Regional Water Strategy

North Coast - Implementation Plan



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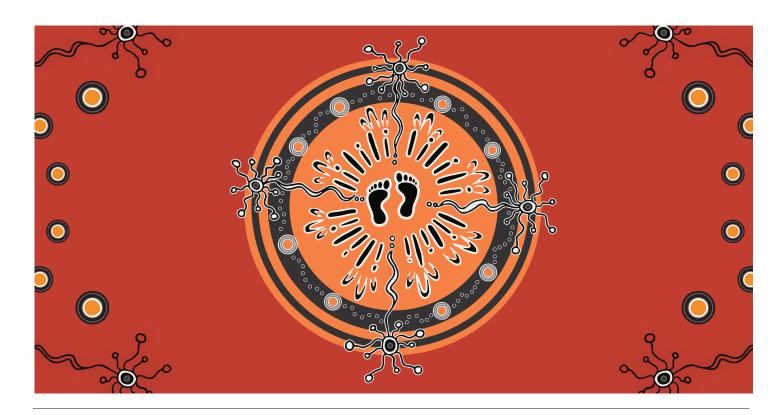
Cover image Image courtesy of Destination NSW. Scenic aerial overlooking the Belligen River, Fernmount.

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

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Acknowledging First Nations people

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 First Nations people/Traditional Owners from the North Coast region 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 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 Traditional Owners/First Nations people hold a strong voice in shaping the future for Indigenous/ Aboriginal and non-Aboriginal communities.

Artwork courtesy of Nikita Ridgeway.

About this Implementation Plan

The North Coast Regional Water Strategy charts the NSW Government's long-term vision and direction for delivering sustainable and resilient water services for the next 20 years. It sets out clear and accountable actions for the NSW Government, local water utilities and industries to tackle the challenges facing the North Coast region. The strategy sets out the actions and responsibilities to achieve this vision. It also presents the opportunity to leverage growth in the North Coast's agricultural sector.

The North Coast Regional Water Strategy has a 20-year timeframe, and the prioritisation and implementation of actions recognises this. Across the strategy's 20 years, the delivery of actions will span short, medium and longer-term time horizons.

We have already started work on many of the strategy's actions. For those actions that have not commenced, we intend to implement some in the short term, and others in the medium-to-long term. This recognises that although all actions are important, we cannot implement all actions immediately.

The North Coast Regional Water Strategy has been designed to be adaptive. This means we will update the strategy and our implementation approach to respond to changing priorities. We will review and update the North Coast Regional Water Strategy at least every 5 years.

Prioritisation

This implementation plan prioritises the actions for delivery over the next 20 years. It identifies work that can begin immediately. It also clarifies the dependencies of actions on each other.

We have prioritised actions based on:

- results of our analyses
- discussions with local councils and other government agencies
- community feedback
- available funding and funding opportunities.

Responsibilities

The implementation plan outlines responsibilities for delivery. This will allow us to better:

- · monitor the progress of actions
- assess the effectiveness of the strategy
- identify areas for improvement.

Key implementation partners

Effectively implementing the actions will require involvement of a diverse group of partners that includes the following government agencies, local government, community groups, industry groups and individuals:

- Department of Planning and Environment Water (DPE Water)
- Department of Planning and Environment Environment and Heritage (DPE Environment and Heritage)
- Department of Primary Industries Agriculture (DPI Agriculture)
- Department of Primary Industries Fisheries (DPI Fisheries)
- · Department of Regional NSW
- Destination NSW
- First Nations/Aboriginal peak groups and communities
- Local councils Kempsey Shire Council, Nambucca Valley Council, Bellingen Shire Council, Armidale Regional Council, Port Macquarie-Hastings Council, Coffs Harbour City Council, Clarence Valley Council, Walcha Council and Kyogle Council
- Local Land Services North Coast and Northern Tablelands regions
- NSW Marine Estate
- · Regional Development Australia
- Water Infrastructure NSW.

Monitoring, evaluation and progress reporting

An integrated monitoring and reporting framework has been developed for the various NSW water strategies. We will confirm and apply this to the North Coast Regional Water Strategy and regularly report on the progress of implementation.

