

**INQUIRY INTO RESPONSE TO MAJOR FLOODING
ACROSS NEW SOUTH WALES IN 2022**

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Submission to
The NSW Legislative Council's Select Committee Inquiry
into the NSW Government's response to major flooding in 2022
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My submission on the Committee's terms of reference, is as follows

a) The preparation, coordination and response by the NSW Government to North Coast floods

PREPARATION

Preparation for floods by the state government, Lismore City Council (LCC) and by the community in Lismore has diminished over many years, partly due to an absence of major floods during the prolonged drought and partly due to a false sense of security created by constructing a flood levee on the east bank of the Wilson's River in Lismore.

Consequently, the community in Lismore has lost its 'flood awareness' and residents and business owners have become unaccustomed to anticipating and preparing for floods. This danger of creating a 'false sense of security' is well known in the literature and was raised many times in the debate about the flood levee wall's construction in the 1990s. However the then approval authority Richmond River County Council ignored these warnings and approved the levee, contrary to two submissions from independent engineers, that cited the danger of 'over-topping' and advised against its' approval.

A further serious problem with preparation for floods is the amalgamation of three county councils, including the former Richmond River CC, into one public authority, such that Rous County Council is now responsible for water supply, weed control and flood mitigation. However, since acquiring responsibilities as the flood mitigation authority Rous CC has not devoted time, staff effort or funding to preparing for future floods.

Anticipation of and preparation for worsening floods in Lismore have been marred by the NSW Liberal National Government's refusal to accept the Intergovernmental Panel on Climate Change (IPCC)'s scientific reports that anthropogenic global warming, aka climate change, is real and happening now, and by the Government's failure to heed warnings of likely climate change impacts.

Due to the NSW Nationals party's blatantly ideological stance, the IPCC's credible scientific warnings of increased incidence of severe and extreme weather events, have not been understood, accepted or acted upon by the NSW Government. Though the Nationals claim an extensive mandate over government policies applied to 'regional' New South Wales, the Nationals have not prepared for forecast increases in incidence and severity of flooding in flood prone regional areas, like the north coast, and have been effectively 'asleep at the wheel'.

Consequently, the likely future environmental impacts of global climate change and the related potential serious threats they create for effective government service delivery, especially in regional areas of the state, under these changing conditions, have not been identified, and appropriate adaptation measures to be taken by government have not been developed, considered, or adopted by the NSW Government.

An example of this Government inaction is their failure to heed the IPCC's forecasts of increasing frequency and intensity of severe storms. Specific warnings of even more intense extreme storms, delivering record rainfall totals, have not triggered any realisation or official reaction by the NSW Government, Rous CC or Lismore City Council

that increasingly serious flooding in Lismore would be a highly likely outcome from the scientifically based forecasts of global climate change.
Consequently, the increased risks to public safety from foreseeable natural disasters have not been adequately considered by, or prepared for, by the State or local governments in their floodplain management, flood mitigation or upstream catchment management.

CO-ORDINATION

See comments on co-ordination in heading c) below.

RESPONSE

The response to severe flooding in Lismore by the NSW Government has been slow, disorganised and lacking coordination.
The 'wisdom' of co-locating all NSW Government services into one Services NSW premises, located in the floodplain, has now been shown to have been folly. Driven by the Liberal and Nationals' economic rationalist ideology of 'small government', this central co-location did not ensure the continuity of government services in a flood emergency.
The co-location of government services in pursuit of smaller government and forced financial savings 'put all the eggs in one basket': a basket which was then smashed.
Hence through the pursuit of its ideology the NSW Government's capacity to deliver government services under foreseeable adverse conditions, has contracted significantly, and has produced a major logjam in government service delivery when it is most needed.
The lesson for the NSW Government from this crash of services, is that its institutional arrangements for service delivery need to be sufficiently robust and risk aware to enable the government services to function in a natural disaster, not pared to the bone to meet an unrealistic budget or undergraduate theories of the desirability of small government.
Notwithstanding the devastation of the Service NSW premises in Lismore, extended delays by the NSW Government in processing applications for flood assistance grants has been a source of stress and anxiety for many already traumatised flood-affected applicants.
For the NSW Government to advertise the opening of flood relief grant applications without allocating sufficient staff resources and a plan to ensure the immediate processing of applications, demonstrated an unacceptable level of disorganisation by the Government.
That details of a planned timeline for government assessment, approval and payment of grant applications have still not been announced 2 months later, indicates a real failure to act with the urgency needed to actually provide, rather than announce, flood relief.
The response to the flood response by Lismore City Council has been very poor and slow.

