

**Managing Water Resources in the National Interest**  
***The Murray-Darling Basin River System Plan:***  
***A Pathway for Conflict or Co-existence?***

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**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*

***“Fragmentation of Australian science...is not impeded, nor yet assisted by the Australian Constitution...It is argued that there needs to be a stronger role for interstate and commonwealth ministerial councils and structures, fed by an informed choice of national priorities to provide a broad framework of national policy within which States and the Commonwealth can work together harmoniously in new ways.”***

(Authors emphasis)

[Professor John White](#), Australian Academy of Sciences (2003)

The Murray-Darling Basin occupies around 14% of the land area of four mainland Australian States - Queensland, New South Wales, Victoria and South Australia – as well as the Australian Capital Territory. It has been described as “Australia’s food bowl”.

The Basin contains Australia’s three longest rivers to form Australia’s longest river system: The Darling River (2,740 km in length), the Murray River (2,530 km) and the Murrumbidgee River (1,690 km).

The ecological health of the Murray-Darling Basin river system, together with sustainability, pose major environmental concerns for Australia. It has been the subject of long-term scientific and political debate.

*State water rights and the  
extraction of water  
- as well as sustainability -  
have been  
the primary sources of conflict.*

The Federal Government agency, the *Murray-Darling Basin Authority*, (“**MDBA**”) has the statutory power for developing a Basin Plan under Federal legislation, the *Water Act 2007*. This statute guides governments, regional authorities and communities for planning the sustainable management and use of the waters of the Murray–Darling Basin.

The goal of the [Murray-Darling Basin Plan](#) is

*“...to manage the Basin as one system.*

*This will enable the river systems to continue to support communities and industries in the long-term as they adapt to changes, including a changing climate”.*

In October 2010, the Authority released its draft plan – the “*Guide to the Murray-Darling Basin Plan*”. The Guide fuelled controversy and led to highly polarised public and scientific opinion throughout the Basin.

In July, 2011, in an article titled “*Finding a Sustainable Outcome for the Murray-Darling Basin Plan: An Alternative Pathway for Resolving State Water Rights and Extraction of Water*” [\(2011\) 31 Queensland Lawyer 82](#) the author observed:

*“Opposition from many sectors within the [Murray-Darling Basin] community reflected a situation that if the underlying causes of conflict were not effectively resolved in the final Basin Plan, they would remain as a source of resentment or irritation.*

*The outcome would be for further conflict to re-emerge at some later date requiring resolution; the alternative would be litigation”.*

The *final Basin Plan* (“[Basin Plan 2012](#)”) came into force in November 2012.

Review and revision processes then followed as the final Plan was progressively implemented throughout the entire Basin system. This ends in mid-2019 when **Basin Plan limits on water take become legally binding.**

***The above scenario for conflict has occurred: November 2017-February 2018.***

***Recent Federal parliamentary action - and divergent scientific opinion – has created a log-in-the- road for implementing the Basin Plan.***

### **Harmonious Working Relationships? *Politics and the Law***

Under the *Water Act*, the Basin Plan prepared by the MDBA is subject to [approval \(“adoption”\) by the Minister](#) [of the Federal Parliament]. The adopted *Basin Plan* - or any subsequent amendment to it adopted by the Minister – has legal status as a [“legislative instrument”](#).

As a consequence, the Federal statute, the ***Legislation Act 2003***, makes the *Basin Plan* – or any amendment introduced after it – subject to [disallowance by the Federal Parliament](#) and so cease to have effect.

### **Disallowance Case Study: *Political and Scientific Disharmony***

In November 2017, [MDBA amendments to the Basin Plan](#) sought to reduce the environmental water recovery target in the Northern Murray-Darling Basin by 70 gigalitres - an 18% reduction.

On 14 February 2018, a **disallowance motion** was passed by the Senate – the Upper House of Australia’s federal parliament. This meant that the MDBA amendment was overturned – and so the *Basin Plan* remained unchanged.

The response by affected sectors to the disallowance of the MBDA amendment was hostile. It ignited public controversy and political debate: -

- The NSW and Victorian governments, not only threatened to quit, but also warned it could “kill off” the entire Murray-Darling Basin Plan.  
*“This disallowance vote undermines important reforms that helped fix a 100-year-old problem and hurts the communities who have sacrificed and worked tirelessly to make the Basin Plan a success”*: [New South Wales Regional Water Minister, Niall Blair](#).
- *“I am nevertheless disappointed that the Australian Parliament has voted to disallow an amendment to the Basin Plan affecting the northern Basin. The MDBA stands by the Northern Basin review process, which was based on the **best available science and evidence**, peer-reviewed by independent experts, and involved an extensive and comprehensive consultation over four years”*: [Chief Executive MDBA, Philip Glyde](#).

