



28th June 2022

Email: regionalwater.strategies@dpi.e.nsw.gov.au

**Submission on
North Coast Draft Regional Water Strategy:
Shortlisted Actions**

The Clarence Valley Conservation Coalition (CVCC) is a community group based in the Clarence Valley. Formed in 1988, the CVCC has been involved with environmental issues – both locally and beyond – since that time. It has had a long-term interest in water and its management and the maintenance of river health in our local area and further afield.

The CVCC appreciates the opportunity to comment on the shortlisted action list and looks forward to seeing the final strategy.

INTRODUCTION

In its May 2021 submission on the Draft North Coast Regional Water Strategy, the Clarence Valley Conservation Coalition commended the NSW Government for its decision to undertake planning for the water needs of the future in both our region and throughout the state. Along with many others in the community, we know that planning is particularly important because climate change will impact our river systems - systems which are vitally important to both humans **and** all other species living in these river catchments.

In our submission we expressed support for some options and urged that others be dropped because they were ecologically unsustainable. We also pointed to major challenges to effective planning and implementation of a water strategy even where there seemed to be a good case for the options presented.

In Section 1 of this submission we refer again to some of the major concerns we expressed in our May 2021 submission because of our ongoing concern about the health of our regional river systems and our concern that past experience has shown us that some of these plans will re-surface yet again. Moreover, we are aware the reason that some of these ecologically unsustainable options have not progressed is because of cost rather than their threat to river health.

SECTION 1 - REVISITING DIVERSIONS AND THE AUGMENTATION OF THE SHANNON CREEK DAM

(a) Expansion of the Clarence–Coffs Harbour Regional Water Scheme (RWS) to provide water to the Bellingen and the Nambucca areas.

The CVCC is pleased that this option has been dropped. As we pointed out in our May '21 submission, a major consideration is “whether inter-catchment water diversions are appropriate and in the interests of protecting river health as well as the necessity (long-ignored by many engineers,

bureaucrats and politicians) of humanity accepting that it must manage its water needs according to what is locally available – that is, in the local catchment.”

(b) Inland diversions from the Clarence Catchment

Both the Border Rivers and Namoi Draft Regional Water Strategies had options for diversions from the Clarence catchment, options strongly opposed by the Clarence community. We are pleased that this unsustainable option has been excluded from the Border Rivers short list and hope that it will also be dropped from the Namoi short list.

(c) Augmenting Shannon Creek Dam

The CVCC is pleased that this option has been dropped as the dam is currently more than adequate for supporting the areas it was designed to support and any augmentation would have caused significant environmental damage.

d) Importance of Accurate Information

One of the points the CVCC made in its 2021 submission was the need for adequate baseline data so that decisions were scientifically based. In addition to obtaining baseline scientific data policy-makers working centrally on decisions which will impact the regions need to have to a proper understanding of what is actually already happening or in place in the regions. While we realise that this presents some challenges, a rigorous approach to achieving this is necessary in the interests of building community confidence as well as in achieving successful, ecologically sustainable outcomes.

Below are two examples of where there was a need for improvement.

i) The Snapshot page of the short list (p. 8) lists major town water storages. This list was obviously incomplete in the 2021 publication.

Added to the list in 2022 is Cowra Dam (opened in 2005 with a 10 GL capacity) which was omitted in the 2021 document. However, Nambucca Shire's Bowra Dam (with a capacity of 5 GL – just 0.6 GL less than the Karangi Dam) is still not on the list. The fact that Nambucca already had an off-stream storage for several years before the 2021 document was published – and in 2021 Nambucca was unnecessarily being suggested as a possible recipient of water from the Clarence-Coffs Harbour RWS scheme - highlights the importance of the need for accurate information on and understanding of what is actually in place in regional areas.

ii) An instance of incorrect information is in the 2022 publication's Effects of Option 1(p.100) on river ecology:

“Second, the regional water supply scheme draws water from a variety of sources, including the Clarence, the Orara and Nymboida Rivers, thereby distributing its impact and reducing the impact on any one source.”

