North Coast Regional Water Strategy – Submission, [redacted]

Introduction

Along with about 30 other people, I attended the Grafton Information Session. Clarence Valley Council was represented by two elected members and an employee who's work was of a technical nature associated with water supply. There was one person representing Aboriginal interests, and I was able to identify one rural producer. A significant majority, but not all, of the remainder were associated with green left community organisations.

I attended as an individual representing no one else. Whilst acknowledging the need to address the whole supplier and user interface my particular interest is reticulated potable water to town sites.

My qualifications are: Engineering and Mining Surveyor and Restricted Mine Manager and I hold a number of professional association memberships. My work has been predominantly in major projects, including construction of Sydney Opera House, Melbourne Underground Rail Loop, Sydney Brisbane and Port Moresby airports, power stations, steel mills, military infrastructure, roads rail and bridges, and water retaining structures – in all Australian states and territories, and in New Zealand and Papua New Guinea.

My mining work has been in base metals, iron ore, and precious metals, in New South Wales, Northern Territory, and Western Australia, and mining infrastructure in those jurisdictions and in Tasmania, Queensland and Papua New Guinea.

In 1980s/1990s, pioneering research on water quality treatment using natural filter methodology was being trialled in Canada and United States. From an Australian perspective I was directly involved in successful experiments at that time in consultation with Northern Territory Mines Department, using also some information obtained from North American results. My responsibility was to design and supervise the construction of successful filter arrays for treatment of mining surface water. One of my associates now heads a major branch of NT Government environmental monitoring.

Question 1

You may publish my name, the town in which I reside, and my email, but **Not** my street address or phone number.

I hasten to add that I'm told there is another person with the same name elsewhere in my postcode. Any subsequent confusion is regrettable but outside of my control.

Question 4

Of necessity the information session contained only a brief outline of the draft strategy and vision. I didn't pick up a copy of the full document, preferring to view or download on line. This has so far proved not to be feasible due to local upgrade and subsequent random interruption of communication services. As I have only partial knowledge of the strategy I'm unable to support it, however the following comments are relevant.

Partial quote from one of your documents: *"... the right amount of water of the right quality delivered in the right way ..."* and further, from the submission questionnaire: *"... Identify least cost policy and infrastructure options"*

These sound objectives are incompatible with an emphasis, very apparent at the information session, on sea water desalination technology and something labelled as *"... highly purified waste water ..."* - the latter, surely a contradiction in terms, and in my opinion totally unacceptable for human consumption.

There is de-emphasis, both within the strategy documents I've seen and during the information session, of a cross river dam. On the other hand referring to agriculture, user constructed water storage is suggested as the answer to flow variability.

Flood management is stated as an objective. Despite my relevant technical knowledge I fail to see how any of the above has any flood mitigation function – they don't. Published in our community newspaper was part of a flood management submission by a local resident, and which I've now obtained a copy. The supplementary thrust of that submission concerns water storage, and the suggested means of achieving these objectives is a cross river dam on the Clarence River, a proposal which I support.

Neither that submission nor my endorsement of it suggest diverting water west of the range. Not that I am against such a proposal, but it's irrelevant in relation to a cross river storage and flood control dam.

It's been stated that both Warragamba and Wivenhoe dams, providing water supply to Sydney and Brisbane respectively, were designed as combination supply and flood mitigation structures. I had peripheral involvement in both those projects. Warragamba was never intended to be other than a storage facility – flood control is a recent add-on objective. Wivenhoe also is primarily a water storage facility, and while flood control was a stated supplementary objective, that function fails to exist unless the dam is deliberately kept at a partially full level – which Wivenhoe is not.

A disadvantage of privately owned off-river storage has mosquito breeding and other undesirable consequences of stagnant water. On the other hand a cross river dam provides constant water ingress and egress, and flow is unrestricted during normal river flows provided that variable discharge design allows for responsible spill management.

The now well understood high efficiency of wetland filters suggests a role such methodology could play in close proximity to a dam wall, and while throughput relative to total discharge would appear to be insignificant, the magnitude of the results, well out of proportion to expectations, is worth pursuing dependant on suitable topography. Another advantage is that during times of drought the water plants survive underground to reappear within hours of new water arrival.

Green left 'No Dams' policy evolved from the Tasmanian Franklin River protest, another in which I had peripheral involvement. The policy is green ideology and as such is irrelevant to rational planning process.

Question 5

During the Grafton information session it was stated that in addition to the 100 plus years of direct weather monitoring observations, 500 years of palaeo-climatic data is studied for a more thorough understanding of future trends. While this is laudable and makes a refreshing change from global long term predictions derived from short term weather observations, in the interest of accuracy the study target needs to be expanded.