Further, Council's capacity to respond to the suite of complex issues regarding Council assets and services, raised by the emergency created by a record flood, and then a second flood, has also been diminished by the arbitrary sacking of the highly regarded merit-selected Council General Manager by the new Mayor and Council, and the appointment, without any merit selection process, of a replacement GM who knows little

or nothing about Lismore, or Lismore City Council, and whose local government record is far from exemplary after his exit from Kalgoorlie Council in Western Australia.

b) The role composition and resource allocations of other relevant Government agencies

Resource allocations to NSW Government agencies responsible for preparing for and responding to floods have been shown to be patently inadequate.

Funding for the upgrade of SES flood-boats and communications systems have been inadequate.

It is now obvious that all the public funds from state, federal and local government, that were spent on engineering works on the floodplain, that have not 'worked', were wasted. The millions of dollars spent to construct the levee wall and manipulate the flood plain in South Lismore have not provided the 'protection' from floods claimed by the proponents. Indeed, the proposition that one flood levee could 'protect' Lismore from floods has been a very dangerous and patently false idea. (See further comments below).

This engineering approach to flood mitigation has been shown to be a demonstrable failure. It is not possible to credibly claim that the levee wall worked, or that it 'protected' the CBD or houses in the basin given the evidence of the massive damage caused by floodwaters. It is inconceivable to me that, given its catastrophic consequences, the solution to Lismore's flooding problem proposed by the Mayor, is more of the same: more, bigger levees.

it is not the Mayor's call.

Nor is it properly the province of the federal MP for Page to determine in a pre-election promise, that federal funds 'should' be spent on more bigger levees.

As well as pre-empting any rational assessment of feasible options to mitigate floods, this proposition would continue the inequitable investment of public funds in protecting CBD businesses but would do nothing to assist flood-affected residents in East, South or North Lismore. Reiterating 'levees' as a "solution" to floods, demonstrates that the Mayor and Page MP have no idea, and have nothing to offer except more of a failed approach.

Given the 1st March flood peak height of 14.4m AHD was >3m over the top of the levee, it is not credible to assert that a new bigger wall will protect Lismore from major floods. A levee wall built to 15m AHD would need to be five times as high as the current structure which raised the height at which floodwaters enter the CBD by 1 metre: from 10m AHD to 11m AHD. And a levee built in anticipation of the reputed probable maximum flood height of 16m AHD would need to be six times as high!

Even if building a new 6m high levee were technically feasible (which is seriously doubted given the Wilson's River's banks' instability due to previous dredging, and hence their unsuitability for such a massive structure) the cost of such a levee wall would be astronomical, and likely waste millions of dollars more of public money, effectively throwing 'more good (public) money after bad'.

Hence, in my view this narrow engineering approach is a failed strategy and its now proven ineffectiveness in mitigating floods in Lismore makes it irretrievably discredited. Further public funding of such works would be a wholly inappropriate use of public resources.

The Inquiry is therefore invited to treat all claims of either the technical or financial feasibility of building a new levee wall to 'protect' Lismore from floods, with caution and scepticism.

Further the Inquiry is requested to refrain from making any recommendation for a new levee or recommending the committal of further public expenditure on levee construction since this engineering approach has evidently failed to mitigate flood impacts in Lismore.

c) coordination between NSW Government, agencies, private sector operators and the community

Co-ordination between SES members and local community volunteers over the rescue of stranded people was non-existent at first, then highly inappropriate.

Because of the speed of its onset, hundreds of people in North and South Lismore were caught unawares by rapidly rising floodwaters and retreated to their roof cavity or onto their roof to escape being drowned. Many people endured a very long wait in the rain and were finally rescued not by SES but by members of the community in private boats.

These rescues happened because, when the enormity of the flood rescue task and the inadequacy of SES's flood rescue resources became apparent, a post on Facebook called local boat owners to Lismore to assist with a community rescue effort. More than twenty boat operators responded

However, initially SES told community members operating private boats eg tinnies, to stop rescuing stranded people. [!]

This was extra-ordinary because these volunteer boat operators were, for the most part, experienced, licensed boat operators in registered vessels on navigable waters exercising their public right of navigation... for an essential public purpose.

Many were residents with good local knowledge of the area's geography and long experience of floods. Many boat operators made repeated trips across the floodwaters saving ten, 15 or in some cases, more than 20 people each, on Monday 28th February and Tuesday 1st March. Some of their stories of their volunteer efforts were subsequently reported by local, state and national media.