The water for the RWS is drawn from the Orara and Nymboida Rivers – not the Clarence – although both the Orara and Nymboida are in the Clarence Catchment. There are two offtake points – Cochrane's Pool on the Orara and the Nymboida Weir on the Nymboida. Furthermore, the primary source is the Nymboida which would be much more heavily impacted if the RWS was expanded. The Clarence system as a whole obviously would be impacted if it lost significant flows from the Orara and, more importantly, from the Nymboida.

SECTION 2

THE STRATEGY VISION – Some General Points

The strategy vision (p. 12) sees water as a resource that we require to be “healthy, reliable and resilient for a livable and prosperous region”. Looked at in this way, water is simply a commodity for the use of humanity. The water in our rivers is much more than that. It is part of the natural world on which humans and many other life forms rely for the services it provides.¹

¹ Note the comment of [REDACTED], on the value of forests in PRIORITY 1, section 3b) on page 4. He provides a big picture view of forests. Our rivers also need to be considered similarly through a big picture lens to understand their value.

The discussion of the reason for developing regional water strategies (p. 13) reinforces this commodity view. It acknowledges “we face difficult decisions and choices about how to balance the different demands for this vital resource and manage water efficiently and sustainably into the future.” “Balance” is a loaded word, used often in comparing economic desires with the health of the natural world. Unsurprisingly the see-saw usually tips dramatically in favour of the economic. This is, of course, a major reason for the mounting environmental problems we are facing. “Sustainable” is another loaded word used in a variety ways. It may be used to refer to ecological sustainability but it may also be used to refer to economic or even social sustainability. The discussion in this paragraph may seem to be “nit-picking” but it is valid. It is natural for conservationists to wonder just what is meant when these terms are used by water bureaucrats and others.

THE PRIORITIES

Priority 1: Take a holistic approach to land and water management

General Comments:

The CVCC strongly supports this “big picture” priority as essential in meeting the challenge of declining water quality and catchment health. We live in a world where environmental degradation is accelerating, with catchment health declining, and a growing biodiversity crisis as well as a rapidly changing climate. And climate change is bound to exacerbate the decline in catchment health and the biodiversity crisis.

Obviously ensuring that water quality and catchment health is protected makes sense both environmentally and economically. Remediation of degraded systems is expensive and is likely to be very difficult if not impossible. And the bottom line is that a healthy economy requires a healthy environment because of the services that a healthy environment provides for humanity and other life forms.

The importance of looking at the big picture and obtaining sufficient baseline data is discussed in 2) below. All relevant data is needed. The Short List Consultation Paper gives an example of how some vital data was not included initially in hydraulic models developed for some rivers for the Marine Estate Management Strategy. While considering sea level rise and saltwater intrusion, the modelling “did not consider the impacts from changes in freshwater inflows due to climate change.” (p. 33) Unfortunately the big picture was missed in this case.

The CVCC supports:

1) Greater Aboriginal involvement in land and water management.(Actions 1.1 and 1.2)

2) Collection of baseline data to better inform decisions. (Actions 1.4, 1.9, 1.6, 1.8, 1.7 and 1.10)

a) The need for improved baseline data was one of the major concerns the CVCC raised in its May 2021 submission. Collection and understanding of this data (and dissemination of this information to the community) would improve understanding of the general environmental water needs in whole catchments.

b) Improved data will be essential for the development of an effective whole-of-catchment program to improve river health (Action 1.4.) and protecting ecosystems that depend on coastal groundwater (Action 1.9). It will also be essential for understanding the current situation with regard to coastal water sources before undertaking Actions 1.6 and 1.8 on likely climate change impacts. Obviously improved information on water extraction and monitoring it (Action 1.10) will also be essential to improving river health and to ensuring that water users are acting according to regulatory requirements.

c) In regard to limiting identifying environmental water needs to coastal waterways (Action 1.7), the CVCC notes that this ignores the reality that what happens in the upper catchment affects the health of the lower catchment. For example upstream erosion as a result of poor grazing

practices or logging where there has been inadequate vegetated buffer zones along streams leads to poor water quality in coastal waterways.

Is this focus on coastal waterways because of the level of water extraction in these area?

