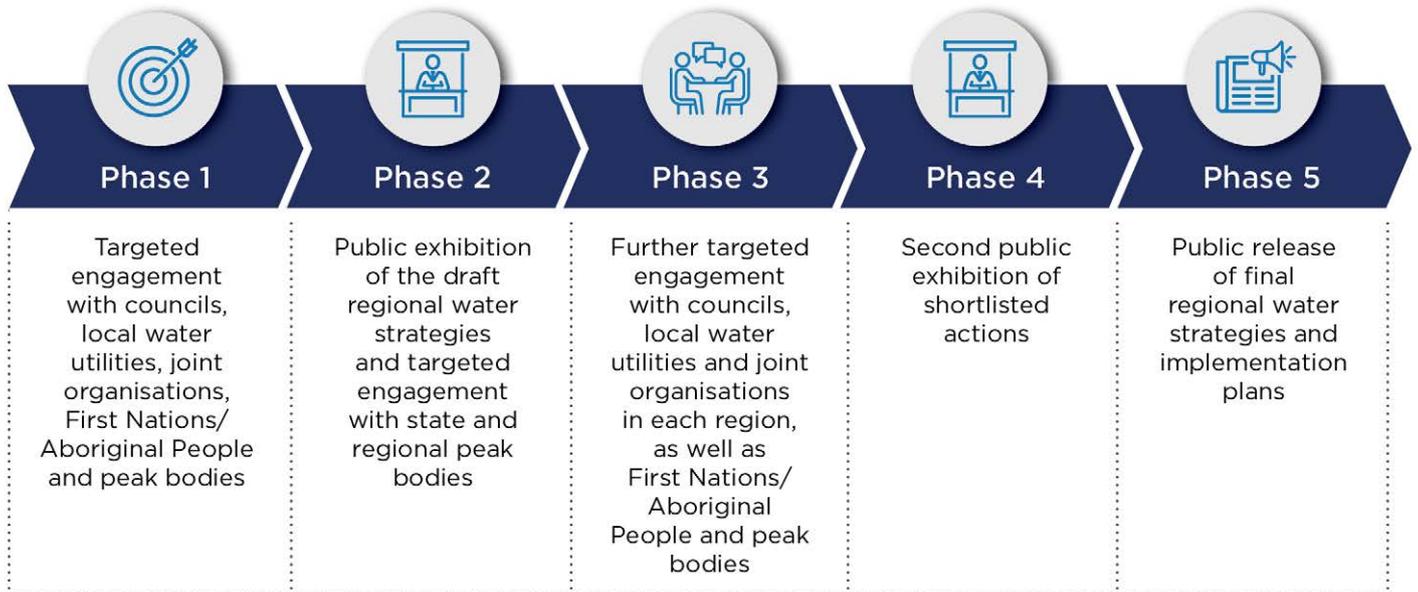
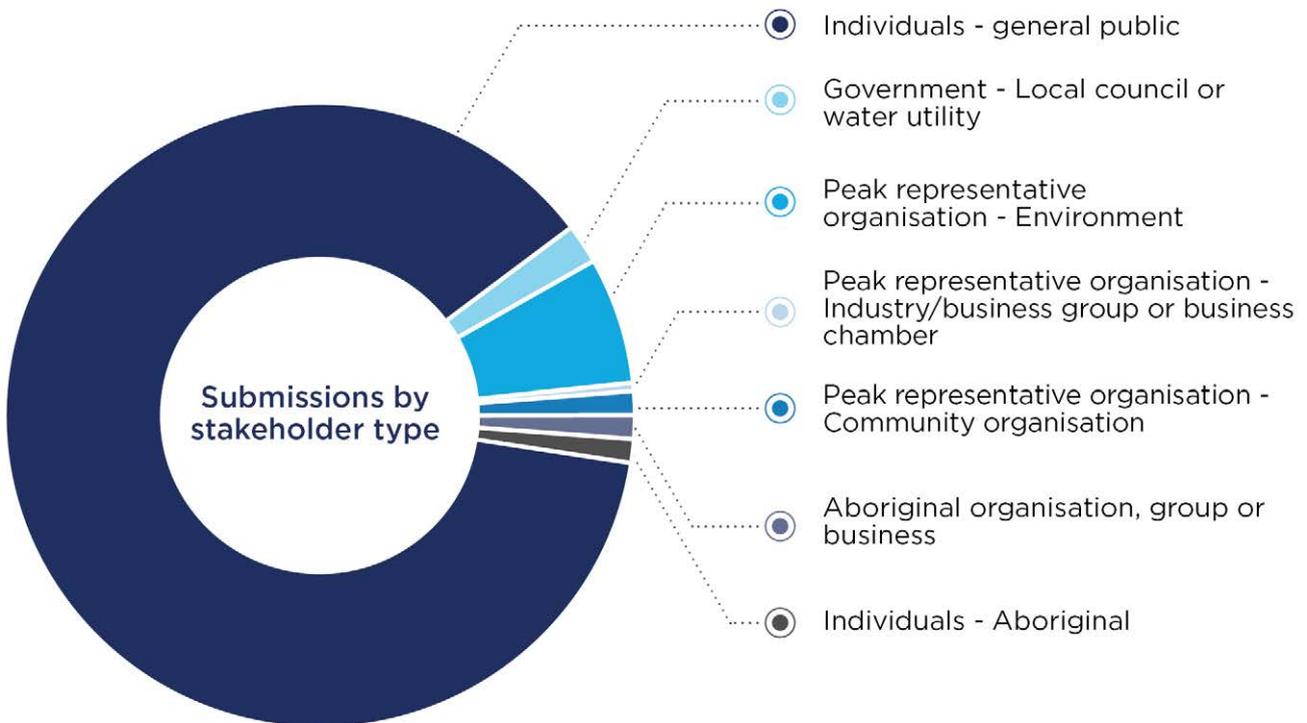