These progress reports will provide transparency and accountability for delivering the North Coast Regional Water Strategy to the NSW community.

Reading the Plan

The North Coast Regional Water Strategy is the result of significant analysis and community engagement and builds on a range of existing commitments and work already underway. This work and community feedback is the rationale for how implementation of the actions has been prioritised and is recorded under the heading **Our starting point.**

There is some work that can commence very soon. Programs planned to start in the next 12 months are recorded under the heading **What we will do next.** There is some work that will take more time or rely on other actions to be completed first before they can begin. Programs which have a commencement time longer than 12 months are recorded under the heading **What we will do later.** These programmes may also be subject to funding approval.

There may be some instances where a column is blank. This is because we cannot begin implementing every action at once. The monitoring framework will help the department and the community assess the progression of implementing the strategy in full.

The NSW Government agencies or partners identified as responsible for delivering each program in the strategy are listed as **Lead** under each sub-action.

Agencies or partners that play a supporting role in delivering the program are listed as **Supported by** under each sub-action.



Image courtesy of iStock. Urunga, North Coast.

Priority 1

Action	Our starting point	What we will do next	What we will do later	Lead	Supported by
Action 1.1: Foster ongoing collaboration with local Aboriginal people in water management	The Department of Planning and Environment Water is developing the NSW Aboriginal Water Strategy and an engagement framework that describes when and how we engage with First Nations and Aboriginal people and peak organisations in an inclusive and culturally-appropriate way, with continued consultation with peak bodies and Aboriginal Community Controlled Organisations.	Finalise the Aboriginal water engagement framework. Set up a program and function to enable the Department of Planning and Environment Water to fund existing and new local Aboriginal organisations to increase their capacity to be involved in water-related matters (consistent with The Department of Planning and Environment Water's Interim Aboriginal community engagement fee guideline).	Incorporate immediate actions from the engagement framework into business-asusual activities. Finalise and implement the NSW Aboriginal Water Strategy.	DPE Water	First Nations/ Aboriginal peak groups and communities



Image courtesy of Destination NSW. Unkya Cultural Eco Tours, Scotts Head.

Action	Our starting point	What we will do next	What we will do later	Lead	Supported by
Action 1.2: Support place-based initiatives to deliver cultural outcomes for	The Department of Planning and Environment Water is developing the NSW Aboriginal Water Strategy (see Action 1.1).	Finalise the Aboriginal water engagement framework.	Co-design at least one project with Aboriginal people in the North Coast region that delivers cultural outcomes from improved access to water.	DPE Water	First Nations/ Aboriginal peak groups and communities Local Land Services
Aboriginal people	The Department of Primary Industries Fisheries is developing the Aboriginal Cultural Fishing Local Management Plan in the Hastings catchment.	Finalise the Aboriginal Cultural Fishing Local Management Plan pilot in the Birpai Birray (Hastings) Catchment.		DPI Fisheries	First Nations/ Aboriginal peak groups and communities Marine Estate Management Strategy (funding)
Action 1.3: Support whole-of- catchment governance	The NSW Government is implementing the Richmond River pilot program through collaborative partnerships with a range of organisations in the Richmond River catchment. This may provide information relevant to other regions.		Further action will be guided by any learnings from the Richmond River programme and the availability of future funding.	DPE Environment and Heritage	

Action	Our starting point	What we will do next	What we will do later	Lead	Supported by
Action 1.4: Deliver a river rehabilitation program	North Coast Local Land Services provides a range of extension services and advice to landholders on best practice and is currently developing natural resource management plans. The Department of Primary Industries Fisheries is administering the 'Flagship Fish Habitat Rehabilitation Grant' across coastal regions in NSW.	Deliver an education program to North Coast council staff about the protection of fish and fish habitat. Build Blue Carbon facilitation capacity in the region. Implement natural disaster recovery projects.	Explore new funding opportunities to develop novel partnerships that allow us to spread the breadth and impact of our river restoration services and on-ground works.	North Coast Local Land Services	Marine Estate Management Strategy (funding) Local councils
	The NSW Government is running a suite of natural capital voluntary programs to assist the primary industries sector to undertake sustainable actions.	Offer certification for farms that are implementing sustainable actions by protecting remnant vegetation, riparian areas, or rocky outcrops via fencing or other means.		DPE Environment and Heritage	



Image courtesy of Destination NSW. Hastings River, Port Macquarie.