3) Delivery of a whole-of-catchment river recovery program (Action 1.4)

a) This is urgently needed given the degradation of catchments as a result of poor land management, large-scale clearing of vegetation, particularly in riparian zones, as well as deforestation on steep slopes, and unsustainable logging practices by the NSW Forest Corporation. The disastrous North Coast floods from heavy rain events earlier in the year have clearly demonstrated how urgent is the need for catchment repair. The landslips, extensive erosion and damage to riverine areas in catchments upstream of Lismore as well as riverine damage on the floodplain are a sign of what we can expect in the future from extreme weather events if there is not urgent, well-targeted and very well resourced repair of our degraded catchments.

b) Healthy forests play a vital role in catchment health. As the North East Forest Alliance's President Dailan Pugh pointed out, "Forests improve our health, generate rainfall, cool the land, regulate stream flows, sequester and store carbon, reduce flood risk by storing water and slowing flows, reduce landslips by reinforcing soils, and support most of our biodiversity."²

c) In its May 2021 submission the CVCC detailed its concerns about the health in our water supply catchment – the Nymboida River above the off-take point for the Clarence-Coffs Harbour Regional Water Supply (RWS) – the Nymboida Weir. Over many months there have been problems with turbid water which has led to limiting the taking of water from the Nymboida to pipe to the Shannon Creek Dam. The CVCC believes that the root cause of the turbidity needs to be addressed by effective protection of the catchment above the Weir and that this should be addressed in the Regional Water Strategy which should also address this matter in relation to other drinking catchments within the North Coast.

A copy of a letter of June 16, 2021, to Minister Rob Stokes detailing the CVCC concerns is included as Appendix I.

d) There are major issues related to urban development on floodplains. The recent North Coast floods have highlighted the problem of development on floodplains – in the Clarence LGA as well as elsewhere. There has been considerable concern in Yamba about a large residential development at West Yamba. The large quantities of fill placed on low-lying land (wetlands) in this area has led to drainage issues and flooding in other parts of Yamba which have never been subject to flooding before. Quite obviously draining or destroying wetlands with fill is economically questionable as well as ecologically unsustainable. Just what will the role of the Water Strategy in dealing with issues like this?

4) Best practice land management (Action 1.5)

If effectively implemented, this will be very important in improving agricultural practices and making them much more ecologically sustainable in the long term. There are currently farmers who are setting impressive examples in this area and hopefully they will assist in show-casing what can be done and how economically beneficial these improved practices are. In addition community groups such as Landcare are doing important on-ground work as well as educating the general community.

5) Improved Governance and Monitoring of Water Extraction (Actions 1.3 and 1.10)

a) As the CVCC has been very concerned about water management governance issues, particularly with the horticultural industry in the local area, it welcomes the inclusion of a commitment to supporting improved governance. While fragmentation (as stated on p. 51) may have been a problem, it also seems that there have been problems with organizational culture in water authorities which have stymied effective governance. If catchment health is to be improved and water use in agriculture is to be managed according to the current limited regulations, there must be major

² North East Forest Alliance Statement for International Day of Forests, Media Release, 21st March, 2022.

improvements – actual action that is **more** than just **support** for action. If more resourcing is necessary to ensure this happens, it should be provided as a priority.

b) While stakeholders – those utilising water – obviously have responsibilities to operate within the rules, this can't be left to self-regulation or the “fox in the hen-house” solution. There needs to be strong monitoring and compliance in place to ensure that agricultural businesses operate according to the rules. What has happened in our region in relation to the blueberry industry shows how necessary this is in the interests of catchment health as well as equity.

More detailed comments in relation to governance matters as well as the blueberry industry are included in two CVCC submissions in the Appendices: Submission on Draft Water Plan for the Coffs Harbour Area Unregulated and Alluvial Water Resources, 27-2-22 (Appendix II); Submission on Coastal Harvestable Rights Review, 16-5-21 (Appendix III)

c) There also is a need for improved governance by other government agencies whose operations impact catchment health. The NSW Forest Corporation has a very poor record in its management of logging operations not only in relation to flouting the regulations it is supposed to adhere to in relation to biodiversity but also in its failure to ensure there are effective buffer zones to protect riparian zones from erosion and sedimentation.