- The proposed reduction to the Northern Basin sustainable diversion limit of 70 gigalitres of water would have been devastating for the Darling River system and communities downstream of Bourke: [Paul Sinclair, ACF](#).
- “Tonight, the Senate threw common sense out the window and gave in to environmental extremism, while at the same time delivering economic and social uncertainty to communities in the Murray-Darling Basin”: [Michael Murray, Cotton Australia General Manager](#).

### **Disallowance of the MDBA Amendments & Information Conflicts**

The disallowance of the Amendment is a classic information conflict created by ***divergent scientific opinion***.

The MDBA Chief Executive described the modelling and data which underpinned their recommendations to amend the *Basin Plan* as being strong and accurate, which had stood up to the scrutiny of independent peer-review: -

and “*hope[d] that the Parliament will take into account the published, professional and peer-reviewed analysis, which is fully documented on our website, in their consideration of these amendments*”.

In January 2018, [The Wentworth Group of Concerned Scientists](#) flagged their opposing position to the MDBA: That they did not support the MDBA Amendments to the *Basin Plan* because:

“*...in its current form, it will undermine the objectives of the Basin Plan and render the Basin Plan inconsistent with the Water Act requirement to develop the Basin Plan ‘on the basis of the best available scientific knowledge and socioeconomic analysis’*”.

On 5 February 2018, twelve Australian scientists – *with recognized expertise on Basin issues covering a wide range of policy fields* - joined together to sign [The Murray-Darling Declaration](#).

They focussed on their deep concerns over the *Murray-Darling Basin*: *That the Basin remains in a poor state; that the Basin Plan was not delivering on its key objectives; & concern over policy issues that govern the Basin Plan.*

***But why did such a situation arise?***

In part, the problem reflects the processes used to *manage and resolve information conflicts* over the Basin Plan.

Today, society is confronted with natural and fiscal limits that were unimaginable in the past. The challenge is to move forward and away from processes and governance structures created in an earlier era to address a very different set of problems.

Finding a solution to sustainably manage the Basin's water resources should not be simply seen as a policy, or a scientific or a legal problem.

*Resolving the information conflict over planning & managing the Murray-Darling Basin's water resources*

*requires a new way:*

*A cross-disciplinary approach,*

*in which policy, science and law*

*are effectively linked within a conflict resolution framework.*

### **Sources of Divergent Scientific Opinion: Law & Science**

Conflict over scientific knowledge for the *Basin Plan* as well as *Amendments* to the Northern Basin has led to different positions held by the MDBA and the expert opinion within Australia's scientific community.

The source of the information conflict is the *Water Act*: The legislative framework for developing the Basin Plan requires the MDBA and the Minister to "***act on the basis of the best available scientific knowledge and socio-economic analysis***": [Water Act, Section 21\(4\)\(b\)](#).

- The meaning given by the *Water Act* to this scientific concept, as a Footnote to the Section, is limited and of little assistance for interpretation: "***The best available scientific knowledge includes the best available systems for accounting for water resources***".
- Nor do *Explanatory Memoranda for the various Water Bills* provide any ***objective criteria*** to assist interpretation of the ***best available scientific knowledge*** - and, in turn, to resolve ***divergent expert opinion***.

**Information conflicts over the Murray-Darling Basin Plan, that lead to divergent expert scientific opinion, arise in the following circumstances:**

- *The basis for expert opinion may reflect differences in the scientific knowledge base that has been relied on by the MDBA, and some within Australia’s scientific community, as to what is **reliable and relevant**?*
- *In arriving at their expert opinion, whether there been different interpretations of the same scientific knowledge base by each of these scientific sectors?*
- *Whether there is any scientific uncertainty arising from incomplete or unavailable information - especially if this leads to speculation in expert opinion?*

At the very least, the interpretation of the concept - the “*best available scientific knowledge*” - should conform to the standard applied by science:

*The enduring criteria of  
testability, objectivity and impartiality;  
together with the following test for acceptance of a finding:  
widespread consensus within the scientific community  
following peer review and publication.*

**Finding Harmonious Working Relationships in New Ways:  
Joint Problem-Solving and Environmental Decision-Making**

The **scientific round-table** is a new way for resolving information conflicts; and for overcoming a potential log-in-the-road for implementing the Murray-Darling Basin Plan. It is also the foundation for achieving co-existence between competing interests through conflict resolution.

***The scientific round-table is a structured negotiation process to evaluate and resolve divergent scientific opinion in environmental conflicts.***

***It has been developed and used by the author - where conflict resolution is undertaken, external to and independent of courts.***



## Understanding the Scientific Round-Table in a Nutshell

The scientific round-table adopts a joint fact-finding approach for evaluating divergent scientific opinion. It is based on a full and fair disclosure of all reliable and relevant scientific knowledge from the outset.