Action	Our starting point	What we will do next	What we will do later	Lead	Supported by
Action 1.5: Support landholder adoption of best practice land	North Coast Local Land Services provides a range of extension services and advice to landholders on best practice and is currently developing natural resource management plans.	Provide grants and property management plans to farmers to help reduce sediment and nutrient runoff through 'Clean Coastal Catchments – Macadamias' funding.	Explore new funding opportunities to develop novel partnerships that allow us to spread the breadth and impact of services and on-ground works.	North Coast Local Land Services	
management		Reduce diffuse source water pollution in the beef, dairy, macadamia, berry and protected cropping industries through practice change and incentives.	Develop Australian-specific blueberry nutrition guidelines. Identify barriers to practice change and develop approaches to reduce these barriers.	North Coast Local Land Services DPI Agriculture	
		Undertake a vulnerability assessment which will include publishing assessments of climate risks and adaptation opportunities for North Coast agricultural commodities including macadamias, blueberries and dairy.		DPI Agriculture	
	The NSW Government is running a suite of natural capital voluntary programs to assist the primary industries sector to undertake sustainable actions.	Offer certification through agreed sustainability actions, including improving land management.		DPE Environment and Heritage	

Action	Our starting point	What we will do next	What we will do later	Lead	Supported by
	The NSW Government is delivering the coastal management framework to support councils manage the coastal zone.	Support councils to collaborate with relevant agencies to provide guidance on the holistic management of estuary health through coastal management programs. This will set the long-term strategy for the coordinated management of the	Support councils to implement certified coastal management programs.	DPE Environment and Heritage	Coastal management program Local councils
		coastal zone.			
Action 1.6: Assess the vulnerability of surface water supplies to sea level rise and saltwater intrusion	The NSW Government has recently developed hydrodynamic estuary models for the Marine Estate Management Strategy. In the North Coast, hydrodynamic models have been developed for the Clarence, Hastings, and Macleay estuaries. The models have considered the impacts of sea level rise on low-lying land and floodplain drainage. The Department of Planning and Environment Water has also developed a methodology for assessing the impacts for tidal pool water extractions on salinity dynamics in the Richmond River and Shoalhaven River estuaries. The Department of Planning and Environment Water supports local councils to prepare sea level rise (tidal inundation) studies in coastal estuaries.	Identify objectives, modelling methodology, model domain and assessment metrics, and commence preliminary consultation process with communities and tidal pool users.	Model priority estuaries drawing on the hydrologic modelling completed for the North Coast Regional Water Strategy and the hydrodynamic models developed for the Marine Estate Management Strategy. Develop an impacts assessment framework to understand the economic and social impacts that saltwater intrusion may have on water users, local water utilities infrastructure and Aboriginal cultural assets. Develop information products to allow the public to use the assessment outputs.	DPE Water	Water users Local councils

Action	Our starting point	What we will do next	What we will do later	Lead	Supported by
Action 1.7: Identify environmental water needs to support healthy coastal waterways	Tot dotorming on the original	Prioritise catchments and reaches for species assessments. Conduct environmental DNA (eDNA) species surveys in priority catchments and reaches. Formalise the methodology and governance arrangements to determine the environmental water needs of the region's catchments.	Develop flow and water quality requirements for priority ecological functional groups and ecological communities.	DPE Water	DPI Fisheries DPE Environment and Heritage
		Support councils to identify and deliver on the community's environmental and water quality values and uses of waterways. We will do this through a risk-based framework that will include support to revise water quality objectives.		DPE Environment and Heritage	Local councils
Action 1.8: Characterise and plan for climate change and land use impacts on coastal groundwater sources	To inform the NSW Groundwater Strategy (to be finalised in 2022), the Department of Planning and Environment Water commissioned the CSIRO to assess the potential impacts of a drier climate on the ability of our groundwater resources to recharge.	Determine the specific groundwater data, analysis and information we need to improve decisions for each region of NSW, including the North Coast. Establish criteria to identify critical groundwater resources and develop spatial products and data to allow for identification and mapping.	To be informed by the NSW Groundwater Strategy implementation plan.	DPE Water	Local councils