Hence it was only because boat owners in the community responded, and then ignored, or disobeyed, the SES directive and sustained their efforts over many hours that hundreds of stranded people were rescued by these volunteer boat operators and their crew.

Several issues raised by SES warrant attention: the danger of proximity of boats to potentially live powerlines; the risks of overloading, the need for lifejackets to be used.

The first – danger of powerlines- is a valid concern, since the 1st March flood, at 2.5m higher than the previous record flood height, did approach the height of powerlines in some areas. However, it is just another hazard, of many, for boat operators to bear in mind when operating their vessels in the extreme conditions experienced.

But assuming all powerlines are live and allowing this assumption to hamper or slow the urgent rescue response, was inappropriate when there was a region wide blackout.

In future floods, urgent liaison by SES and or LCC with electricity supply companies should be undertaken to ascertain the status of powerlines in the flood zone. If these enquiries establish that they are in fact still live, it would be appropriate for SES to request suppliers to interrupt electrical power supply to them, to eliminate any risk from them to SES or the public, during flood rescue operations.

Concerns about overloading are also valid, but only one factor of many for skippers to consider when operating their vessels for flood rescue purposes. No skipper would deliberately endanger their passengers, their crew, their boat or themselves by operating beyond reasonable safety limits. In many cases boat operators made repeated rescues rather than risk dangerous overloading. Hence though it is a fair concern, actual risk is over-stated. Assessments of risk are best left to the judgement of experienced skippers.

Similarly, the idea that operators and passengers in boats, ie rescued persons, 'should' be wearing lifejackets, is a reasonable 'in principle' expectation. However, it is practically implausible under emergency flooding conditions and should not be a matter which prevents urgent rescues being made. Luckily for hundreds of people, they were able to be rescued safely by volunteer boat operators without the need for, or use of, lifejackets.

One feasible measure which could overcome this gap between an 'in principle' rule and sensible practicality in an emergency, would be for SES or LCC to create a stockpile of lifejackets which could be called into use at short notice.

d) public communication, systems and strategies

There were no effective public communications by SES or Lismore City Council about the likely extent – ie predicted flood peak height – of the first or second flood in March.

There are no established protocols for LCC or SES to use fixed or mobile sirens, SMS text messages, social media or other means to alert businesses owners and householders living behind the levee, that, or a time when, the levee would be overtopped. Hence many residents were completely surprised and unprepared when it happened.

Much of the essential communication of key messages about the Wilson's River flood were broadcast through the ABC Radio network. However, the utility of the ABC's broadcasts from the Lismore studio were adversely affected by the conflation of news reports and flood alerts for several other major river systems in the wider region then also in flood. It is unfortunate that other 'local' ABC stations in Coffs Harbour and Port Macquarie did not broadcast the flood messages for their local river systems, to relieve the pressure on the Lismore studio and prevent confusion among the listening public.

One key failure of 'public communication' about the flooding on the Wilson's River has been the promulgation of the idea that the levee wall constructed in the early 2000s has made or would make Lismore "floodproof".

This is idea of making something safe from a threat – like a 'shockproof' watch, a waterproof jacket, or a bullet-proof vest – does not readily transpose to something as massive as a city, and the staggering volume, velocity and sustained power of floodwaters and it is inappropriate to attempt to do so. The term 'floodproof' is advertising copywriting and a fundamentally dud concept, quite inapt as a credible public communications message. The reiteration by civic leaders and media commentators of the implausible concept that Lismore is, or can be made, 'floodproof' has dangerously misled many people.

It is recommended that use of the phrase 'floodproof' be permanently discontinued.

e) implementation of recommendations from previous enquiries

Earlier reports of inquiries into flooding at Lismore have called for **more flood gauges** and **an upgrade of the system of gauges** used to monitor flood heights in watercourses upstream of Lismore and forecast the timing of flood peaks downstream.

However, to date no funding has been allocated and no action has been taken by the NSW Government on this priority.

As a result of this inaction, during the early March flood an old but key flood gauge on the Rowing Club building was damaged by flood debris early in the flood and was rendered inoperable for the rest of the flood. Though guesstimates were made by SES, the loss of vital data about the actual height of floodwaters immediately downstream of the Wilsons River and Leycester Creek confluence, adjacent to the CBD, made it difficult for the SES and local residents to accurately predict the time when the levee would be overtopped.

Hence through the Government's inaction on prior recommendations to upgrade flood gauges, crucial data about the actual height of the flood were not available, which limited the capacity of residents and SES to effectively respond to the flood threat.