Figure 2: Phased approach to engagement for the regional water strategies engagement program.



Figure 3: Timeline the engagement activities during Phase 2 public exhibition in the Far North Coast region.

Engagement at a glance





**Our vision for the Far North Coast Regional Water Strategy is to support the delivery of healthy, reliable and resilient water resources for a liveable and prosperous region. To achieve this, we need to position the region so there is the right amount of water of the right quality available to people, Aboriginal communities, towns, industries and the environment.**

## What we heard

During the public exhibition we received 245 submissions on the draft Far North Coast Regional Water Strategy and the long list of options. Stakeholders shared many comments on the regional water strategies program, the content of the draft strategy and the long list of proposed options.

There was general support for the regional water strategies program and stakeholders urged the department to progress the development of the NSW Water Strategy to provide an overarching framework and objectives that would guide the 12 regional water strategies and the associated implementation plans. The NSW Water Strategy has since been developed and the final strategy has been published.

The department also heard that the next phase of regional water strategy development should be accompanied by an open, transparent and broad-scale consultation process to ensure all stakeholder voices are being heard and a broad cross-section of the community is represented in the discussion. We will be undertaking a further round of public

consultation on a shortlisted set of actions before the Far North Coast Regional Water Strategy is finalised.

Many stakeholders appreciated the opportunity to provide feedback to the draft strategy documents and reinforced the need to integrate and align the regional water strategy work with the NSW ongoing work programs and other state water reform processes.

There was support for the climate data modelling used in the development of the regional water strategies, with particular regard for its purpose in planning for climate resilience. Stakeholders noted that the modelling focused on drought conditions and suggested that more extensive flood modelling be incorporated for the Far North Coast region.

The consultation and engagement program for the draft strategy highlighted a wide variety of views on a range of issues. These issues can be categorised under the following themes:



