

SUBMISSION – Far North Coast Regional Water Strategy

Overview

I am writing as a concerned citizen who lives near Dunoon on a property with access to Rocky Creek. I regularly see platypus and an impressive diversity of birds and animals at Rocky Creek which I greatly enjoy and appreciate and do not wish to see destroyed for a dam which current experts say is unnecessary and financially risky (<https://waternorthernrivers.org/wp-content/uploads/2020/11/Prof-Stuart-White-Brief-Review-Rous-Water-augmentation-20200904-1.pdf>).

I attended your forum in Lismore for the draft Far North Coast Regional Water Strategy, and I was very impressed by its good intent and far ranging policies to preserve and protect our environment which we depend on and our indigenous cultural heritage which is irreplaceable. I also liked that you include current best practice in water management.

However I was shocked and disappointed at the paragraph describing the proposed Dunoon dam (which I understand you received from Lismore City Council). There was no mention of how controversial it is, how strongly the community oppose it, or the serious ecological and cultural impacts found from numerous studies already done such as the Dunoon Dam Terrestrial Ecology Impact Assessment 2011, the Environmental Flows Assessment Proposed Dunoon Dam 2012, Aquatic Ecology Assessment Proposed Dunoon Dam 2012, and the Cultural Heritage Impact Assessments (done twice).

I say STOP to any further expenditure on the Dunoon Dam. It is pointless to waste millions on further studies. We already have reports that show the dam would destroy Aboriginal Heritage, and destroy rare rainforests that comprise part of the Big Scrub Rainforest, of which just 1% is left.

The Dunoon dam is last century's thinking. I value water at every point of its journey, so let's bring on system-wide water efficiency and water re-use, and inspiring and creative ways of supplying water such as the roof water harvesting used in Warnambool.

I want a water system to be proud of, one fit for the 21st century that uses current best practice water management and actually protects our precious ecology and cultural heritage rather than just paying lip service to them.

Draft regional water strategy objectives and vision

The draft Far North Coast Regional Water Strategy is one of 13 strategies (12 regional water strategies and a Greater Sydney Water Strategy) being developed by the department. All regional water strategies are being developed in line with the following objectives:

1. Deliver and manage water for local communities – Improve water security, water quality and flood management for regional towns and communities.
2. Enable economic prosperity – Improve water access reliability for regional industries.
3. Recognise and protect Aboriginal water rights, interests and access to water – Including Aboriginal heritage assets.
4. Protect and enhance the environment – Improve the health and integrity of environmental systems and assets, including by improving water quality.
5. Affordability – Identify least cost policy and infrastructure options.

I agree with these objectives but emphasise that they need to be achieved with objectives 3 and 4 taking precedence because our aboriginal heritage is irreplaceable and we depend on the health and integrity of our environmental systems for our lives and livelihoods. The old saying "No Environment, No Economy" is as true as ever.

The proposed Dunoon dam fails to achieve objectives 3 and 4 and therefore must be excluded from being a part of the FNC Regional Water Strategy.

Below are my reasons for excluding the proposed Dunoon dam from consideration – or at least putting it at the bottom of the list of options considered.

There is widespread opposition to Dunoon Dam, and Rous has not been open with DPIE and government

- Rous and Lismore City Council failed to provide the Department of Primary Industries and Environment with an accurate appraisal of Dunoon Dam. The dam is highly controversial, and resisted. There is widespread concern about the destructiveness of Dunoon Dam and also the failure of RCC to plan for water resilience using modern technologies.
- 91% of 1290 written and online submissions to RCC opposed the dam option. Over 300 of the written submissions are identified as individual and not pro-forma submissions, demonstrating a high level of engagement. Rous seem to be doing the token “we’ve consulted, now we will do it anyway” approach to community consultation. This is completely unacceptable, and risks huge and expensive delays to reliable water supply by pursuing an option the community doesn’t want and is prepared to fight. For a recent example of this community’s ability to stop unwanted projects, watch “The Bentley Effect” about the successful fight against coal seam gas. Metgasgo (the company involved) had its share price go to rock bottom and failed to get a single well producing, the Nationals very nearly lost their “safe seat” over this issue and the NSW government was forced to buy back all the gas licences in the area.
- Social rejection demonstrates the dam option fails the “triple bottom line” test [economic/environmental/social]. Exhibition ran for 2 months “with strong promotion” (VAXA, FWP2060 Outcomes from Public Exhibition - 2020, 2020). A broad suite of other effective options were preferred by respondents.

Rous have been using old population estimates that are far higher than the most recent projections from DPIE to justify the need for a dam.

