

***Name and personal details not for publication**

SUBMISSION IN RESPONSE TO:

NORTH COAST REGIONAL WATER STRATEGY



SUNDAY 19 JUNE 2022

SUBMISSION TO:

DPIE WATER

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INTRODUCTION

As a non-optional resource, water, its purity and supply is a priority.

When 'Australia' was in the care of its Indigenous people, it was never a relationship of human dominance, control and exploitation rather it was a symbiotic relationship of the deepest and most meaningful respect.

Today we have to deal with the aftermath since European arrival to these shores, along with the environmental consequences, including climate change. The lifestyle that many of us were born into today requires serious and well thought-out adjustments if we are to live in what could now best be described as intermittent, unpredictable and at times catastrophic climate situations.

It is encouraging to see the work and commitment the NSW State Government has put forward in an effort to commence addressing the security and reliability of such an essential and precious resource as water. The Priorities and Actions overall, reasonably address the objectives however, I would like to discuss further **risk factors and how government should prioritise the implementation of the shortlisted actions.**

Furthermore, it is reassuring and highly commendable that there is a strong focus in the Strategy on the essential role the environment plays in supporting our collective needs for water and how paramount it is that restoration of our water ways and associated ecosystems has been identified as a priority.

I thank the NSW State Government for this opportunity to address the North Coast Regional Water Strategy Consultation Paper, its challenges, priorities and action points.

OVERVIEW

The Strategy has a strong focus on drought as a major risk to water supply. With climate change being an evolving concern and with planetary systems reacting and changing to it over time, new studies are emerging on a regular basis. I would like to refer to a research paper¹ released on 6 June 2022 by Professor Mathew England - Scientia Professor and Deputy Director of the ARC Australian Centre of Excellence in Antarctic Science at the University of NSW, Sydney. Professor England studies factors that 'control ocean currents and how these currents affect climate and climate variability on a time scale of seasons to millennia. The paper is entitled 'Inter-basin and Inter-hemispheric Impacts of a Collapsed Atlantic Overturning Circulation.'

¹ <https://www.nature.com/articles/s41558-022-01380-y>

In brief, it is a proven process, whereby 'climate change is slowing down the conveyor belt of ocean currents. Should this conveyor belt collapse entirely it would shift the Earth's climate to a more La Nina like state – meaning more flooding rains over eastern Australia and more droughts and bushfires over South West United States.'²

² <https://theconversation.com/a-huge-atlantic-ocean-current-is-slowing-down-if-it-collapses-la-nina-could-become-the-norm-for-australia-184254>

The relatively recent and unprecedented flooding in and adjacent to Lismore, combined with associated power outages, affected water supply and sewerage systems in Lismore and Nimbin as Lismore City Council was unable to replenish water reservoirs.³ Furthermore, Lismore City Council's Flood Response Report estimates that the damage to water & wastewater infrastructure was likely to cost around \$108 million.⁴

³ <https://lismore.nsw.gov.au/news/lismore-nimbin-water-and-sewage-services-flood-affected>

⁴ <https://lismore.nsw.gov.au/news/council-releases-2022-flood-response-report>

These aspects may be a stark reminder that we should consider giving equal weight to flood events in Regional Water Strategies.

In light of the unpredictable nature of climate it may well be counterproductive to set the Strategy with a fixed 20 year life span.

RECOMMENDATION:

- Consider the inclusion of flood events in Regional Water Strategies.
- Consider the Strategy as a living document.

IDENTIFYING RISKS AND TAKING A WHOLE OF LANDSCAPE APPROACH

Degradation of the waterways begins with 'improving the health and integrity of environmental systems' within the broader landscape, inclusive of catchments. In the first instance, anything that has an adverse affect on our waterways - rivers, estuaries and groundwater sources requires immediate attention (Priority 1: REPAIR) else any restoration works will fail over time. Taking a

Whole of Landscape approach is required to ensure that water entering the system is supported by the restoration processes.

Matters that lead to adverse affects include but are not limited to land clearing - inclusive of logging operations in public native forests (resulting for example, in fragmentation and loss of habitat), weed infestations, inappropriate recreational uses, contaminants, pollutants and livestock entering waterways.