Priority 2: Ensure water resource development and use is sustainable and equitable

The CVCC supports:

1) Reducing the impact of water infrastructure on native fish populations (Actions 2.1 and 2.2). The CVCC also calls specifically for the provision of the fish ladder on the Nymboida Weir which was a licence requirement for the Clarence-Coffs Harbour Regional Water Supply.

2) Support for Aboriginal business opportunities

The CVCC supports with provisos:

1) Better management of competing demands for water (Actions 2.3,2.4 ,2.5 and 2.7)

a) Under Priority 1, 2) the need for better data in order to make informed decisions was discussed. The same need applies with Actions 2.3, 2.4 and 2.5. In relation to possible changes to basic landholder rights, there needs to be consideration of how any changes might impact water extraction given the proliferation of small holdings and rural residential blocks along rivers.

b) The requirements of the environment and river health should not be over-ridden by the expansion of water-hungry industries. While industries may be moving away from rain-fed crops, farmers who decide to grow water-hungry crops are making a business decision that contains an element of risk. They should have no expectation that they are entitled to the volume of water they see as essential for their crop's viability. And the government and its water authority should not accept that they are bound to comply with these unrealistic expectations – whatever the political influence exerted. The general community wants to see healthy waterways and equity rather than rampant developers damaging the waterways and the natural environment that it values.

c) The CVCC supports the current limits and the aims of the Water Management Act 2000 which prioritises protection of water sources and their dependent ecosystems ahead of landholder 'rights'. This priority should remain the basis of any decision making regarding the future of our water resources.

d) Harvestable Rights. **The CVCC does not support last year's decision on harvestable rights** and believes that it should be dropped. The decision, as well as being questionable in relation to the Water Management Act 2000, was at odds with what is supposed to be happening with the development of a regional water strategy – being a fait accompli before the strategy was even half completed. This demonstrates what many community members feel about governments and their

ethics and their lack of concern about proper process. The increase in harvestable rights means less water will flow downstream, less will support instream and associated ecosystems and possible plans for river recovery programs (Action 1.4) have been compromised before the strategy has even been completed.

The CVCC's submission opposing increased harvestable rights is attached as Appendix III.

e) If there is to be better management of competing demands for water, there will need to be an improved monitoring and compliance regime – which will provide another challenge for water authorities. This challenge is also discussed in Priority 1, (5) above.

Priority 3: Prepare for future climate extremes

The CVCC supports

1) Support for local councils to provide a secure and affordable water supply for their towns. (Action 3.1) This should include assistance in implementing water efficiency measures as well as investigating alternative water sources (such as wastewater and stormwater re-use and desalination) where surface water or groundwater supplies are limited.

2) Provide better information about water access, availability and climate risk (Action 3.2)

3) Investigate alternative water supplies (Action 3.5)

a) Use of recycled water for intensive horticulture is the only option listed. This may be problematic in extended wet periods as storage the water may be impossible. Cost of infrastructure may limit the area that could be supplied.

b) One off the options in the May 2022 document – desalination (either portable or fixed) could provide an interesting pilot study to assess its potential. If this became possible, renewable energy could be used to power it. The produced brine would need to be dealt with.

The CVCC does not support

4) Water markets in our region and what appears to be a plan to encourage their expansion. These markets have been grossly sorted in the west of the state – admittedly where there are large volumes of water as well as big money involved. And they have not improved river health in the Murray-Darling Basin. They have also led to gross inequity in the south of the state where almond growers have dominated with their high value crops (and extensive mono-cultures) and other producers have been unable to secure water for less high value but important food commodities. Great capitalistic idea – but there do seem to have been unintended consequences (or perhaps not?)

5) Plans to increase on-farm water storage. There are so many questions about this including the limits that inevitably will happen to stream and river flow and the effect on important ecosystems. Also there is the major concern about monitoring and compliance to make sure the system isn't sorted.



APPENDIX I



Clarence Valley Conservation Coalition inc

16th June 2021

The Hon. Rob Stokes MP
Minister for Planning and Public Spaces
[REDACTED]
[REDACTED]

Dear Minister

Protection of drinking water catchment for Clarence/Coffs Regional Water Supply

The Clarence Valley Conservation Coalition (CVCC) is a community group based in the Clarence Valley. Formed in 1988, the CVCC has been involved with environmental issues – both locally and beyond – since that time. It has had a long-term interest in water and its management and the maintenance of river health in our local area and further afield.