Most recent 2019 projections

ASGS 2019 LGA	2016 Population	Growth 2016-2041	2041 Population	Average change per year	Extrapolation from 2016 -2060
Ballina (A)	42,993	4,099	47,092	163.96	7214.24
Byron (A)	33,399	4,556	37,955	182.24	8018.56
Lismore (C)	44,122	-1,178	42,944	-47.12	-2073.28
Richmond Valley (A)	23,256	421	23,677	16.84	740.96

Total Population change for Rous supplied councils 2016 – 2060 **13900**

2019 NSW Population Projections ASGS 2019 LGA

<https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections>

See under projections datasets

2016 Projections used by Rous (Michael McKenzie, pers. Comm. 2020)

Regional NSW LGAs	2011	2016	2021	2026	2031	2036	Total Change	Annual Change	Extrapolat 2011 – 2060
Ballina (A)	40,750	42,100	43,250	44,300	45,150	45,850	5,100	204	99
Byron (A)	30,700	32,400	33,850	35,250	36,650	37,950	7,250	290	142
Lismore (C)	44,350	46,200	47,850	49,350	50,700	51,750	7,400	296	145
Richmond Valley (A)	22,700	23,550	24,300	24,850	25,350	25,650	2,950	118	57

Total Population change for Rous supplied councils 2011 – 2060

44

NSW state and local government area population projections 2016

<https://data.nsw.gov.au/data/dataset/population-projections-2011-2036-2016-series/resource/3ddaff1-6800-4e44-a6ae-cf7674be4c>

So the old projections used by Rous are more than 30,000 people higher than the most recent NSW DPIE projections out to the same time period of 2060. Convenient if you want to justify a dam...

Also, it is known that population projections have an increasing level of inaccuracy the smaller the population size you are working with and the further into the future you are predicting (Hamilton Lombard, 2017)(<http://statchatva.org/2017/06/21/how-accurate-are-population-projections/?fbclid=IwAR1G4V4s3urWcS3SZCNhpcg1vBg04sejYMa3nCPctZybbuSvRv3TndE-boE>).

This means that water options that are scalable (unlike dams) are the only sensible option.

Dunoon Dam will leave us vulnerable in a warming climate

- Water Services Association of Australia describes new dams as high-risk investments because they depend on rain. They recommend a mix of complementary water strategies. (WSAA, [All Options on the Table](#), 2020).
- Professor Stuart Khan (UNSW) has said a resilient water system would have 30-50% of supply from sources that don't depend on rain, such as Purified Recycled Water and desalination, both of which can be powered by renewable energy. (ABC North Coast Radio, 22/10/20)
- The NSW Productivity Greenpaper 2020 recommends water efficiencies, and the uptake of new sources such as purified recycled water. (NSW Treasury, Productivity Commission Green Paper: continuing the productivity conversation, 2020. Accessed at <http://productivity.nsw.gov.au/green-paper/water-energy>)
- Rous Future Water 2060 fails to mention system resilience as important, and seriously examined only groundwater and Dunoon Dam, in effect refusing to properly analyse, cost and consider all other options. (Rous County Council, [Future Water Project 2060](#), 2020.)

Rous County Council (RCC) have failed to show leadership in contemporary water management

- All options need to be given serious attention including water efficiency, roof and stormwater harvesting (including tanks), and water sources that don't need rain such as purified recycled water and desalination.
- RCC failed to provide leadership in increasing knowledge of innovative water management. There is a lack of familiarity with options showcased by Water Services Association of Australia (WSAA) in [All Options on the Table](#) and on the Cooperative Research Centre Water Sensitive Cities website. The narrow focus on Dunoon Dam has stunted water literacy in the region. This is a deficit that DPIE needs to rectify in the Regional Strategy.
- New housing developments can build in innovative water systems from the ground up, the cost of which can be borne by developers.
- Because of this failure of leadership and governance, Rous Future Water 2060 is a flawed plan that reflects an outdated, stunted approach to water system planning, and must not be used to underpin the Regional Strategy.

RCC has ignored system-wide water efficiency which is cheap and recommended

- Water efficiency is cheap and effective ([All Options on the Table](#) p3). It is also recommended by the 2020 NSW Productivity Commission Green Paper. (NSW Treasury, Productivity Commission Green Paper: continuing the productivity conversation, 2020. Accessed at <http://productivity.nsw.gov.au/green-paper/water-energy>)
- Rous County Council omitted water efficiency from its 2020 Integrated Water Cycle Management Development options for increasing supply and undertook no specialist studies on it. (<https://rous.nsw.gov.au/page.asp?f=RES-HOV-71-65-36>)
- Professor Stuart White identified significant potential increase in Rous supply through efficiency

measures neglected by Rous.

(<https://waternorthernrivers.org/wp-content/uploads/2020/11/Prof-Stuart-White-Brief-Review-Rous-Water-augmentation-20200904-1.pdf>)

- The lack of attention to water efficiency is evident from the fact that during the past 2 years there was a significant amount of time in which RCC did not employ a Demand Management officer. The position is now filled part-time, reflecting the low priority that RCC still attaches to water efficiency.