LAND:

The health of the landscape as a whole forms a critical part of our waterways system and will strongly dictate the health of our rivers, estuaries and groundwater. Our well-established native forests are interconnected systems that support habitat, provide food and shade, retain moisture in times of drought enabling them to survive and their transpiration influences rainfall in time of stress. During flood and rainfall events they absorb moisture, slow the rate of runoff therefore preventing or minimising siltation, they stabilise the earth with their root systems, enrich the soil beneath and are carbon sinks, with **no financial outlay**. Changes to this perfect system occur largely during land clearing and native forest logging practices where forest systems become fragmented, they can no longer function as a system and rainfall events result in erosion and siltation of our waterways.

Development and associated infrastructure produce hard surfaces that during wet conditions are associated with surface runoff, flash flooding and erosion, also impacting river health.

All these factors are of extreme importance and as a result, they have initiated Regional Water Strategies as a response - for which restoration works will require **significant financial outlay**.

While the Strategy gives mention to land clearing as a contributing factor towards poor waterway/river health it does not appear to suggest measures to limit, prevent it, or restore such land.

WATER:

Activities on waterways will also be reflective of river, estuarine and ecosystem health. Release of chemicals and contaminants, unregulated water diversion and certain recreational activities such as the use of high-speed watercraft all significantly influence waterway health. Whilst flooding can be periodic, multiple high-speed water vessels can be a regular occurrence on weekends and during school holidays on our rivers, the resulting wake is erosive and destructive to riparian zones and riverbank health.

If we proceed to take an approach to land and water management that is selective and not truly holistic the results (and any financial outlay of taxpayer money) are likely to be considerably less than optimum.

RECOMMENDATIONS:

- Reforestation and weed control in cleared and fragmented areas of public land.
- Restrict forestry practices to plantations that are isolated from public Native forests and National Parks

- Use of porous materials where appropriate in development and associated infrastructure to manage run-off more effectively.

PRIORITY RENAMING:

The priorities may be best worked in three stages: **REPAIR, RECOVERY and IMPLIMENTATION.**

WHOLE OF LANDSCAPE APPROACH

PRIORITY 1: REPAIR

Action Points:

- 1.1 Develop ongoing collaboration with local Aboriginal people in water management.
- 1.2 Support place based initiatives to deliver cultural outcomes for Aboriginal people
- 1.4 Deliver a river recovery program
- 1.5 Support landholder adoption of best practice land management.
- 1.6 Assess the vulnerability of surface water supplies to sea level.
- 1.7 Identify environmental water needs to support healthy coastal waterways.
- 1.8 Characterise and plan for climate change and land use impacts on coastal groundwater sources.
- 1.10 Improve monitoring of water extraction.
- 2.3 Establish sustainable extraction limits for surface water and ground water sources.
- 3.2 Provide better information about water access.

RECOMMENDED: Action Point for consideration

1.11 Cease recreational water use activities that impact and are detrimental to river, ecosystem and riparian health.

PRIORITY 2: RECOVERY

With a **whole of landscape** approach addressed, the recovery phase can begin. It would include the action points as listed below that are supportive of the repair stage.

Action Points

- 1.4 Deliver a river recovery program
- 1.9 Protect ecosystems that depend on coastal groundwater
- 2.1 Improve fish passage
- 2.3 Establish sustainable extraction limits for surface water and groundwater sources?????
- 2.5 Reduce the take of low flows
- 2.7 Address catchment-based impacts of harvestable rights limits
- 3.1 Support local councils to provide a secure and affordable water supply for towns
- 3.2 Provide better information about water access, availability and climate risks

RECOMMENDED: Restore the broader landscape and catchment areas. Anything detrimental to our waterways begins here eg land clearing, environmental elements eg riparian zones, landward bank stabilisation via plantings of indigenous species.

PRIORITY 3: IMPLIMENTATION

- 2.4 Implement daily extraction limits
- 2.6 Support Aboriginal business opportunities
- 3.5 Increase use of recycled water for intensive horticulture

RECOMMENDED: All the above Action Points to be addressed.