Action	Our starting point	What we will do next	What we will do later	Lead	Supported by
Action 1.9: Protect ecosystems that depend on coastal groundwater	Datasets for the identification and assigning of ecological value for vegetation and wetland groundwater-dependent ecosystems are available on the Sharing and Enabling Environmental Data (SEED) website.¹ • Water Sharing Plans set objectives and rules for monitoring, evaluating, reporting and management of groundwater dependent ecosystems.	Establish baseline and monitor ongoing condition of vegetation, wetland and subterranean groundwater dependant ecosystems. Correlate relationships between condition of vegetation, wetland and subterranean groundwater dependent ecosystems. Research methods to assess dependence on groundwater by vegetation groundwater by vegetation groundwater dependent ecosystems. Review available data on springs and assess cultural and ecological value. Implement a risk-based program to regularly improve groundwater dependent ecosystems data, information products, and adaptive management decisions for the benefit of social-cultural and environmental outcomes.	To be informed by the NSW Groundwater Strategy implementation plan.	DPE Water	DPE Environment and Heritage

^{1.} More information is available at: seed.nsw.gov.au

Action	Our starting point	What we will do next	What we will do later	Lead	Supported by
Action 1.10: Improve monitoring of water extraction	The NSW Government is progressing the non-urban water metering framework which became law in December 2018 with staged deadlines for installing compliant equipment rolling out over 5 years. The Department of Planning and Environment Water has issued advice on how to install metering on portable pumps.	Finalise implementation of the non-urban metering framework in coastal catchments by 2024.	Progressively make use of metered water use data to improve our estimates of extractions for greater confidence in the use of models for water planning and policy purposes. This may support forthcoming work to establish sustainable extraction limits for surface water and groundwater sources (Action 2.3).	DPE Water	



Image courtesy of Clarence Valley Council. Shannon Creek Dam, NSW.

Priority 2

Ensure water resource development and use is sustainable and equitable								
Action	Our starting point	What we will do next	What we will do later	Lead	Supported by			
Action 2.1: Improve fish passage	Identified 4 high priority fish barriers in the North Coast region: the Nymboida Weir, a causeway on Timbarra River off Upper Rocky Creek Road, a pipe culvert on Dowlings Falls Road, and a box culvert on Ewingar Road.	Restore fish passage and river connectivity at priority weir and road crossings, where funding has been secured, so that fish can move between habitats, avoid predators, find food and breed through the Reconnecting Fish Habitat program.	Continue to explore funding opportunities to implement actions at high priority sites.	DPI Fisheries	Marine Estate Management Strategy Structure Owners			
Action 2.2: Implement fish-friendly water extraction	The NSW Government is implementing the non-urban metering framework by 2024 (Action 1.10) and collecting valuable information on locations and sizes of pumps in the region.	We will fit the Department of Primary Industries Fisheries sites such as the Grafton Hatchery with modern screens as showcase sites.	Use information collected on pump size and locations to prioritise screening opportunities for the region.	DPI Fisheries				

Action	Our starting point	What we will do next	What we will do later	Lead	Supported by
Action 2.3: Establish sustainable extraction limits for surface water and groundwater sources	The Department of Planning and Environment Water has developed a project plan for progressing this work for surface and connected alluvial groundwater resources. The department has already commenced Phase 1 – Review of methods implemented in other jurisdictions.		Continue implementing the project plan: • Phase 2 – Develop preferred option(s) for determining sustainable extraction limits: This will consider legislative requirements, data availability, and possible future changes to catchment hydrology. • Phase 3 – Apply the preferred option(s): Undertake a pilot trial in one or more catchments to understand environmental, social, economic and cultural impacts. • Phase 4 – Refine innovative water sharing arrangements and develop an implementation program.	DPE Water	

