Murray-Darling Basin Royal Commission & the Law-Science Linkage

Part 1: Introduction ~ Conflict Assessment

Dr Ted Christie, *15 February 2019*

Disclosure Statement

Ted Christie does not work for, consult to, own shares in or receive funding from any company or organisation that would benefit from this article, and has no relevant affiliations

> ***"I believe that in this age of science we must build legal foundations that are sound in science as well as in law. Scientists have offered their help. We in the legal community should accept that offer. The result, in my view, will further not only the interests of truth but also those of justice. The law will work better to resolve many of the most important human problems of our time".***
>
> **Justice Michael Kirby (1999)**[i]

Finding solutions for environmental conflicts should not be seen as the exclusive domain of law, or as the sole province of science.

But, this goal is dependent on an effective integration between law and science if the management and resolution of public interest environmental conflicts is to resonate with the observations of Justice Michael Kirby.

Integration would be best achieved through a cross-disciplinary, problem-solving approach that links law and science within a framework based on contemporary principles and concepts for environmental dispute resolution.

The ***Murray-Darling Basin Royal Commission*** was established by the South Australian Government on 23 January 2018. The purpose of the Royal Commission was to investigate the operations and effectiveness of the Murray-Darling Basin system.

The final Report of the ***"Murray-Darling Basin Royal Commission"*** was released on 29 January 2019. In terms of the law/science interface, the Commissioner, Bret Walker SC, noted:

"Two opposite impressions come
from the experience of conducting this Royal Commission:

- "The first is one of admiring praise for the enactment of the *Water Act 2007 (Cth)* (Water Act) and, with crucial qualifications, for the making of the *Basin Plan 2012 (Cth) (Basin Plan)* under the Act".

- *"The second is one of deep pessimism whether the objects and purposes of the Act and Plan will be realized. There are many ways in which study of the grand national endeavour in question leaves a decidedly sour taste"*

An emotive and harsh reaction from some quarters of the media arose following the release of the Commissioner's report. ***For example***:

"Among the more sensational finding…was that
[the Murray-Darling Basin Authority] *acted unlawfully*
and failed to use the best available science, including climate science
The inquiry's report… marked an extraordinary chapter
in the Murray-Darling Basin's controversial and contested reforms,
and revealed much about the messy way
in which water and climate law,
science and politics interact."

In its response
to the Royal Commission's Report,
the *Murray-Darling Basin Authority* stated:

- "The MDBA is confident that the Basin Plan has been made lawfully and is based on best available science. There is extensive documentation in our published reports to support this; and
- The MDBA rejects any assertion by the Commission that it has acted improperly or unlawfully in any way."

What is a Royal Commission?

A Royal Commission is an independent public inquiry that acts as a fact-finding body. The findings of a Royal Commission are the basis for recommendations made to Government. They are not binding on any other body and have no authoritative legal value.

The most likely area of challenge
will arise in respect of the decisions made by Government
following the Royal Commission
as the final decision is a political one!

Ultimately, the dilemma for Government will be whether or not to implement some or all of the Royal Commission's recommendations.

It would be rare for Government to implement all of the recommendations "*lock, stock and barrel*" as was the case of Queensland's then Premier, Mike Ahern, following the "police corruption inquiry" of Tony Fitzgerald QC. A past, option used by Government is to "cherry pick" selected recommendations.

Conflict Assessment: *The Report of the Murray-Darling Basin Royal Commission*

The findings of the Report of the *Murray-Darling Basin Royal Commission,* following its release on 29 January 2019, ignited significant controversy and concern over the Murray-Darling Basin Plan.

It was further fuelled by a new controversy in December 2018: The ecological health of part of the river system. This reached a "crescendo" in January 2019, following a fish kill of around one million dead fish covering a 40km stretch of the Darling River, downstream of the Menindee Lake System.

The Productivity Commission's "***Murray-Darling Basin Plan: Five-Year Assessment***", released to the public on 25 January 2019, added to the controversy. Their report identified complex future challenges made more difficult as a result of the approaches taken by Basin Governments to implement the MDB Plan e.g. *because of a process that lacked transparency and candour with stakeholders; and a need for reform to current institutional and governance arrangements to manage the risks to implement the MDB Plan.*

The impacts of these three events – but, particularly the findings of the *Murray-Darling Basin Royal Commission* - have created a significant log-in-the-road for the implementation of the MDB Plan.

Clearly, the next step is for the MDB Authority to be given sufficient time to respond to the Royal Commission's report.