### Aboriginal knowledge and connection to Country



### Water infrastructure



### Water Security



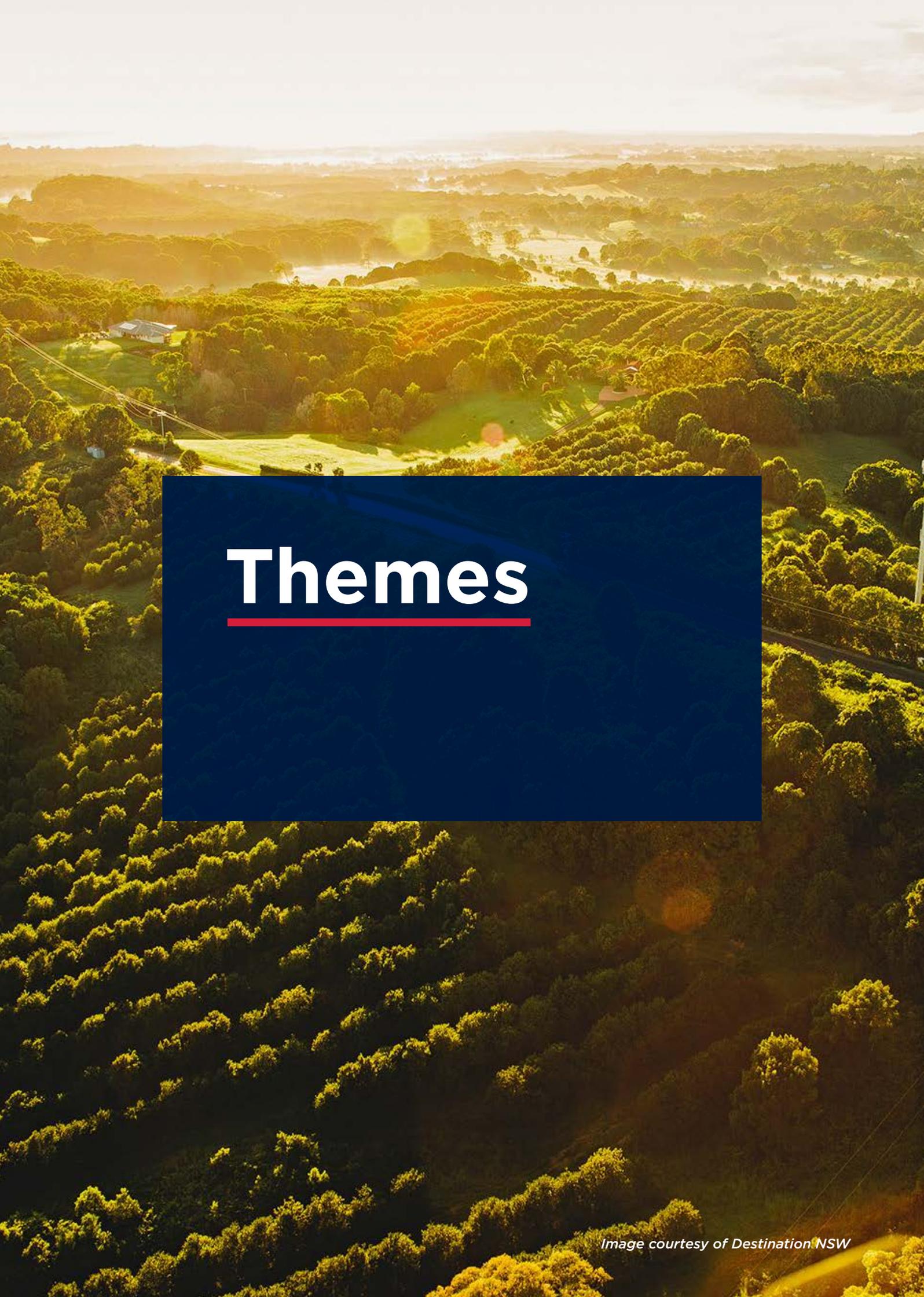
### Flooding and flood mitigation



### Groundwater

The following section summarises the feedback received for each of these themes. Note themes below are not listed in order of importance.

The draft strategy also included a long list of proposed options for the region. This long list is included on page 14. The options section summarises the feedback received on each option.

An aerial photograph of a vast, rolling landscape covered in dense green trees and fields. The scene is bathed in warm, golden light, suggesting a sunrise or sunset. In the center, a dark blue rectangular box contains the word "Themes" in white, bold, sans-serif font. A thin red horizontal line is positioned directly beneath the text. The background shows a mix of forested hills and open fields, with a few buildings and power lines visible in the distance.

# Themes

*Image courtesy of Destination NSW*



# 1. Aboriginal knowledge and connection to Country

There was broad support for improving the recognition of First Nations/Aboriginal People's water rights, interests and access to water. There was recognition that inclusion of Aboriginal knowledge of land and water management could enhance the outcomes of many of the proposed options.

## Key support

- There was acknowledgement that genuine consultation with First Nations/Aboriginal People through this process can provide an important step in providing a voice for First Nations/Aboriginal People in water matters.
- Integration of Aboriginal knowledge of water management and protection of cultural heritage was supported.
- Clear governance and coordination of Aboriginal representative groups, and how they are engaged and funded, for water management issues was encouraged.
- Simplification of the application process for Aboriginal cultural licences and clear and transparent information on their use was requested.
- Pursuit of options that advance employment opportunities for First Nations/Aboriginal People were encouraged.
- Securing flows to cultural sites, recognising cultural knowledge, and reducing barriers to water access for First Nations/Aboriginal People, were supported.
- There was interest in the governance of the proposed advisory panel on water management, along with suggestion that there be one for each of the First Nations encompassed by the draft strategy.
- Communities acknowledged that opportunities exist to integrate Aboriginal ecological knowledge into projects with shared benefits for environmental and cultural outcomes.

## Key concerns

- It was noted that the Far North Coast region covered in the draft strategy contains two First Nations, requiring consultation with representatives from both.
- Concerns around the usability of cultural water licences were raised, with a particular focus on cost and accessibility. Feedback encouraged the provision of education and support, as well as streamlining the process to improve licence accessibility.
- It was suggested that the exclusion of cultural water licences from trading is a barrier to economic development by local First Nations/Aboriginal People.
- Managing and monitoring compliance for both cultural and other water licences in the region was a concern.
- Feedback suggested that the draft strategy had a limited focus on water security for Aboriginal communities and options that would drive economic outcomes for Aboriginal people.
- Complexity of water policy and laws and the need to develop tailored educational resources to help empower Aboriginal communities, was raised as a concern.
- Lack of access to water via crown and private land, including via travelling stock reserves, was raised as a concern.



## 2. Water infrastructure

The feedback received throughout this consultation period, particularly in the formal submissions, was predominantly in opposition to the proposed Dunoon Dam at Rocky Creek (Option 14). There was support for proposed desalination infrastructure that is fuelled by green energy options.

### Key support

- Stakeholder feedback on the proposed desalination projects comprised a mix of support and concern. However, stakeholders indicated that their support will increase if commitments can be made to use green renewable energy sources for operation.
- There was strong support for initiatives that would reduce demand, instead of increasing supply, particularly through climate-dependent infrastructure solutions. Options that are not dependent on climate were favoured including those that focus on water reuse and recycling.
- Public support for the Dunoon Dam project has increased among some Far North Coast communities since public exhibition of the draft regional water strategy and release of Rous County Council's *Future Water Strategy 2060*. Supporters consider the dam to be the most cost-effective option for securing Rous County Council's long-term water supplies given the region is one of the wettest areas of NSW.