Action	Our starting point	What we will do next	What we will do later	Lead	Supported by
Action 2.4: Reduce the take of low flows	The NSW Government is undertaking a review of regulation of domestic and stock basic landholder rights under the NSW Water Strategy.	Identify and assess options around the installation of low-flow bypass devices on new harvestable rights and licensed farm dams.	Implement the preferred and approved option for low flow bypass installation on appropriate farm dams.	DPE Water	
*Interdependency with Action 3.4					
Action 2.5: Address catchment- based impacts of increased harvestable rights limits	Harvestable rights limits for farm dams in coastal-draining catchments were increased from 10% to 30% in May 2022.	Conduct catchment-based assessments for each coastal-draining water source to assess and confirm the 30% limit, or to recommend a different limit for that catchment based on its specific characteristics. This will include an estimate of impacts of increases in harvestable rights dams on the downstream flow regime.	Include harvestable right at the commencement of the first water sharing plan as a numerical component of the long-term average annual extractions in revised coastal water sharing plans. Undertake a review of the update of harvestable rights to determine whether further water sharing plan amendments are required.	DPE Water	

Action	Our starting point	What we will do next	What we will do later	Lead	Supported by
Action 2.6: Support Aboriginal business opportunities	The Department of Planning and Environment Water is developing the NSW Aboriginal Water Strategy (see Action 1.1). The Department of Regional NSW has established the Aboriginal Partnership Program, which will work with Aboriginal organisations, businesses, and individuals to identify and develop new business opportunities or better manage existing ones and access support or grant funding. During consultation on the Draft North Coast Regional Water Strategy, we heard that immediate priorities for this action should focus on capability building partnerships.	Work with Aboriginal organisations, businesses and individuals in the North Coast region to identify and support new and existing businesses opportunities and facilitate access to support and/or grant funding.	Subsequent action will be guided by the finalised Aboriginal Water Strategy.	DPE Water	Department of Regional NSW First Nations/ Aboriginal peak groups and communities Local councils Regional Development Australia Destination NSW



Image courtesy of Destination NSW. Wajaana Yaam Gumbaynggirr Adventure Tours, Coffs Harbour.

Priority 3

Action	Our starting point	What we will do next	What we will do later	Lead	Supported by
Action 3.1: Support local councils to provide a secure and affordable water supply systems for towns	 The NSW Government is supporting local councils by: providing best practice management frameworks to ensure a safe and reliable water supply assisting the development of their strategic planning & asset management programs delivering the \$1.09 billion Safe and Secure Water Program funding high risk projects across the state. The NSW Government's Water Efficiency Program is supporting community adoption of water system efficiency, water conservation and demand management measures. 	We will implement a new regulatory framework. We will improve collaboration to help local councils deliver more effective and meaningful strategic planning. We will trial the 'Opt In' grant program which aims to assist councils in project development and/or delivery.		DPE Water	Water Infrastructure NSW Local councils

Action	Our starting point	What we will do next	What we will do later	Lead	Supported by
Action 3.2: Provide better information about water access, availability and climate risks	 The NSW Government is providing continued or expanded access to a range of online resources including: WaterInsights portal, a powerful interactive tool that will provide meaningful data on how water is shared, allocated and managed in a way that is easy to understand NSW Sharing and Enabling Environmental Data (SEED), is the state's central resource for sharing and enabling environmental data, which now includes the stochastic climate datasets for the North Coast Regional Water Strategy. 	Continue to provide access to more water models and modelled data in NSW SEED. Launch a comprehensive website that brings together coastal, estuary, and climate change information and facilitates public and stakeholder access to long-term data and reports.		DPE Water	DPE Environment and Heritage



Image courtesy of Kempsey Shire Council. Bellbrook, Macleay Valley Coast.