Pressure is also on to the South Australian Government who commissioned it, to properly consider the content of the report.

Can decision-making by Government over implementation of the Royal Commission's recommendations be facilitated - given the opposing positions that currently exist between the Royal Commission and the MDB Authority?

A Problem-Solving Pathway to Facilitate Decision-Making for Implementing the MDB Royal Commission Recommendations

The pathway outlined recognizes that, under the *Water Act 2007 (Cth)*, questions of science are equally as important as questions of law and so the pathway must be cross-disciplinary: One that integrates law and science and does so within a conflict resolution framework.

Such a framework provides the basis to review five key findings made by the MDB Royal Commission **(See Appendix I)**; specifically, findings that focus on the following issues:

1. **Best Available Scientific Knowledge**
2. **Climate Change & the Precautionary Principle**
3. **Effective Public Participation & Community Consultation**
4. **The Triple Bottom Line: Ecologically Sustainable Development**
5. **Mathematical Modelling**

Objective criteria are essential to review these findings. The criteria are based on constraints known to be problematic for resolving environmental conflicts and environmental decision-making. ***Each issue in Appendix I will be reviewed in a series of articles that will follow.***

Whether Statutory Interpretation Problems Exist?

The scientific terms and concepts prescribed in the Water Act vary in their complexity. They have special significance in that the legal meaning for these terms and concepts set the boundaries for the scientific evidence that must be considered in the MDB Plan decision-making process.

Where environmental legislation
fails to provide legal definitions
for prescribed scientific terms and concepts,
or legal definitions are prescribed
that do not resonate with their accepted scientific meaning,
they may be open to many interpretations.
Decision-making in these circumstances
runs the risk of being inconsistent –
or in the worst-case scenario, invalid.

Whether the Scientific Evidence is Testable, Objective and Impartial?

The reliability of scientific evidence can only be achieved by a sequential examination of the procedures which end in the reporting of the scientific finding – along a spectrum commencing with the generally accepted scientific meaning of the underlying term or concept through to the conclusions.

- *In between these end-points, attention should focus on assessing whether the experimental methods, experimental design and the data analysis relied on, forms part of a body of knowledge which is sufficiently organised, or recognised, to be generally accepted as a reliable body of knowledge in the relevant scientific community;*
- *Areas of scientific uncertainty, including where there is incomplete or unavailable information, must be identified. Incomplete or unavailable information should be evaluated for issues, such as its relevance for assessing reasonably foreseeable significant adverse environmental risks; and*
- *Any policy or value-laden issues relied on in determining the final decision need to be identified to avoid a basic difficulty in resolving environmental disputes: To separate issues of fact from issues of policy.*

Whether Existing Governance Processes and Structures Resolve Conflict?

Problems over economic activity and environmental stewardship do not arise solely because of the people engaged in the conflict; the problem arises because of limitations in existing processes, institutions and organisational structures through which people are seeking to resolve their conflicts.

The issue is not with the environmental regulatory control standards imposed by law and enforcement — but the procedures and processes that have been traditionally applied. Why is this the case?

Contemporary environmental problems have become far more complex. And society is also faced with natural and fiscal limits unimaginable in the past.

Paradoxically, Government continues to cling, obstinately,
to "a set of tools and governance structures,
created in an earlier era
to address a very different set of problems".

TAGS: *Murray-Darling Basin Plan; Murray-Darling Basin Royal Commission; Murray-Darling Basin Authority; best available scientific knowledge; climate change; the precautionary principle; community consultation; public participation; ecologically sustainable development; mathematical modelling*

APPENDIX I

Key Findings of the Murray-Darling Basin Royal Commission

Some of the Royal Commission's findings - at this stage - cast a degree of uncertainty whether the Basin Plan effectively integrates science and the law to resolve this public interest environmental conflict.

The following key findings of the Royal Commission raise issues that may be problematic for decision-making for implementing the Commission's recommendations.

These issues will be reviewed in a series of short articles that will be posted on this site along a pathway of conflict management and resolution.

1. Best Available Scientific Knowledge: *Scientific & Legal Meaning*

Royal Commission Overview at p.23: "*[B]oth* the MDBA and the Minister, who between them are statutorily responsible for making the Basin Plan, 'must … act on the basis of the best available scientific knowledge' … As appears throughout this report, this is a serious and fundamental requirement that it appears has most regrettably not been consistently obeyed". And, at p.25: *Failure to disclose justifications, if any, for their ESLT/SDL outcomes in terms that answer an acceptable description of "best available scientific knowledge".*

Royal Commission Finding at p.53: "Best available scientific knowledge is neither secret nor classified. It is available to the scientific community, and the broader public. It involves processes and actions that represent science — that is, that are capable of being reviewed, checked and replicated".