### Key concerns

- There was strong stakeholder opposition to the proposed Dunoon Dam on Rocky Creek. Issues cited included:
  - negative impacts of the proposed dam on endangered flora and fauna, including koala and platypus habitats
  - destruction of big scrub rainforest and Aboriginal heritage sites in the inundation zone
  - negative impact on lands that are home to and of significance for local First Nations/Aboriginal People
  - contention of the economic cost-benefit of the project
  - effect on the communities impacted by the inundation zone.
- There was concern that the stated cost efficiencies would not be realised in the construction of the proposed new infrastructure projects.
- Feedback suggested that the strategy focuses too much on water-related infrastructure instead of sustainable resource management and use.
- It was suggested the strategy should focus on reducing demand and improving water use efficiency, noting that additional infrastructure would not necessarily provide increased water reliability.
- Concern that construction of large infrastructure will have negative environmental outcomes to environmental health, ecosystems and natural habitats.
- Lack of clarity as to how the infrastructure-related options will be assessed through the options assessment process was raised.



### 3. Water security

Water security was raised in the context of the population and economic growth that the region is experiencing. Stakeholders called for the adoption of water efficiency projects to increase supply through reduced wastage, and for population management.

#### Key support

- A multi-source approach to water security, applied to strengthen town water security in the region, including increased climate-independent sources, was supported.
- Diversifying the supply whilst managing and reducing demand for water in the region, was supported.
- Education on water resource management, water use and efficiency, for residential, commercial and industrial user, was supported and encouraged.
- Water reuse, recycling and purification projects, especially stormwater and rainwater harvesting, was strongly supported.
- Connecting water efficiency, reuse and recycling projects to development applications and approvals was encouraged, with many stakeholders noting the opportunity to drive the take up of these measures during this time of population and economic growth in the region.
- There was support for the climate data modelling used in the development of the regional water strategies, with particular regard for its purpose in planning for climate resilience.

#### Key concerns

- There was concern raised for the increasing population in the region and the increased pressure this will place on water sources.
- Many suggested that regional growth should be limited by the water supply capacity.
- The need to provide reliable water supplies for locals and the high volume of tourists and visitors that come to the region throughout each year, was a key concern. Consideration of this issue in the draft strategy was encouraged.



## 4. Flooding and flood mitigation

This was raised as an issue in the region, particularly in the Richmond River valley. Feedback encouraged the development of climate modelling for extreme rainfall and rising sea levels, with appropriate options developed for mitigating their impacts.

### Key support

- There was support for including flood management objectives in the regional water strategy.
- There were suggestions for the draft strategy to give focus on this issue by developing a detailed Richmond River catchment-wide flood model, including investigating and developing specific options for flood mitigation.

### Key concerns

- Flooding events are a prominent feature in the region and was stated in the feedback as a significant issue of concern for some.
- Stronger regulation of development in flood-prone areas was suggested as a way to manage concerns around continued development in high-risk areas.
- Stakeholders noted that the modelling focused on drought conditions and suggested that more extensive flood modelling be used for the Far North Coast region.
- The focus of the regional water strategies program is on drought conditions. Feedback acknowledged that this is a concern in many of the other regions but is not the key climate issue in the coastal region.
- The impacts of flooding in the region can be significant. Feedback encouraged the department to consider including options in the short list that aim to address these impacts.



## 5. Groundwater

Stakeholders expressed that better groundwater knowledge was an imperative and that more work is needed to better understand the relationship between surface water and groundwater resources. There was concern that groundwater sources were being exploited through commercial harvesting for water bottling.

### Key support

- General support for the protection of groundwater sources and emphasis on sustainable use as many landholders and farmers rely on groundwater as their primary water supply.
- Strong support for more research into groundwater, including alluvial and coastal sands aquifers, and the health and sustainable use of groundwater resources.
- Feedback acknowledged that a greater knowledge of groundwater systems is required to understand the long-term security of supply, recharge rates, groundwater-dependent ecosystems, water quality, and impacts of other infrastructure projects in the region.

### Key concerns

- There was opposition expressed for commercial harvesting of groundwater in the region, in particular for bottling, with concern for future impacts.
- The impact of climate variability and climate change on groundwater demand, recharge and groundwater levels, was raised as a concern.
- Potential damage to aquifers and wariness of an over-reliance on groundwater as a water source, especially in times of drought, was a concern.
- There was concern that limited information about the current condition of groundwater sources and commercial harvesting could lead to unsustainable use.

