

## SUBMISSION COVERSHEET

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<b>CONFIDENTIALITY AND PRIVACY</b>	<p>The Royal Commission will treat all submissions as public documents, unless the author has reached a prior agreement with the Commission that the submission be treated as confidential.</p> <p>Public submissions may be published in full on the Commission's website. Your name, organisation (if applicable), and state or territory will be published with your submission.</p> <p><b>Has the Commissioner provided agreement for the submission to be treated as confidential? No</b></p>
<b>SUBMISSION DETAILS</b>	<p>Conformity of Basin governance with natural environment Terms of Reference. Matter 12. Whether the Basin Plan in its current form, its implementation, and any proposed amendments to the Plan, are adequate to achieve the objects and purposes of the Act ...</p> <p>The Plan replaces fragmented state and territory jurisdictions with an integrated management structure for the natural basin. However it does not cover flow from the South-East of South Australia into the South Lagoon of the Coorong. The South East Flows Restoration Project due for completion in June 2018 is a \$60m project funded by the Australian and SA governments that aims to repair significant ecological damage: "By restoring inflows from the South East, the SEFRP seeks to assist maintaining salinity in the Coorong South Lagoon within the target range and prevent ecological degradation during periods of low flows from the River Murray."</p> <p>We are attempting 'restoration' of flows that are not recognised within the Basin Plan. Definition of what constitutes the Basin is deficient and needs to be rectified if we are "to establish a sustainable and long term adaptive management framework for the Basin water resources" as identified in introductory paragraph C.e of the Commission's Terms of Reference.</p> <p>The South Lagoon is a critical component within a number of international conventions and agreements:</p> <ul style="list-style-type: none"> <li>• The Convention on Wetlands of International Importance (Ramsar Convention);</li> <li>• The Convention on Biological Diversity; and</li> <li>• Migratory Bird Agreements with Japan, China and the Republic of Korea.</li> </ul>

The Basin Plan cannot meet the environmental objectives of the Act until it includes responsibility for all inflows and salinity management in the Coorong South Lagoon.

Presentation of findings

Matter 13. Any other related matters

“Water for South Australia” is a term in popular usage that has done great harm to the river system. It encourages a perception in other states that the main concern of South Australians in relation to the Basin Plan is to do with consumptive use of the water that flows across our border. Unchallenged, that perception will do much to diminish the force of recommendations that may come from this Commission.

Our state borders are lines on a map that mean nothing to the natural system. South Australians have a particular perspective on Basin health only because we are at the end of the river system, where governance failure registers most severely. But as consumers of water—in Adelaide or Renmark—we have no special privileges and indeed we have no answer to the challenge that runoff from within our state border contributes little to system flow.

It is crucial that Commission deliberations are presented from a system perspective.

Demise of the Darling River

Matter 9. Whether, in any event, the enforcement and compliance powers under the Act are adequate to prevent and address non-compliance with the Act and the Basin Plan, and any recommendations for legislative or other change if needed.

Murray–Darling Basin Water Compliance Review, November 2017, from Murray-Darling Basin Authority (MDBA) acknowledges an ABCTV broadcast in July that year: “The Four Corners program raised questions about whether current management rules in the Barwon-Darling system allow environmental water to be taken by irrigators.” But the Review itself, the forced resignation of a NSW water bureaucrat and subsequent prosecutions launched against five irrigators have all occurred only because of that television program. Why, more than six years into the Basin Plan, did we need a television program to trigger such actions?

The answer is given later in the Review: “The iron law of water is that extractions upstream affect communities downstream. The need to address the conflicting interests of the two groups is why extraction is regulated.” Those two sentences encapsulate a fateful mismatch between MDBA management culture and our democratic intent. Australians have not committed to the Basin Plan to adjudicate between a rice grower in St George and a pastoralist near Bourke. We have committed billions of dollars to keep this heartland river system alive: that is the essence of ‘sustainability’. By recognising only ‘two groups’ within its ‘iron law of water’, MDBA has betrayed the primary objective of the Basin Plan. It has been blind to a third stakeholder: the natural environment.

We are overseeing the death of the Darling River. The NSW plan to build a 270 km pipeline from Wentworth on the River Murray to “provide a long-term secure water supply for Broken Hill” is a clear signal that the NSW government has written off the Lower Darling.

My family has pursued dryland farming on our property at Milang, alongside Lake Alexandrina, since European settlement. How long, I ask, until Australia will similarly write off the Lower Murray? Then my family will join today’s lament from Northern Basin Aboriginal Nations: “When seasonal water is available to the environment our culture strengthens and the health and wellbeing of our people improves. When our rivers and waterways are dying, we are dying with our Country. Our science dies, our culture dies, and our ceremony dies.”

The Precautionary Principle

Matter 5. If the Basin Plan is unlikely to achieve any of the objects and purposes of the Act and Basin Plan and/or the ‘enhanced environmental outcomes’ and the additional 450 GL referred to above, what amendments should be made to the Basin Plan or Act to achieve those objects and purposes, the ‘enhanced environmental outcomes’ and the additional 450 GL?