**Joint fact-finding** means that scientific experts cooperatively interact with one another in conferring or challenging differing perspectives held on disputed issues. Joint fact-finding overcomes the obstacle of polarised scientific opinion – a common feature of litigation.

The **representatives at the scientific round-table** are scientific professionals, having expertise in the subject matter of the conflict.

Ideally, in the case of the Murray-Darling Basin Plan, each of the four Mainland Basin States would nominate their scientific expert(s) to represent them at the round-table for the specific information conflict that is to be resolved. The MDBA would represent the Federal Government.

The framework for the round-table is the **Alternative Dispute Resolution** (“ADR”) process of **Independent Expert Appraisal** – a structured negotiation process. An independent dispute resolver, **having ADR process skills as well as scientific expertise**, convenes the round-table.

### The Scientific Round-Table Objectives

(i) The **first objective** requires a full and fair disclosure of all relevant and reliable scientific knowledge for the issues in conflict - known to be published - and made available through information exchange.

**The rationale for this objective?** To ensure that all fact-finding can be undertaken without any fear of “*cards being held under the table*”! It is a pre-condition before commencing the second objective.

(ii) The **second objective** is for the scientific experts at the round-table to reach **agreement, by consensus**, on disputed scientific issues.

The round -table gives effect to one of the key elements of **principled negotiation**. To insist that agreement on disputed scientific issues is based on **objective criteria**: A common set of objective criteria to evaluate the agreed scientific database would be determined by the round-table.

A **summary of outcomes** arising from the scientific round-table is prepared by the dispute resolver and would include: -

- Agreement on disputed issues where divergent scientific opinion existed.
- Where agreement cannot be reached on a disputed issue, the non-binding opinion of the dispute resolver would be provided.
- Areas of scientific uncertainty for a specific issue - *including where there is incomplete or unavailable information* - must be identified.
- Alternative pathways may be suggested to address circumstances where a specific issue remains in dispute because the information base is uncertain, incomplete or not available.

***The summary of outcomes becomes the foundation for conflict resolution by the appropriate Cabinet Ministers of the four mainland States and the Commonwealth. The pathway enables them to equally share scientific knowledge - and to understand it - in negotiating agreement.***

***It is a pre-condition for the structured negotiation process of mediation to resolve conflict. It ensures that there is no imbalance in knowledge power between the politicians engaged in Basin Plan negotiations!***

## **SUMMARY**

- 1. The MDBA is on the threshold for Murray–Darling Basin Plan limits on water take to become legally binding in mid-2019. But, the dilemma now confronting the MDBA is the uncertainty created by divergent scientific opinion and its consequences for the implementation of the Basin Plan.**
- 2. The source of the divergent scientific opinion arises from statutory interpretation of the legal obligation requiring the Basin Plan “to be based on the best available scientific knowledge and socio-economic analysis”.**
- 3. The possible impacts that may flow on? *Will the main objective of the Basin Plan to secure the future of this river system and the communities and industries that rely on it, be achieved? Will the Basin Plan provide certainty and stability to Basin communities? Will the right balance between fiercely competing interests be achieved throughout the Basin?***



4. The prudent path for the MDBA to now take would be to evaluate its existing model for Basin decision-making to resolve divergent scientific opinion and conflict against the alternative pathway outlined in this article.
5. In particular, the potential of both models to resolve scientific knowledge conflicts that have led to the existing log-in-the-road; and to avoid the possibility of any further impasse for the Plan's implementation.
6. The joint problem-solving and shared responsibility pathway outlined in this article has the following advantages for the development of the Basin Plan: -
  - ☑ *Information conflicts that have led to divergent scientific opinion being resolved.*
  - ☑ *A conflict resolution outcome that leads to a sustainable solution which provides competing interests with a sense of ownership in the Basin Plan;*
  - ☑ *By negotiating agreements for commitments that are firm, sustainable and able to be implemented; and*
  - ☑ *By preserving or enhancing the relationships between competing interests, trust is promoted.*

**KEY WORDS:** *Murray-Darling Basin; Basin Water Plan; conflict; environmental decision-making; problem-solving; divergent scientific opinion; science; best available scientific knowledge; scientific round-table; law; disallowance.*

To read more on the *scientific round-table*, as well as a *cross disciplinary model for managing and resolving environmental conflicts*, click on the author's book: "[\*\*Finding Solutions for Environmental Conflicts: Power and Negotiation\*\*](#)".

In the *Foreword to this book*, Justice Peter R.A. Gray (as he then was), of the Federal Court of Australia wrote:

*"If this book is read, and its contents are heeded, as widely as is justified, then the days of the application of traditional dispute-resolution procedures to environmental disputes should be over in the 21<sup>st</sup> century... To describe this book as revolutionary is not to resort to hyperbole. It will bring about significant change..."*