Five hundred years ago the planet was already 100 years into the Little Ice Age, i.e. the most recent cooling period with decreasing global temperature until it ceased 160 years ago and we commenced the next warming period. Therefore while the intention is sound, the knowledge gained may be detrimental in that the data commences and ends with only parts of one cooling and one warming phase.

Global palaeo-climate data over the last 10,000 years, relative to today's climate, shows significant alternate periods of seven warming six cooling with the peaks many hundred years apart. It's obvious that this longer term record provides a more accurate baseline from which to predict future climate.

It should be noted that:
*IPCC research and subsequent reports adhere to that organisation's charter which mandates **only** human causation of greenhouse gasses, specifically carbon dioxide – and:
*Global warming **always** precedes increasing CO_2 levels – and:
*Water vapour is the most significant greenhouse gas – and:
*Despite enormous resource expenditure the human global warming theory remains unproven, yet important decisions are being made based on false provenance – and:
*A further questionable assumption is that should the human causation hypothesis be proven, we could reverse or halt the decline – and:
*The foregoing remarks are based on proven scientific **fact**.

Future demand including not only the Clarence LGA is and should remain the most relevant driver. The oft-heard “our water” is a misnomer. Clarence tributary flow originates from high catchments along most of the range between Armidale and the Border Ranges.

Community engagement and consultation is of course essential, however it's also a risk, i.e. everybody pushing their own barrow. There's no easy answer other than a pragmatic even handed approach during the decision making process, refraining from head count methodology in recognition of mischievous voice stacking strategies – not something professionals need reminding, no offence intended.

Question 6
I'm not a statistician so can't comment on relative methods but regardless of methodology, predictive modelling is by its very nature subject to great and/or small possible errors, a fact often misunderstood by those not directly involved – in crude terms a best guess – nevertheless without such tools errors migrate from the possible to the probable.

Question 7
Much of the matters raised in this question I've covered elsewhere, so I'll just comment on some but not all points of note.

The flood mitigation submission by another person, to which I've previously referred, calls for a cross river dam below all flows with the exception of the Orara. Surely a proposal well worth further evaluation – and without the intrusion of external political bias.

Sea level rise, based on the Mann Bradley Hughes 'hockey stick' curve and subsequent revisions, is still being promoted despite both proven flawed methodology and contradictory empirical data. This is an example of what can only be described as scaremongering, naïvely accepted and worried about by many people, hence calls for 'climate action'.

Saline intrusion on the other hand is, among other causes, associated with food production for the ever expanding human population, the latter a problem for which there appears to be no serious will to address.

Presumably the 24% flow reduction to which the questionnaire refers, is based on IPCC climate modelling. the inadequacy of which I've previously noted.

Healthy riverine and estuarine environment will in no way be adversely impacted by a cross river dam equipped with variable discharge ability and fish ladders, and may in some circumstances be beneficial.

Many of the sub-headings in the section headed *'Opportunities ... manage and use water'* lack detail and therefore raise questions rather than provide explanation.

Question 8

The North Coast Water Strategy needs to be planned on rational scientific needs-based parameters. Community feedback is relevant and may raise useful information but should not adversely effect the planning process.

The submission opportunity is appreciated but I'll not be involved in a 'popularity poll' of the 36 presented options. We are, most of us, not equipped to make such important decisions, albeit that some people may disagree. Rather I'll comment on those options I can contribute to and/or those I feel strongly about.

Unless it is covered under option one, which appears doubtful, there is no mention of the proven efficiency of a new cross river dam on the Clarence. It surely cannot be oversight, more likely a political decision deserving of ridicule.

Desalination is last resort technology, expensive and unlikely to be needed in the Clarence catchment.

I completely reject the irresponsible options 12 and 13. Option 10 would appear to be seeking to abolish protection against these offensive options.

There is some ambiguity in the wording of option 26.

Option 27 – 'Climate Change' is politically contrived to cause confusion between the well understood labels 'Man Made Global Warming' and 'Naturally Occurring Changing Climate' and continuation of its use only perpetuates the deception. Despite enormous expenditure of resources, human causation of changing climate is and is likely to remain, unproven. Climate is always changing and scientific global projections – with one, incomplete and therefore lacking validity, exception – indicate nothing abnormal and no need for alarm.

Option 30 is ambiguous – unless it flags significantly excessive planned end user cost increases.

The salient event in north coast rivers is flooding, for which a cross river dam would provide relief. There is nothing 'extreme' about flooding in east coast rivers. The word is misused when applied to a regular event ongoing for many thousands of years past.

Option 35 seems best interpreted as the metaphor 'passing the buck'.

Question 9
A combination, not of any of the thirty six offered but of the glaringly obvious omission – a cross river dam can provide for both secure water supply and flood mitigation.