The Precautionary Principle reminds us to “look before we leap”, we are “better safe than sorry”, and that “an ounce of prevention is better than a pound of cure”. It should be front and centre of an adaptive management philosophy responsible for managing a natural system as complex as the Murray-Darling Basin. In making judgements about sustainable diversion limits we need to be always mindful that future advances in knowledge may negate current understandings. A glaring example of how limited our knowledge has been is the issue of Acid Sulfate Soils (ASS) in the Basin. During the Millennium Drought urgent research was undertaken to determine if human health could be impaired by ASS dust particles, if rainwater collected in tanks should be drunk, if washing should be dried on clothes, etc. We were warned of backwaters with Ph readings equivalent to battery acid. People were genuinely alarmed; politicians pontificated. But on my records it was not until late 2007—six years into the Drought—that Dr Rob Fitzpatrick, University of Adelaide, first drew public attention to ASS. Until then we had been blissfully unaware of this very serious phenomenon. Significantly, Dr Fitzpatrick drew upon personal experience in South Africa: no comparable work had been done in Australia.

Perhaps even more troubling is our continuing national schizophrenia about the Murray estuary. Without the Barrages, would Lake Alexandrina be fresh or saline? Was the Mouth continually open for 6,000 years before it ‘first’ closed in 1981? If the Mouth closed during a period of low outflows, could it be reopened by a flood? Did the mighty floods of 1956 scour out the Mouth? Were saltwater fish species once caught upstream of Murray Bridge? Passionate voices are raised in competing answers to such fundamental questions. Extracts from Charles Sturt’s journals are brandished, photos of a parched river bed are wielded as weapons, diatoms are scraped from the lake bed for analysis. We turn to MDBA for enlightenment and what are we told? In the relevant ‘Fact Sheet’ “most of the time, flows of freshwater down the River Murray would have been sufficient to fill the lakes and keep seawater from creeping in” is as close as we can get to a definitive answer. The controversy roars on.

In mid-April 2018—after two years in five with exceptionally high flows—dredges are working 24/7 to clear the Mouth although the Plan promises to ensure “the mouth of the River Murray is open without the need for dredging in at least 95% of years, with flows every year through the Murray Mouth Barrages” The Commission could ask how often the dredges have been deployed in the last five years, and what budge provisions are in place for dredging over the next decade. If we know so little about basic issues such as Acid Sulfate Soils and natural estuary operation how can we confidently predict the impact of diversions on delicate and complex webs of life throughout the river system? We need a healthy dose of humility to acknowledge that the Plan is built upon an uncertain foundation of evolving knowledge. A philosophy of adaptive management requires rigorous application of the Precautionary Principle to minimise the risks of causing irreparable damage.

Salt

The objects and purposes of the Act and the Basin Plan include, but are not limited to, the following matters:

a. ensuring the return to environmentally sustainable levels of extraction for water resources that are over-allocated or over-used

	<p>Salt is an issue that breaks up the usual Basin battlelines: every farmer knows that salt kills.</p> <p>Currently an average of 2.1 million tonnes of salt is exported annually through the Murray Mouth—equal to what is received in rainfall through the Basin and enough to fill a solid line of B-double trucks stretched from Adelaide to Canberra. This salt load has been estimated to double by 2100 because of the effects of irrigation. In endless arguments about water being ‘wasted’ as it flows out the Mouth I have encountered no satisfactory response to the question of how we would manage salt if we do not keep the river flowing. To date, our ‘salt mitigation’ schemes consist of trucking salt a relatively short distance from the stream bed. It does not leave the Basin; it is simply dumped for future generations to worry about.</p> <p>To the prompt “Does irrigation destroy civilizations” the search engine on my laptop computer returns an alarming list of articles and books that appear to answer in the affirmative. I am in no position to evaluate their worth but I ask the Commission to seek qualified advice on this matter. There is at least a prima facie case that we are embarked on a fool’s errand as we lower enormous extraction pipes into our rivers. The Commission may give us a late and precious opportunity to pause and think beyond the next balance sheet or electoral cycle.</p> <p>Technological change</p> <p>In my 1950s boyhood, I carried canvas water bags out to men pitchforking sheaves of hay onto a trailer for later stacking by those same pitchforks. My uncle kept a fenced run for about eight Clydesdale horses: he had grown up with the breed and loved them. Thus he was a soft touch: as friends and neighbours bought their first tractors they had called upon him to save a faithful servant from a bullet.</p> <p>Today—with only very occasional assistance from a retired farmer—our share farmer runs around 2,000 sheep and produces about 3,000 tonnes of grain and 1,000 rolls of pasture hay annually. Membership of Milang Agricultural Bureau, approximately thirty, represents perhaps two-thirds of broad-acre farmers in an arc stretching from Goolwa to Woodchester and Langhorne Creek. I would conservatively say that more than 300 farmers would have been working that land when I was lugging water bottles out into the paddocks. In my lifetime, agriculture has been revolutionised by technological change.</p> <p>And the pace is increasing. Monthly Bureau meetings receive presentations on the latest advances in soil husbandry and fertilisers, GPS steering for tractors, drones, pesticides, soil and moisture mapping, stock handling equipment, and so on. The list is endless. And the same change agents apply throughout the Basin (and are turbocharged with microelectronic aids for irrigation). Objective and result are consistent: enhanced labour productivity and a hollowing out of rural populations.</p> <p>In considering the social and economic impacts of the Basin Plan it is essential that we separate the effects of reductions in water volume extractions from other change agents. I do not consider that this has been done satisfactorily in the Northern Basin Review report or in assessment of the thirty seven projects accepted as justification for reducing 2,750 Gl of environmental water by 605 Gl.</p>
<p><b>DOCUMENTS UPLOADED?</b></p>	<p>No</p>
<p><b>DECLARATION</b></p>	<p>I declare that:</p> <ul style="list-style-type: none"> <li>• the submission is made by me or I am authorised to do so by the organisation making the submission</li> <li>• I understand that my submission may be published in full</li> <li>• I understand the Commission may contact me should further information be required.</li> </ul> <p>checked</p>