The destructive impacts of Dunoon Dam have been noted in numerous reports and are unacceptable, especially when other options have not been properly investigated

- In 2010 Terrestrial Ecology, Aquatic Ecology, and Cultural Heritage reports all found serious impacts from a dam in this location on Rocky Creek. Members of a Public Reference Group voiced their concerns and opposition. (SMEC, Dunoon Dam Terrestrial Ecology Impact Assessment, 2011)
- In 2013 a Technical Report noted that the dam was constrained by significant environmental and social impacts, high capital cost, and the fact that it was 'highly climate influenced' (p52).
- An Integrated Water Planning report in 2014 noted that although the dam was 'technically viable', it had 'significant environmental and social constraints associated with threatened and endangered terrestrial ecology and culturally significant Aboriginal heritage'.

The destruction of Aboriginal Heritage by Dunoon Dam is unacceptable

- The 2011 Cultural Heritage Impact Assessment states "Aboriginal stakeholders are of the opinion that the sites should remain undisturbed and that no level of disturbance is considered acceptable to them". This heritage would be destroyed by the proposed dam and so the dam should not even be considered as an option at the currently proposed site.
- In 2013, Rous County Council commissioned another Cultural Heritage Impact Assessment (CHIA 2013) to supersede the 2011 CHIA). It seems that very few Wijabal Wia-bal stakeholders have seen the 2011 or the 2013 CHIAs, or have been aware of their existence. Rous are now asking the Wijabal Wia-bal to repeat the CHIA process yet again. Are they going to repeat this process until they get the result they want? When will Rous listen to the elders, respect aboriginal heritage and not proceed to destroy it?
- When RCC promotes the dam as the 'cheapest option' (which is contested by Stuart White, as water efficiency is usually the cheapest option) it must be noted that destruction of the Juukan Rock Shelters was also thought the 'cheapest option' by Rio Tinto, at the time.

Destruction of Big Scrub Rainforest and its threatened species – also unacceptable

- There are 62 ha of Lowland Rainforest Endangered Ecological Community (EEC) on the site. Only 1% of the Big Scrub Rainforest remains. This rainforest is of global significance.
- The Channon Gorge contains warm-temperate rainforest on sandstone, a rare occurrence. The dam wall construction would destroy 92% of it..
- Nine threatened flora species would be severely impacted by Dunoon Dam. (2013 Terrestrial Ecology Impact Assessment Report). The destruction of these plants and an increase in the threats against them is a very serious matter with international scientific consequences.
- 17 fauna species have been identified that are listed as threatened under the TSC Act NSW (the koala, one fruit bat, six microbats and eight birds and one frog).

Extinction pressure on koalas

- Koalas were under extinction pressure even before 70% of koalas in North Coast firegrounds were killed in the 2019 summer fires. <https://www.wwf.org.au/news/news/2020/new-wwf-report-koalas-suffer-decline-across-fire-grounds>
- The 2011 Terrestrial Ecology Impact Assessment (TEIA), identified 72 ha of Tallowood and Flooded Gum koala habitat. https://waternorthernrivers.org/wp-content/uploads/2020/11/Dunoon_Dam_Terrestrial_Ecology_Impact_Assessment.pdf
- Koala corridors would be severed by the Dunoon Dam (TEIA 2011). Habitat fragmentation contributes to the decline in koala populations, will worsen the stress-disease problem and lead to more deaths.
- Koalas are commonly seen and heard in the area of the proposed dam wall and The Channon.
- Whian Whian Landcare has planted almost 3000 koala food trees to rebuild corridors in the proposed dam area – linking to tracts of forest to the north. This southern corridor would be destroyed

Extinction pressure on platypus

- Platypus is facing extinction because of habitat destruction, dams and weirs (Bino et al, A stitch in time – Synergistic impacts to platypus metapopulation extinction risk, Biological Conservation, Feb 2020)

- There are breeding platypus on Rocky Creek. The Dunoon Dam would hasten the decline of this species.
- Construction of the dam will reduce platypus habitat downstream, due to sediment load smothering (The 2012 Aquatic Ecology Assessment p.61).

https://waternorthernrivers.org/wp-content/uploads/2020/11/Aquatic_Ecology_Assessment_Final_Report-1.pdf

Extinction Pressure on Native Fish

- A Dunoon dam would extinguish nearly all of the endangered Eastern Freshwater Cod's Rocky Creek habitat due to cold water pollution downstream (NSW Fisheries, Eastern (Freshwater) Cod(Maccullochella ikei)Recovery Plan, 2004). The existing NSW DPI Eastern Freshwater Cod Recovery Plan aims to restore this species to the Rocky Creek and Richmond River systems. It depends on quality habitat and natural flows. [<https://www.dpi.nsw.gov.au/fishing/fish-species/endangered-species/eastern-freshwater-cod>]
- Another 16 native fish species are also threatened by a significant and permanent loss of this 17.5 kms of habitat, including Oxleyan Pygmy Perch and Purple Spotted Gudgeon (2011 Rous Aquatic Survey).

"Offsets" are unacceptable when set against these extinction pressures.

Conclusion

For all the above reasons, the proposed Dunoon dam should be removed from the FNC RWC or at least put at the bottom of the list of options to be considered.

Instead, system-wide water efficiency, purified recycled water, desalination, roof water harvesting and other less destructive options should be prioritised.

Yours sincerely,

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