Action	Our starting point	What we will do next	What we will do later	Lead	Supported by
Action 3.3: Enhance coastal water markets	The NSW Government is working closely with the Commonwealth and other Murray–Darling Basin governments to ensure the 'roadmap' for water market reform represents practical and cost-effective reform measures that will improve confidence in water markets in the Murray–Darling Basin. It is likely that this work will have some statewide implications. The NSW Government is reviewing trade rules as part of the water sharing plans remake process using updated risk assessment data and the uniform application of trade principles.		Review any elements of the Murray–Darling Basin market reforms that may be relevant for the coast. This may include work to determine the current barriers to the development of a successful market, and whether there is the underlying demand for increased water activity.	DPE Water	
Action 3.4: Investigate increased on- farm storage **Interdependency with Action 2.5	This action may rely on data and decisions from the review of sustainable extraction limits (Action 2.3), the review of low flow bypasses (Action 2.4) and/or the review of Harvestable Rights (Action 2.6). See the relevant sections of this plan for the next steps of these actions.			DPE Water	

Action	Our starting point	What we will do next	What we will do later	Lead	Supported by
Action 3.5: Investigate increased use of tertiary-treated and on-farm recycled water for intensive horticulture	The NSW Government has collaborated with stakeholders to understand the benefits and concerns of industry to use onfarm water recycling systems.	Two water re-use pilot programs associated with the Clean Coastal Catchments Project (related to Marine Park Estates) will be implemented and monitored within the berry industry. Continue to monitor the performance and suitability of bioreactors to treat water and reduce nutrient loads before it exits to a stream (berry industry). Continue to work with industry to identify priorities and implement strategies to ensure efficient use of water and reduce off-site water quality impacts.	Undertake further water re-use system demonstrations to identify the critical issues, develop a cost-effective design and drive industry adoption beyond the berry industry to the broader intensive horticulture sector. Examine water efficiency plans with intensive horticultural industry growers. Upskill growers in the use of irrigation and best practice irrigation technology. Work with industry on water treatment systems prior to leaving farm such as the installation of bioreactors or wetland systems to capture nutrients.	DPI Agriculture	DPE Water

Ongoing monitoring, adaptation and reporting

The North Coast Regional Water Strategy is designed to respond to changing circumstances. We will undertake a formal review of the strategy at least every 5 years or in response to significant changing conditions and government priorities. The formal review will ensure that the key assumptions, such as population and demographics, have not significantly changed.

Amendments may be made in response to key changes in water demand, social preferences, science and

technology, economic conditions, or other events, including how climate change assumptions and responses evolve. These amendments may result in a shift in priorities, and the implementation plan will be updated to reflect this.

Each year, we will report on our progress in implementing the strategy actions. This will provide transparency to the community, and allow us to show what we have achieved and what we will deliver in the future.

Figure 1. Regional water strategies process

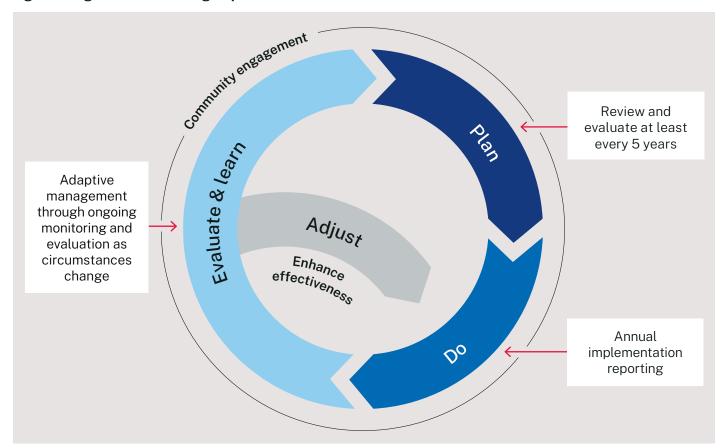


Table 1. Supporting activities

Action	Lead agency	What we will deliver in the next 5 years
Reporting	DPE Water	Publish regular progress updates on delivery of the actions in the North Coast Regional Water Strategy Implementation Plan so that the community can track progress.
Monitoring and evaluation	DPE Water	Apply the framework developed for the <i>NSW Water Strategy</i> to monitor, review and report on the actions in the North Coast Regional Water Strategy.
Review	DPE Water	Undertake a formal review of the strategy at least every 5 years, or in response to changing circumstances. The formal review will ensure that the key assumptions, such as population and demographics, have not significantly changed.

Department of Planning and Environment