# Options



*Image courtesy of Destination NSW*

## Long list of proposed options identified in the draft Far North Coast Regional Water Strategy

### Maintaining and diversifying water supplies

1. Interconnection of independent water supplies in the region to the Rous County Council network
2. Interconnection of Rous County Council and Tweed Shire Council bulk water supplies
3. Use Toonumbar Dam to augment town water supplies
4. Connect the regional water system to the South East Queensland water grid
5. Vulnerability of surface water supplies to sea level rise
6. Remove impediments to water reuse projects
7. Indirect potable reuse of purified recycled water
8. Direct potable reuse of purified recycled water
9. Managed aquifer recharge investigations and policy
10. Decentralised desalination
11. Regional desalination
12. Raise Clarrie Hall Dam level
13. New dam on Byrrill Creek
14. New Dunoon Dam on Rocky Creek
15. Increased harvestable rights

16. Provide purified recycled wastewater for industry and rural users Increased on-farm water storage
17. Increased on-farm water storage
18. A grid of off-stream storages in the Far North Coast region
19. Raise Toonumbar Dam level

### Protecting and enhancing natural systems

20. Establish and/ or increase Establish sustainable extraction limits for Far North Coast surface water and groundwater sources
21. Environmental water releases from major storages in the Far North Coast
22. Convert low flow water access licences to high flow water access licences
23. Improve stormwater management
24. Bringing back riverine and estuarine habitat and threatened species
25. Fish-friendly water extraction
26. Improve fish passage in the Far North Coast region
27. Addressing cold water pollution
28. Characterising coastal groundwater resources

29. Protecting ecosystems that depend on coastal groundwater resources
30. Northern Rivers Watershed Initiative
31. River Recovery Program for the Far North Coast: a region-wide program of instream works, riparian vegetation and sediment control

### Supporting water use efficiency and conservation

32. Improved data collection and information sharing
33. Active and effective water markets
34. Regional demand management program
35. Regional network efficiency audit

### Strengthening community preparedness for climate extremes

36. Apply the NSW Extreme Events Policy to the Far North Coast region
37. Protecting coastal groundwater resources for town water supplies and rural water users
38. Planning for climate change impacts on coastal groundwater resources
39. Planning for land use pressures on coastal groundwater resources.

**Table 1:** Long list of proposed options for the Far North Coast region

## Options 1-19: Maintaining and diversifying water supplies

Large infrastructure projects were not well supported, with strong opposition to the proposed Dunoon Dam (Option 14). There was considerable support for the water reuse and recycling options.

Options	Summary of feedback received
1. <b>Interconnection of independent water supplies in the region to the Rous County Council network</b>	<ul style="list-style-type: none"> <li>• There was support for the interconnection of the bulk water supplies in the region.</li> <li>• The provision of enhanced security and reliability of water supply through these interconnection options was welcomed.</li> </ul>
2. <b>Interconnection of Rous County Council and Tweed Shire Council bulk water supplies</b>	
3. <b>Use Toonumbar Dam to augment town water supplies</b>	<ul style="list-style-type: none"> <li>• Full utilisation of the Toonumbar Dam for the benefit of the residents in the local area was supported.</li> </ul>
4. <b>Connect the regional water system to the South East Queensland water grid</b>	<ul style="list-style-type: none"> <li>• Connecting the regional water system to the South East Queensland water grid may also allow the Byron Shire to access water supply from the desalination plant at Bilinga on the Gold Coast.</li> </ul>
5. <b>Vulnerability of surface water supplies to sea level rise</b>	<ul style="list-style-type: none"> <li>• Further research and extension of the climate modelling was encouraged to assess the potential impact of sea level rise.</li> </ul>
6. <b>Remove impediments to water reuse projects</b>	<ul style="list-style-type: none"> <li>• State funding or grants should be available for resilient options such as infrastructure for both potable and non-potable recycled water, and stormwater harvesting for large scale greenfield developments.</li> </ul>
7. <b>Indirect potable reuse of purified recycled water</b>	<ul style="list-style-type: none"> <li>• Climate-independent solutions, including efficiency measures (restrictions being the last resort) and water recycling (both potable and not), were considered prudent.</li> </ul>
8. <b>Direct potable reuse of purified recycled water</b>	<ul style="list-style-type: none"> <li>• NSW legislation change is needed regarding the use of recycled water systems, to enable fast-tracking permission, less red tape and modified health regulations.</li> </ul>
16. <b>Provide purified recycled wastewater for industry and rural users Increased on-farm water storage</b>	<ul style="list-style-type: none"> <li>• Recycled treated wastewater for drinking purposes was recognised as being aligned with the draft strategy’s stated approach and objectives.</li> <li>• Stakeholders encouraged the use of recycled and treated water to be considered for industrial, agricultural and residential consumers.</li> </ul>

Options	Summary of feedback received
<b>9. Managed aquifer recharge investigations and policy</b>	<ul style="list-style-type: none"> <li>The principles underlying managed aquifer recharge of capturing water when it is abundant and storing it with minimal losses to be used when it is dry was strongly supported.</li> <li>Further investigations were suggested into potential environmental impacts and opportunities from the managed aquifer recharge policy.</li> </ul>
<b>10. Decentralised desalination</b> <b>11. Regional desalination</b>	<ul style="list-style-type: none"> <li>The significant benefit of desalination as acknowledged in the feedback, was its lack of reliance on rainfall, thus providing an alternative, climate-independent source of water.</li> <li>Desalination plants were considered to have a lower environmental footprint if powered by renewable energy such as solar panels or wind turbines.</li> <li>Concerns were raised for the cost of desalination technology and operations, and the potentially damaging impacts on coastal environments.</li> <li>Feedback included concern that desalination would be perceived as an unlimited source of water, thus negating efforts to reduce water consumption.</li> <li>Opposing views were put forward that desalination was not necessary when the region experiences above average rainfall for the state.</li> </ul>
<b>12. Raise Clarrie Hall Dam level</b> <b>13. New dam on Byrrell Creek</b> <b>14. New Dunoon Dam on Rocky Creek</b> <b>19. Raise Toonumbar Dam level</b>	<ul style="list-style-type: none"> <li>Feedback regarding new water infrastructure predominantly opposed the options.</li> <li>The proposed Dunoon Dam was strongly opposed by people participating in public exhibition. There was significant organisation of local residents to participate in the formal submission process to express their opposition.</li> <li>First Nations/Aboriginal People opposed the Dunoon Dam proposal due to its negative impact on culturally significant sites.</li> <li>Public support for the Dunoon Dam project has increased among other sections of the Far North Coast community since public exhibition of the draft regional water strategy. Support for the project is based on the cost effectiveness of the proposal compared to other long-term options.</li> <li>There was support for raising the Toonumbar Dam to increase bulk water supply in the local area, however, opposition based on environmental impacts was expressed.</li> </ul>