The CVCC draws your attention to the ongoing issues of high turbidity levels in the Nymboida River - the main source of the water supply in the Coffs Harbour and Clarence Valley local government areas.

We request that planning measures - similar to what exists for metropolitan water supplies - are put in place to address this issue.

An offstream storage on Shannon Creek is meant to provide security in water supply for our region. However, the ongoing issues with turbid water in the Nymboida River prevents topping up the dam from this source due to the high risk of such dirty water triggering a blue-green algal bloom in the Dam. Hence, in spite of substantial rainfall in the region, our region remains on level 1 water restrictions. This level of restrictions is imposed whenever Shannon Creek Dam is at or below 80% capacity.

A key problem is the lack of planning controls on what is happening in the Nymboida's catchment. The only restriction appears to be a ban on swimming immediately upstream of the weir.

In contrast, the CVCC understands that Sydney's drinking water catchment is protected via a State Environmental Planning Policy (SEPP), namely the [State Environmental Planning Policy \(Sydney Drinking Water Catchment\) 2011 - NSW Legislation](#).

The aims of that policy are:

- (a) to provide for healthy water catchments that will deliver high quality water while permitting development that is compatible with that goal, and
- (b) to provide that a consent authority must not grant consent to a proposed development unless it is satisfied that the proposed development will have a neutral or beneficial effect on water quality, and
- (c) to support the maintenance or achievement of the water quality objectives for the Sydney drinking water catchment.

It is understood that similar protections exist for water supply catchments and borefields managed by Hunter Water under the Hunter Water Act 1991.

Why are there no similar controls to protect drinking water catchments for other parts of NSW?

For the Nymboida, clear planning controls need to be imposed on new developments that are subject to consent (including mining) and also on development that is permissible without consent, including forestry, cropping and clearing to 'improve' agricultural value - noting that a substantial part of the Dorrigo Plateau lies in the Nymboida's catchment.

It is the CVCC's opinion that all land uses in the Nymboida's catchment - including the continuation of existing uses - should meet the test of having 'neutral or beneficial' impact on water quality as per the Sydney Drinking Water SEPP.

If the NSW Government is interested in the health and water security of residents in the Clarence Valley or Coffs Harbour - or in other regional areas of NSW - the CVCC regards such planning controls as an essential first step.

Yours faithfully

[REDACTED]
[REDACTED]

APPENDIX II



Clarence Valley Conservation Coalition inc



27th February 2022

Submission on the Draft Water Sharing Plan for the Coffs Harbour Area Unregulated and Alluvial Water Sources

The Clarence Valley Conservation Coalition (CVCC) is a community group based in the Clarence Valley. Formed in 1988, the CVCC has been involved with environmental issues – both locally and beyond – since that time. It has had a long-term interest in water and its management and the maintenance of riverine health in our local area and further afield.

The CVCC, along with other community groups and individuals, has for years been concerned about the unsustainable use of water that has been associated with the unregulated intensive horticultural industry in our area. It is obvious to us that the former Water Sharing Plan for this area was totally inadequate in dealing with the expansion of the blueberry industry as was for many years the level of monitoring and compliance by the state authorities responsible for ensuring the health of our rivers and streams³.

Brief Comments on the Some of the Changes Listed in the Fact Sheet

a) Addition of a new water source – Coastal floodplain alluvial groundwater: How strongly based on scientific evidence is the inclusion of this new water source and its annual long-term annual extraction limit of 625 ML?

b) Water Supply Works Approvals – Prohibitions

The CVCC supports the prohibition of:

i) construction or amendment of in-river dams in water sources that either have high ecological value or are upstream of or include parts of the Solitary Islands Marine Park. Furthermore the CVCC urges that in-river dams be prohibited on **all** third order streams throughout the area of the Water Sharing Plan.

ii) the granting or amending of water supply work approvals where there will be more than minimal impact on Coastal SEPP wetlands in water sources where they exist. Furthermore the CVCC is concerned about how the minimal impact level is determined and the strength of the scientific evidence on which this has been based.

iii) groundwater works on land classified as having a high probability of occurrence of acid sulfate soils.

