

SUBMISSION - FNC Water Strategy

I am a concerned resident of The Channon, living on the low-lying flood plain not far from the proposed New Dunoon Dam (Option 14 in the DPIE FNC Water Strategy document). I am strongly in opposition to this aspect of the Strategy, along with the New Dam at Byrill Creek option. Both dam options are unnecessary and I believe there are less destructive and smarter options still available to the FNC communities and region, regarding efficient water reuse, recycling and treatment systems.

Note: 91% of the 1290 previous written and online submissions to RCC opposed the Dunoon dam option (VAXA, FWP2060 Outcomes from Public Exhibition - 2020, 2020)

As a qualified Conservationist/Regenerator and independent consultant to private landholders, rural farmers and environmental organisations, I currently work in Rainforest reforestation, by establishing nurseries, and supplying local rainforest seed and tree seedlings. My focus is on Threatened Species recovery projects and the restoration of local (and global) Endangered plant communities, including the Big Scrub. I worked in Brazil for 11 years in threatened palm species recovery (*Euterpe edulis*, Brazil's equivalent of the Bangalow Palm), establishing seed banks, nurseries and an independent NGO, and facilitated the purchase of forest food products and local organic farm crops by state school catering departments. This strategy aided in the rapid recovery (of the *Euterpe* sp) and increased resilience of the Atlantic rainforest, whilst economically benefitting local farming communities. The increased forest cover mitigated subsequent extreme flood and drought events in 2003, 2007, 2010, 2014 and 2017 !!

NSW government departments ought to support and promote local forest conservation (including species recovery) and increase community education efforts (regarding water creation, supply and demand). Forests are **the vital factor** in the water creation cycle, and yet we find the RCC plan is intent on further regional forest habitat destruction, which makes no sense at all!

Chronic habitual deforestation must change and be replaced by efficient and innovative water production and maintenance systems. Smart options above all else.

I firmly believe in community education and engagement and hope that our local community will be further consulted and our views included as a component in the amended proposed water strategy. There are many local 'expert' voices and well researched opinions to be heard.

Whilst I commend the NSW government/ DPIE on their proposed Water strategy document as a whole, I believe the strategy must not rely on Rous's Future Water 2060 project plan, since their plan relies on the contentious Dunoon Dam. The Water Strategy has outlined various considerations that are practical and logical, but large dams are no longer seen as smart by the broader community, due to their various risks and limitations. The Dunoon dam should not be considered as a viable option for the reasons outlined below:

The essence of my Submission relates to the irreplaceable and inherent ecological (and cultural) values of specific Endangered Ecological communities that lie in the proposed Dunoon dam area:

1) The ecological impacts of Dunoon Dam are unacceptable:

The proposed dam would smother and destroy most of this unique Big Scrub rainforest remnant and linked sclerophyll buffer zones; including koala habitat corridors and platypus breeding grounds; and would therefore affect the integrity of this entire precious ecosystem. It will drastically affect multiple flora and fauna species; including several endangered and critically endangered species, and therefore this Option 14 must be disregarded as unviable and inappropriate.

Specifically;

- 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, a fruit bat, six microbats, eight birds and one frog).

Extinction pressure on koalas

- Koalas were under extinction pressure even before 70% of koalas in North Coast fire grounds 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.pdf3)
- 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 are facing extinction due to habitat destruction, dam and weir construction (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)

All development "Offsets" are unacceptable when set against these potential extinction pressures. It is time we valued our precious natural resources. No Dunoon Dam!

2) Large (Mega) Dams are an excessively expensive and outdated technology, especially where rainfall and seasonal water flows are inconsistent. Too much or too little water will reduce the efficacy of such water storage systems. Instead, many countries are choosing to adopt other advanced technologies over dam building, and the NSW government would be wise to consider these also. Water re-use, recycling, treatment and purification systems, at both domestic and local/regional levels would assist in water supply minimisation. In coastal areas, decentralised desalination may be part of the solution, if the energy required to run the process is renewable. No option should be deemed viable unless it meets an energy neutral target.

- 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**' (p.52).
- 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. <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 (Rous County Council, Future Water Project 2060, 2020). RCC has 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 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.
- Due to 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 for the Strategic update.
- Water efficiency is cheap and effective (*All Options on the Table* p.3). It is 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 this (<https://rous.nsw.gov.au/page.asp?f=RES-HOV-71-65-36>)

●Professor Stuart White has 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>)

●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**”.

3) The destruction of Aboriginal Heritage by Dunoon Dam is unacceptable.

Cultural Heritage is an asset to all Australians and it is time that development planners and their processes took this seriously into account, more than as an afterthought.

There are various culturally significant sites in the proposed dam area including burial sites. Would you build a dam and drown a cemetery? Why is our Aboriginal cultural heritage still largely ignored, and stakeholders’ requests repeatedly denied?

●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)

●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 any dam.

●In 2013, Rous County Council commissioned another Cultural Heritage Impact Assessment (CHIA 2013) to supersede the 2011 CHIA. It seems that very few Wijabal/Wiyabal stakeholders have seen the 2011 or the 2013 CHIAs, or been made aware of their existence. Rous are now asking the Wijabal/Wiyabal to repeat the CHIA process yet again, apparently until they get the result they want.

●When RCC promotes the dam as 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.

Cheapness is not an excuse for any option.

Please consider all this and reject Option 14. Outright.

No Dunoon Dam.

Thank you

Yours sincerely

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