Options	Summary of feedback received
	<ul style="list-style-type: none"> <li>The proposed Byrrill Creek dam was also opposed based on a previous cost benefit analysis, its potential negative impacts on the Wollumbin and Mt Warning National Parks, the inundation of lowland rainforest and endangered or threatened flora and fauna species, severing of the fauna corridors and damage to Aboriginal cultural heritage sites.</li> </ul>
<b>15. Increased harvestable rights</b>	<ul style="list-style-type: none"> <li>Increasing harvestable rights raised concern given the largely unregulated nature of farming operations and the growth in intensive horticulture.</li> <li>Feedback suggested that there is a lack of a policy, or regional strategy, for on farm dam heights as they pertain to harvestable rights.</li> </ul>
<b>18. A grid of off-stream storages in the Far North Coast region</b>	<ul style="list-style-type: none"> <li>Support for this option for the potential to reduce downstream impact of peak flood flows.</li> </ul>

## Options 20-31: Protecting and enhancing natural systems

Feedback for the proposed options in this category was supportive of the preservation or restoration of the natural characteristics of the river system and actively seeking to increase knowledge and understanding of water sources, land and water management.

Options	Summary of feedback received
20. Establish sustainable extraction limits for Far North Coast surface water and groundwater sources	<ul style="list-style-type: none"> <li>• It suggested that more data may need to be collected prior to establishing the extraction limits.</li> <li>• Feedback indicated that environmental flows should take precedence over rural landowners in times of low flows.</li> </ul>
21. Establish and/ or increase environmental water releases from major storages in the Far North Coast	<ul style="list-style-type: none"> <li>• There was support for all options in the draft strategy that support the natural hydrological systems of the Far North Coast region.</li> <li>• The proposed licence changes were supported, along with suggestions to improve education and regulation to ensure that the ecological sustainability that they promote is realised.</li> </ul>
22. Convert low flow water access licences to high flow water access licences	<ul style="list-style-type: none"> <li>• Construction of infrastructure to capture stormwater should be substantial to avoid seepage or evaporation.</li> </ul>
23. Improve stormwater management	
24. Bringing back riverine and estuarine habitat and threatened species	<ul style="list-style-type: none"> <li>• There was strong support for these options.</li> <li>• Feedback recognised that these options could achieve improved outcomes for river health, native fish, waterbirds and wetlands.</li> </ul>
30. Northern Rivers Watershed Initiative	<ul style="list-style-type: none"> <li>• Suggestion was made to investigate the impact of unrestrained domestic livestock on river and stream bank degradation and erosion.</li> </ul>
31. River Recovery Program for the Far North Coast: a region-wide program of instream works, riparian vegetation and sediment control	<ul style="list-style-type: none"> <li>• There was a call for programs such as the River Recovery Program to be planned and funded for longer operational duration (such as 6-10 years), to gain traction and realise benefits.</li> </ul>
25. Fish-friendly water extraction	<ul style="list-style-type: none"> <li>• There was strong support for these options.</li> </ul>
26. Improve fish passage in the Far North Coast region	<ul style="list-style-type: none"> <li>• Feedback was fully supportive of improvement in the river health and systems emanating from the implementation of these types of options.</li> </ul>
27. Addressing cold water pollution	

Options	Summary of feedback received
<p><b>28. Characterising coastal groundwater resources</b></p> <p><b>29. Protecting ecosystems that depend on coastal groundwater resources</b></p>	<ul style="list-style-type: none"> <li>• There was strong support for this option.</li> <li>• Suggestion was made for all bores to be metered to improve compliance to extraction limits and collect water usage data.</li> <li>• Feedback suggested the inclusion of the Ballina Nature Reserve, Victoria Park and Uralba Nature Reserve as groundwater dependent ecosystems.</li> <li>• Research into groundwater resources, through extensive field investigations, expansion of existing monitoring networks, metering of all forms of groundwater take, development of groundwater flow data and, and publishing of annual resource updates were encouraged.</li> </ul>

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## Options 32-35: Supporting water use efficiency and conservation

Feedback supported improving delivering options while maintaining positive environmental outcomes and avoiding further environmental damage. Distinctions were made between town and industry or other water users, regarding shoring up town water supplies. Connectivity and minimal losses were important to the respondents.