³ It was only towards the end of 2020 that state authorities finally started serious investigation of issues that had been drawn to their attention for years – as a report in *The Sydney Morning Herald* on September 21, 2020, noted: <https://www.smh.com.au/environment/sustainability/rampant-expansion-of-blueberry-farms-trigger-compliance-crackdown-20200919-p55x7q.html>

c) Access and Trade Rules – Trade not permitted between disconnected water sources or into areas of high ecological value or ecological stress : The CVCC supports this provision.

d) Impacts of increased harvestable rights - The CVCC strongly opposed increasing harvestable rights in coastal catchments in its submission in May 2021 to the review into this matter. Obviously the likelihood that increased harvestable rights would have a serious impact on water availability and the health of waterways and aquifers should have prevented the ill-considered changes which were adopted last year. This was a further case of “bending over backwards” to further please those in an over-developed and unsustainable industry who have minimal interest in the long-term health of the land they are mining or the waterways they are destroying. This plan to act when the over extraction inevitably occurs is a case of “shutting the stable door after the horse has bolted” and is another example of far too little, too late.

Improving Water Management in the Coffs Harbour Area

The following are some of the measures the CVCC believes will be essential in order to improve managing water access and sharing in the Coffs Harbour area as well as in maintaining healthy waterways:

- Appropriate resourcing (staffing and financing) of regulatory authorities and those undertaking further scientific studies to increase understanding of the natural systems which provide the water resources.
- Metering of pumps.
- Regular random monitoring of water use and on-farm dam structures and capacities.
- Effective compliance of all regulations to ensure that the abuses of recent years do not occur again.
- Progressively wind back the increase in coastal harvestable rights.



Appendix III

Copy

Clarence Valley Conservation Coalition inc



16 May 2021

Coastal Harvestable Rights Review
Department of Planning, Industry and Environment–Water



Submission on Coastal Harvestable Rights Review

The Clarence Valley Conservation Coalition (CVCC) is a community group based in the Clarence Valley. Formed in 1988, the CVCC has been involved with environmental issues – both locally and beyond – since that time. It has had a long-term interest in water and its management and the maintenance of river health in our local area and further afield.

Of key interest to the CVCC is the ongoing health to the Clarence River, the largest coastal catchment in New South Wales.

The CVCC would like to remind the Department (and NSW Government) that water is not an unlimited resource. More and larger dams will not increase the amount of water - they will merely prevent water reaching downstream users including rivers, wetlands and estuaries.

The CVCC supports the current limits and the aims of the *Water Management Act 2000* which prioritises protection of water sources and their dependent ecosystems ahead of landholder 'rights'. This priority should remain the basis for any decision making regarding the future of our water resources. When it comes to agriculture, forestry and fisheries, there is no economy without the healthy ecosystems to support them.

The CVCC is concerned by the seemingly uncontrolled growth in farm dam development in our area. In the Clarence Valley LGA, farm dams do not require development consent from Council (as they are considered ancillary to agricultural land uses). It appears to many CVCC members that farm dams are being built with scant regard to downstream or even upstream lands.

In the background to HARC's modelling component of the review, it states:

Under the National Water Initiative farms dams are considered a land use that have the potential to intercept significant volumes, and need to be managed based on their risk to the integrity of water access entitlements and the achievement of environmental objectives

The CVCC strongly concurs with this statement and queries how the National Water Initiative is being implemented at the local level. We recommend that all local environmental plans are amended to provide that farm dams are only permissible with development

consent under the *Environmental Planning and Assessment Act 1979*. There is considerable risk involved in the ad hoc construction of farm dams – and not just to the downstream health of receiving waters and wetlands. Poorly located dams can and do inundate neighbouring properties and public land, including roads.

It is disappointing that the detailed modelling component of the Review only considered two subcatchments in the Northern Rivers, namely Bucca Bucca Creek and Duck Creek. While the CVCC is pleased that both of these form part of the catchment of the Clarence River, it wonders how these subcatchments were selected and why so few other subcatchments were studied.