2. Effective Public Participation & Community Consultation

Royal Commission Overview at p.27: "In both reviews to date, SDL adjustment mechanism and NBR, a chorus of protest from affected communities and concerned scientists (and lawyers), and very prominently from some engaged farmers, united to seek much more and much better information from the MDBA. It scarcely obtained any favourable response. This state of affairs renders consultation hollow and tends to lower the quality of decision-making".

Royal Commission Findings at p.51: **There are considerable issues concerning a lack of genuine consultation and openness on the part of the MDBA, Commonwealth Government agencies, and agencies of the Basin States, including in relation to water resource planning and regarding Aboriginal interests and values"; and**

At p.59: "…The Murray Lower Darling Rivers Indigenous Nations… assessed that First Nations were deprived of any opportunity to provide an informed response to the SDLAM as a result of lack of information, inadequate time for consultation, and inadequate provision of information. This is unacceptable".

3. The Triple Bottom Line: *Ecologically Sustainable Development*

Royal Commission Finding at p.52: **"The Water Act requires environmental priorities to be given primacy when determining an ESLT and a SDL".**

Royal Commission Finding at p.53: **"There is no 'triple bottom line' legislated in the Water Act concerning the setting of a SDL that must reflect an ESLT, or in the scientific judgement to be made as to what are key environmental assets, ecosystem functions and environmental outcomes…**
Any optimisation of environmental, social and economic outcomes must come later. In any event, [it is unlikely to be possible] to optimise all three simultaneously in determinations such as the setting of an ESLT or SDL"; and

***At p.188 (ESLT Process): "Accordingly, the adoption of a triple bottom line approach has resulted in the SDL not reflecting an ESLT, contrary to sec 23 of the Water Act*"**.

4. Climate Change & the Precautionary Principle

Royal Commission Response to TOR at p.50: **"[The Basin Plan] in its current form, its implementation, and any proposed amendments to the Plan, are *[inadequate]* to achieve the objects and purposes of the Act and Basin Plan, the 'enhanced environmental outcomes' and the additional 450 GL referred to above, taking into "account likely, future climate change" …The MDBA completely ignored climate change projections for the determination of the ESLT and the setting of a Basin-wide SDL that reflects this. That is unlawful. It ignores the best available scientific knowledge. As an administrative decision it is indefensible."**

Royal Commission Finding at p.55: ***"*****The assertion by the MDBA that climate change projections could not be incorporated into the modelling because they were too uncertain is rejected. This is contrary to their incorporation in the Guide and the evidence from expert witnesses before this Commission".**

***And at p. 251 (Climate Change)*: "When the Water Act directs the MDBA to take account of ESD that means it must take account of. *[As]* defined in the Water Act, it instructs the MDBA that in circumstances where there is a threat of serious or irreversible environmental damage, a lack of scientific certainty is no reason to postpone measures to prevent that damage occurring. Incorporating climate change projections into the determination of the ESLT (and hence the SDLs) is precisely the kind of precaution needed to be taken to prevent risk of serious environmental degradation".**

5. Mathematical Modelling

***Royal Commission Finding at p.57:* "… the MDBA cannot simply assess modelling results. It requires a substantive assessment. Real environmental outcomes are at stake. Leaving aside the clear text of the Basin Plan, as a matter of policy, modelling should not be preferred over empirical observation. Reliance only on modelling — which is the approach taken by the MDBA — is unlawful and inconsistent with the Basin Plan".**

***Royal Commission Finding at p53:* "Whilst the modelling the MDBA employed for the Guide was partially disclosed to the CSIRO and the Goyder Institute for the purposes of review (for South Australia), none of the modelling used to form the basis of the Basin Plan as enacted has been made available to the scientific community, or the wider public".**

***Royal Commission Finding at p.55:* "In the ESLT Report, climate change was not considered or factored into the modelling at all. This decision was unlawful, as it meant the Basin Plan was not based on the best available scientific knowledge and was done with total disregard for the principle of ESD".**

End Note

[i] Kirby M, "Human Freedom and the Human Genome. The Ten Rules of Valencia", International Workshop on Freedom and Risk Situations, Valencia, Spain 25 January 1999. *www.hcourt.gov.au/speeches/kirbyj/kirbyj_gen999.htm -(accessed 30 March 2010)*