Options	Summary of feedback received
32. Improved data collection and information sharing	<ul style="list-style-type: none"> <li>• There was overall support for these options.</li> </ul>
33. Active and effective water markets	<ul style="list-style-type: none"> <li>• Concern was expressed for the growing bottled water industry and the potential impact will have on groundwater sources in the region.</li> </ul>
34. Regional demand management program	<ul style="list-style-type: none"> <li>• Development in the region was also highlighted as industries increase water consumption and the need for integrated water efficiency measures within the planning requirements grows.</li> </ul>
35. Regional network efficiency audit	<ul style="list-style-type: none"> <li>• Demand management was supported as a priority action before increasing water licence allocations.</li> <li>• Exclusion of cultural water licences from trading was suggested as a barrier to economic involvement by local First Nations/Aboriginal People.</li> </ul>

## Options 36-39: Strengthening community preparedness for climate extremes

Feedback supported the proposed options and expressed support for further research and growing understanding of the impacts of climate change in the region, to enable resilient communities to be built.

Options	Summary of feedback received
36. Apply the NSW Extreme Events Policy to the Far North Coast region	<ul style="list-style-type: none"> <li>• There was agreement from stakeholders that communities need to be better prepared for climate extremes and rising sea levels.</li> </ul>
37. Protecting coastal groundwater resources for town water supplies and rural water users	<ul style="list-style-type: none"> <li>• Application of emergency measures was raised as a concern, with the environment having lower priority than township or industry requirements.</li> </ul>
38. Planning for climate change impacts on coastal groundwater resources	<ul style="list-style-type: none"> <li>• Further understanding and research into the impacts of climate change and land use on coastal groundwater resources was encouraged.</li> </ul>
39. Planning for land use pressures on coastal groundwater resources.	

## Suggested additional options

Respondents suggested a range of new options that related to a variety of topics as set out in the following. A number of these suggestions will be integrated into existing options. In some cases, new options will be created and displayed in the next public exhibition.

Topics	Summary of additional suggestions received
<b>Catchment management</b>	<ul style="list-style-type: none"> <li>• Recognise and support Landcare programs that support volunteers and land managers to better manage the catchment in a whole range of issues.</li> <li>• Develop a whole-of-government position on historical floodplain drainage systems.</li> <li>• Develop a detailed Richmond River catchment-wide flood model, including investigating and developing specific options for flood mitigation.</li> </ul>
<b>Technologies</b>	<ul style="list-style-type: none"> <li>• Renewable-powered solutions, such as Zero Mass Water, can roll out community by community, as needed, to solve drinking water shortage issues, with minimal environmental impact, at a cost which is now competitive with other solutions (for example, as used in Murrurundi, NSW).</li> </ul>
<b>Infrastructure</b>	<ul style="list-style-type: none"> <li>• Raise Rocky Creek Dam wall by 1+ metres.</li> <li>• Increase height of Bray Park Weir to mitigate saltwater breaching the fresh water supply.</li> <li>• Remove the concrete drainage channels and restore a functioning vegetated ecosystem instead.</li> <li>• Investigate a combined infrastructure solution in the Tuckean Swamp area - high quality modelling would facilitate the evaluation of a water attenuation device to store flooding rains and run off from the Alstonville Plateau and the continual release of water through the Bagotville drainage system.</li> <li>• An off-creek storage in Byron Bay to supply Mullumbimby with water.</li> <li>• A water audit of the area to see where water is being wasted. There are numerous leaking council mains.</li> </ul>
<b>Development projects</b>	<ul style="list-style-type: none"> <li>• Invest in a research facility specifically for agricultural water security, focused on developing science and technologies for drought resilience.</li> <li>• Make it a requirement for any new or existing residential developments to use rainwater tanks in urban areas and recycled grey water systems; provide subsidies if appropriate.</li> <li>• Develop a map of mining to identify sensitive areas, drinking water catchments, heritage sites, and places of environmental significance, and scenic beauty, where mining simply should not occur, and declare them off-limits.</li> </ul>



# Response

## Response to feedback

Since the publication of the draft Far North Coast Regional Water Strategy, the NSW Water Strategy has been developed. Some of the issues that the Far North Coast Regional Water Strategy highlighted and that were raised by communities in the Far North Coast region are challenges across the whole state. These state-wide issues have been included as priority focus areas in the NSW Water Strategy and are outlined below.

Your feedback has been used to refine the key challenges that we need to focus on in the final Far North Coast Regional Water Strategy, and the options that will be shortlisted for further investigation.

### Further consultation

We have heard and accepted feedback from across the state requesting more consultation on the regional water strategies and a greater say in how options are shortlisted and prioritised.

We will be undertaking public consultation on a shortlist of actions before the Far North Coast Regional Water Strategy is finalised.

### New climate data

The new climate datasets and updated modelling that underpin the draft Far North Coast Regional Water Strategy are an important advance on previous climate work. We can now better assess the likelihood of a range of drought conditions, and the impacts on surface water security and reliability over a much wider range of climate conditions. This is a major improvement from our previous reliance on the observed historical records only.