As well as **additional gauges being installed in all sub-catchments upstream**, the existing 'old' flood gauges need to be updated to incorporate new technical developments for real time transmission of key data under extreme conditions.

In addition to height of flood waters, a new generation of flood gauges should be commissioned and tasked **to collect and report real-time data** on the velocity, direction of flow and turbidity of floodwaters to the 'NSW Rainfall and & River Conditions' web-pages on the BoM website, so that the data are readily publicly available.

Further, the measurement scales of all flood gauges should geo-referenced to Australian Height Datum (AHD).

Hence the Committee is invited to (again) recommend to Government that an upgrade of flood gauges into **a comprehensive network of intelligent telemetric devices** providing real time data on flood waters affecting Lismore, is an urgent priority.

Previous inquiries into natural disasters have also called for the **creation of an emergency radio communications systems**, including designation of common emergency frequencies, which would allow local Police, SES, council staff and community members to communicate to each other directly during times of emergency.

To date no action has been taken by the NSW Liberal Nationals Government to implement this recommendation.

Hence the Committee is invited to again recommend to Government that a common emergency radio communications system be established, and related protocols be developed for its use during natural disasters and other states of emergency.

f) overall effectiveness of the flood response

To say the Government's response to the floods has been effective would be risible.

The initial response to the early March flood was underwhelming. SES were unprepared, under-resourced and initially unwilling to accept the vital assistance being provided by private citizens by effecting rescues and evacuations of stranded people in their tinnies.

The effectiveness of the flood response was not helped by the political opportunism of the Page MHR, and the Lismore Mayor who – despite it not being their role - inappropriately called for more public spending on more, bigger flood levees, while the flood was still underway, despite the unmistakable evidence of the catastrophic failure of this approach. This was an unnecessary and unhelpful distraction from the actual flood response.

g) any other related matter

THE WRONG APPROACH HAS BEEN FOLLOWED

The focus on floodplain management 'works', in attempting to mitigate flooding in Lismore, has been fundamentally misdirected for decades due to successive Councils' exclusive focus on trying to 'protect' the CBD from floodwaters, instead of taking actions to reduce the incidence of flooding and lower flood heights through catchment management.

Calls from the members of community for catchment restoration and rehabilitation, to increase rainfall retention in the upper catchment and reduce the volume of runoff during extreme rainfall, to lower flood heights and delay flood peaks have been made for many years but have been rejected out of hand by know-it-all civic leaders due to both Lismore City and Richmond River County Councils' perverse unwillingness to consider any strategy other than engineering works.

The aversion to even considering the feasibility of any other strategy for flood mitigation is contrary to legal obligations to do so, demonstrates a lack of 'good faith' in decision-making, and has been a hallmark of the narrow, now obviously failed, engineering approach to mitigating floods, pursued by Lismore City Council and the then RRCC.

Indeed a major shortcoming of this failed engineering approach to flood mitigation is that it fails to recognise that the floodwaters which inundate Lismore come from a huge and complex catchment which, in many of its sub-catchments, has been massively degraded by the historical over-clearance of native vegetation on steep slopes and creek banks. This narrow engineering approach sees the Wilson's River and its tributaries as drains and perceives the task of flood mitigation as simply 'getting the water away quickly'.

The ideas that the Wilson's River is a complex, living natural system which has an ancient identity, that deserves respect and consideration in its own right, and warrants the use of a modern systems-based natural resources management approach, have not dawned on the MPs in the NSW Government, the mayors of Lismore City or the members of successive flood mitigation County councils.

Thus no attention has been paid by governments to exploring the potential to actually mitigate floods and flood impacts by reducing the volume and the velocity of floodwaters flowing from the catchment after heavy rain, and delaying their arrival on the floodplain.

IDEOLOGICALLY MOTIVATED IGNORANCE AND INACTION

This studied ignorance of the beneficial potential of active catchment management is no accident or simple oversight. State and local governments' failure to consider catchment reforestation as a viable alternative means of mitigating floods, is an ideological choice.

It has been driven by the NSW Nationals party policies of 'protecting traditional industries' and of ignoring these industries' extensive off-site adverse environmental impacts.

The idea of regulating land use on rural lands in upstream catchments to lower runoff and consequently reduce flood hazard is, and has been, fundamentally opposed by the NSW Nationals based on fallacious claims about the primacy of rural landowners' private

property rights and an ideological view that rural landowners should not be subject to environmental protection measures.