The HARC study found that the percentage of uptake of current harvestable rights was only 1% in the Bucca Bucca Creek. Given that there are many new dams in the Orara subcatchment (including the Bucca Bucca) to support growth in the blueberry industry, we wonder if the spatial mapping underlying this study used contemporary data. It appears the initial draft of the report dates from 2017. Your attention is drawn to this article in The Land from April 2017 (shortly before the preparation of the first version of the HARC report):

[Blueberries row at Coffs Harbour raises issues about right to farm](#). To quote this article:

Cattle farmer [REDACTED] ... said he was fearful the blueberry industry was running amok, building large dams without permission, and building right up to the borders of neighbouring farms. He believed governments [sic.] departments were too stretched to monitor the building of the dams.

Reports on illegally constructed dams were continuing into 2019 - with the flows on Dundoo Creek (a 3rd order stream) blocked by a dam wall. This obstruction to flows was eventually removed but it interrupted downstream flows for several months.

The CVCC questions: were all the current dams in this subcatchment considered? Compliance checks by the Natural Resources Access Regulator (NRAR) in May 2019 and February 2020 has found that close to 90% of irrigators on the North Coast are allegedly non-compliant with NSW's water laws.

Irrespective of whether there is compliance with current limits on harvestable rights, it stands to reason that, the more water that is captured on-farm, the less there will be flowing down our rivers. That is already happening across inland NSW, and we don't want it happening on the coast as well. But it appears the impacts will vary across the coastal regions of NSW.

The HARC modelling identifies that there would be vastly different effects on the Bucca Bucca Creek's flows compared to the Duck Creek's flows if harvestable rights were increased. That is, even within the same catchment, it appears there is a compelling case for any increase in harvestable rights to be linked to conditions on a subcatchment-by-subcatchment basis. The resulting complex system of rights would be even more difficult to administer and enforce, increasing the risk of regulatory failure.

The CVCC objects to any proposal to increase harvestable rights and recommends improved enforcement of current limits.

The CVCC queries if the calls for increases in harvestable rights is justified. HARC's report states:

It was assumed that existing farm dams are meeting the current requirements for stock and domestic use in each catchment.

In the Northern Rivers catchments – which are the wettest areas of the state – it is inappropriate to increase rights to meet the unreasonable demands from commercial agricultural interests to exceed the current carrying capacity of their properties. Instead, they should be encouraged to adopt agricultural products and practices that do not intensify their water demand.

As shown by the example of the short-lived example on Dundoo Creek, and the modelling done by HARC, damming of 3rd order streams has potentially greater impacts on downstream water flows than dams in 1st and 2nd order streams.

The Discussion Paper identifies that allowing dams on 3rd order streams had an adverse effect on freshes. The effects from 3rd order steam dams are modelled to be greater than an increase in harvestable rights on 1st and 2nd order streams. To quote the discussion paper:

Freshes are ecologically important, as they:

- help maintain the river channel and riparian vegetation*
- transport sediment, nutrients and organic carbon downstream*
- increase dissolved oxygen and break up stratification of pools*
- wet banks and benches of rivers to maintain habitat, stimulating ecological processes that regulate water quality and sustain fish populations*
- are an essential determinant of the health of estuaries.*

Consistent with the priorities of the WM Act, damming of 3rd order streams should be ruled out on environmental grounds.

But safety should be another key consideration. Dams on 3rd order streams are also more prone to failure. Their design and construction require engineering informed by geotechnical investigations to reduce this risk of failure. Poorly constructed dams can and do fail, causing downstream risks to people, property and public infrastructure. While it is acknowledged that dam safety is the responsibility of the NSW Dam Safety Committee, there appears to be little oversight from or action by that committee in this region.

The Clarence Catchment includes some wetlands listed in the Directory of Important Wetlands, that support endangered and critically endangered ecological communities that have been extensively cleared on other parts of the floodplain. These national treasures must be protected from any further losses of water due to increased storage of water in upper catchments.

In conclusion, the CVCC strongly opposes any increase in harvestable water rights in coastal catchments and any proposal to allow the building of dams on 3rd order streams. Water is essential for life on earth and should never be commercialised, owned or controlled by a small minority who just happen to own the land on which it falls.