The key next step is to work with the community to detail how this climate data should be used. This may include establishing the risk appetite of the community and identifying which historical droughts should be used as the basis for water management.

A priority action in the NSW Water Strategy is for the NSW Government to review water allocation frameworks and water sharing plan provisions in response

to new extremes in water availability. This will include exploring risk management approaches for a more adaptive water allocation and accounting framework, as well as understanding how the new climate data can inform this work. Progressing this requires detailed and focused engagement with the community. It cannot happen overnight. It also depends on communities having a workable understanding of these risks and having conversations about the levels of risk they are willing to accept.

The new climate data is already being used in business cases to assess the impacts and benefits of proposed major state water infrastructure. This information will be useful for local water utilities and other stakeholders in assessing the long-term water security of individual towns. Making this data available in a useable format is a priority under the Town Water Risk Reduction Program.

As with all types of science, we need to continually improve the data. The next steps in continuing to improve the climate data and modelling method will be to apply it to assess climate impacts on groundwater and associated risks. This is being progressed through the Groundwater Strategy.

### Aboriginal water rights

One of the primary objectives of the draft Far North Coast Regional Water Strategy is to recognise and protect Aboriginal water rights, interests and access to water. It is also priority number 2 in the NSW Water Strategy.

The department remains committed to engage with First Nations/Aboriginal People in the region as we progress through the options assessment process and the development of the final Far North Coast Regional Water Strategy and the NSW Aboriginal Water Strategy.

Unlike many other challenges in the region, the fundamental water rights of First Nations/Aboriginal People is still a major gap in water management across NSW. Addressing this issue will set up a framework for addressing the Aboriginal

community options identified in the draft regional water strategies. These options will be progressed through the NSW Aboriginal Water Strategy. Opportunities to progress region-specific options for Aboriginal communities, in parallel with this state-level action, will be explored in the final Far North Coast Regional Water Strategy.

### Water infrastructure

We acknowledge the extensive feedback we received regarding the proposed new Dunoon Dam on Rocky Creek (Option 14). When shortlisting the options, we have assessed each infrastructure option using a tailored cost-benefit analysis that considers the benefits, costs and impacts localised to the area and the catchment.

### Environment and ecosystem health

The feedback on the draft Far North Coast Regional Water Strategy showed strong support for options that improve environmental and ecosystem health and increase the connectivity throughout Far North Coast catchments. When developing the final Far North Coast Regional Water Strategy, we have considered ideas that were raised by stakeholders during public exhibition.

### Integrating land use and water management

There is an important link between land use and water management. How land is used determines water management needs—whether water is servicing urban developments or being provided for other uses such as industry, environmental, cultural or recreational needs. Land use planning decisions and development controls also have a key role to play in protecting water sources for supply, on the health and stability of waterbodies, and on receiving water quality.

Future water reliability and security in a changing climate will be critical to land use, urban development planning decisions and industry development initiatives in regional NSW. In particular, there is an opportunity to consider water availability and impacts much earlier and more strategically through the planning system. We have begun this work by using the evidence in

the regional water strategies to inform:

- the next generation of regional plans
- special activation precincts
- regional job precincts – including the Richmond Valley Regional Job Precinct.

The NSW Water Strategy has committed to better integrate land use planning, development approvals and water management (NSW Water Strategy Action 4.4) across the state. In addition, the NSW Water Strategy commits to adopting a more intense, state-wide focus on improving water quality (NSW Water Strategy Action 3.5) through the definition of clear roles, accountabilities and frameworks for monitoring, assessing and addressing water quality risks across the state.

The Department of Primary Industries – Agriculture is undertaking a three-year program to identify and map important agricultural land. Knowing where this land is situated and understanding value and contribution to the state's economy and food security will assist in making decisions about current and future land uses and their water needs. A comprehensive and consistent approach to collecting water statistics and related information will greatly help this process.

### Groundwater

The NSW government has placed an enhanced state-wide focus on sustainable groundwater management and will consult with the community on a draft NSW Groundwater Strategy and publish the final strategy in 2021-22.

Opportunities to progress region-specific groundwater options in addition to state-level actions will be explored in the final Far North Coast Regional Water Strategy.

### Economic prosperity and resilience

We are also working on additional options to address feedback we received during the public exhibition about ways we can support economic growth and resilient industries within capped systems (NSW Water Strategy Action 5.4) and align with the commitments made under the *Future Ready Regions Strategy*.

## Next steps

Your feedback during the public exhibition has helped us refine the key challenges that the strategy needs to focus on improving. It has also helped us identify which of the 39 proposed options listed in the draft Far North Coast Regional Water Strategy should be shortlisted to help address these challenges. Your feedback has also suggested several new options that have been assessed.

The next steps in our engagement will be to seek your views on the newly shortlisted actions before the Far

North Coast Regional Water Strategy is finalised. Your ongoing engagement is important to ensure we are identifying the right solutions for the Far North Coast region that meets the vision and needs of communities, the environment and industries.

A final package of actions will be presented as part of the final Far North Coast Regional Water Strategy and associated implementation plan which is scheduled for release in 2022.

More information:

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