Hence it is accurate to say that the NSW Nationals have consistently failed to apply the laws of the land to rural lands to protect the environment or the community downstream.

For example when a draft policy for riparian lands was released in 1993 the Nationals MP and then Minister Ian Causley on behalf of the Liberal Nationals Coalition Government, refused to adopt any policy for managing the adverse impacts of over-clearing of native vegetation on streambank stability. (See Northern Star report 19 February 1993)

Later in 2015 when the Liberal National parties could not amend or repeal the *Environmental Planning and Assessment Act 1979* (NSW), the NSW Government simply adopted a 'policy' of not allowing local councils to apply the law to create environmental protection zones, or land use controls over rural lands without the landowners' consent.

By doing this the NSW Nationals have jettisoned the concept of equitable treatment of all private landowners, effectively subverted the proper administration of the law of the land to achieve its preferred outcomes of non-intervention for 'olde world' farmers, and abandoned any pretence they are managing the state's resources in the public interest.

This blatant favouritism and hands-off attitude towards 'traditional farmers' have meant that much of the rural land in many sub-catchments of the Wilson's River are now badly degraded, exhibiting serious erosion scars, mass movement on steep de-vegetated slopes, degraded slumping tree-less creek banks and subsidence of adjacent roads.

Due to this over-clearing, very little rainfall is retained on site during heavy rainfall and huge volumes of run-off carrying eroded sediments are generated when the soil and limited pasture cover quickly become saturated. These high velocity runoff flows then actively undercut stream banks, further destabilising them and adding tonnes of additional sediment into the floodwaters. This degradation is a major part of why Lismore floods.

While it is possible to gain an impression of the extent of these sub-catchments' degradation from views in Google Earth, and site visits, it is not possible to be definitive here about the extent of de-vegetation, erosion, mass movement and bank destabilisation, (or areas' potential for reafforestation), because no comprehensive analyses of the state of the Wilson's River catchment or its dynamics in severe or extreme rainfall events, have been carried out by any government authority.

An outline of a brief for an urgently needed post-flood report on the state of the Wilson's River catchment, (prepared when the Prime Minister began to talk about involving the CSIRO to provide advice) is attached as part of this submission.

Were such a 'state of the whole of catchment' report to be prepared by CSIRO I have no doubt it would identify many areas of serious degradation which require urgent intervention to arrest ongoing erosion and reduce the volume and velocity of run-off.

NATURE BASED SOLUTIONS TO FLOODS ARE NEEDED

Hence it my submission that what is needed to reduce flooding in Lismore, is the development and implementation of a total catchment management plan' for the whole Wilson's River catchment, which has 'flood mitigation' as one of its core objectives.

While such a TCM plan could identify degraded areas such as de-vegetated steep slopes and creek banks, that are priorities for urgent rehabilitation to mitigate flooding, it could, indeed should, also include other important public interest objectives.

A whole of catchment management plan could aim to:

- provide links between existing but isolated areas of habitat for climate threatened native species, facing potential extinction, such as koalas;
- sequester carbon to abate atmospheric carbon build-up and slow the rate of global warming;
- improve the water quality in rivers / creeks by reducing turbidity and contaminants;
- grow and harvest ecologically sustainable sources of timber;
- produce a range of tree-crops for local food supply;
- create local employment opportunities by developing a sustainable new local industry in seed collection, plant propagation, weed control, site planning and preparation, and establishing and maintaining plantations for diverse purposes;
- carry out research into effective catchment management strategies and techniques.

Regrettably time and space do not permit a more detailed exposition of the scope of such a TCM plan here, or an outline of existing scientific research into catchment reforestation and other nature-based solutions to flooding, which underpin this proposition.

However, I would be willing to further expand on the potential value of a TCM plan for the Wilson's River, and feasible means of developing and implementing it, in a presentation to the Select Committee, were I invited to do so.

In conclusion it is apparent that other feasible means of mitigating floods in Lismore have not been explored to date, which deserve closer investigation in any credible response to flooding by the NSW Government.

Committee hearings

I am aware that the committee intends to hold two days of public hearings for its Inquiry in the Northern Rivers region.

I would like to request an opportunity to speak to my submission in a presentation to the Committee, and respond to questions, on one of the days of scheduled public hearings.

Further, I highly recommend that as part of its Inquiry, the Committee travel beyond the Lismore CBD and flood zone and inspect the Wilson's many degraded catchments. For example, the Committee should view the extent of de-vegetation, erosion and landslip in the Numulgi Creek catchment just upstream of Lismore.

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