

Environmental Conflicts and Divergent Scientific Opinion: *The Scientific Round-Table & Conflict Management*

Dr Ted Christie, 01 November 2016



Disclosure Statement

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*The **Scientific Round-Table** is a structured process for evaluating and resolving divergent viewpoints on scientific and technical issues in environmental conflicts? It has been developed and used by the author for conflict management; where conflict resolution is undertaken, external to and independent of the courts.*

What do the following environmental problems all have in common?

- Climate change, a low carbon future and coal-generated energy;
- Management of global atmospheric CO₂ levels: Measuring natural source and sink processes to unravel CO₂ fluxes;
- Fire-fighting foam (“PFAS”) and public health;
- Major mining development proposals and sustainable water management of both surface and groundwater systems;
- Tree clearing and biodiversity;
- Bush fires, fuel load and hazard reduction burns;
- Remediation of contaminated land and groundwater;
- Mathematical (predictive) modelling of environmental risks for ecological health and human health...

A key unifying feature for all these problems: The significant role information has as the primary source of conflict for environmental disputes.

Information conflict fuels ***divergent scientific opinion*** which may polarise, rather than facilitate public debate.

Information conflict arises because of a lack of information, misinformation, scientific uncertainty, different interpretations of the same information or different opinions as to what information is relevant.

The absence of a generally accepted research methodology – or standard

protocols - to provide the framework for a research study, adds a further element for information conflicts.

A further unifying feature of environmental disputes is that they are all classic problems for sustainability. Finding sustainable solutions adds a layer of complexity for conflict resolution when the environment is in dispute.

This article sets out how **conflict management** can resolve conflicts over scientific information – and, in turn, providing the foundation for the parties to share scientific knowledge equally in the final stage - conflict resolution.

Principles and concepts from *Conflict Management* and *Alternative Dispute Resolution* (“ADR”) processes are applied to provide a foundation for the *Scientific Round-Table*.

The Objectives of the Scientific Round-Table

The **first objective** requires a full and fair disclosure of all relevant and reliable scientific and technical information for the issues in conflict - known to be published - be made available through information exchange. This is a precondition before commencing the second objective.

What is the rationale for this objective? It is to ensure that all fact-finding can be undertaken without any fear of “*cards being held under the table*”!

Where conflict resolution is undertaken independently of legal action, there will be no formal process of “**Discovery**” – as is the case for litigation. Information exchange between all parties in legal proceedings is under strict judicial control. The trial does not commence until all Discovery is completed.

The absence of a formal Discovery process is a limitation for conflict resolution when undertaken independently of a legal action. But, it can be offset for conflict management by the process of **data (or information) mediation**.

The **second objective** of conflict management is for scientific experts to reach agreement, by consensus, on disputed scientific and technical issues.

Data Mediation and Fact-Finding

The entire process of **conflict management** is convened by an independent dispute resolver having scientific expertise in the subject matter of the conflict - as well as having ADR process skills.

(i) Data Mediation at the Round-Table

The representatives at the scientific round-table are a panel of scientific professionals, having expertise in the subject matter of the conflict. Each scientific professional is nominated by each competing interest group involved in the conflict as their representative at the round-table.

The dispute resolver and the scientific panel all have a role in identifying information that needs to be the subject of information exchange.

The environmental issues that have been identified and ranked in order of priority in the *conflict assessment*¹ process become the foundation for information exchange at the data mediation.

Each scientific panel member may identify any relevant materials that need to be the subject of information exchange.

The dispute resolver may also identify materials to complement the list compiled by the scientific panel.

A list of scientific materials *e.g. published articles, reports, experimental studies*, is compiled at the scientific round-table to address the environmental issues that have been identified. The final list of materials becomes the common database used in the next step – collaborative joint fact-finding at the scientific round-table.

(ii) Fact-finding at the Round-Table

The round-table commences with the scientific panel addressing the outcomes of the conflict assessment process that precedes; in particular, the issues in dispute and issues where common ground exists.

The goal of the scientific panel is to reach agreement, by consensus, for each environmental issue from the information database in which divergent scientific opinion exists.

The scientific round-table adopts a **joint fact-finding approach** for evaluating the scientific issues in dispute.

Joint fact-finding at the scientific round-table overcomes the obstacle of polarised scientific opinion arising in the adversarial process and litigation.

To avoid information conflicts arising from different interpretations of the information database, the scientific round-table must adopt an underlying

element of **principled negotiation**: The evaluation of disputed issues must be based on objective criteria agreed to by the scientific panel.

Understanding the ADR Process of Independent Expert Appraisal

The scientific round-table is based on the ADR process of independent expert appraisal.

- *Independent expert appraisal is an **advisory ADR process**.*
- *Where there is an impasse on any disputed issue between the scientific panel at the round-table, the independent expert may evaluate the disputed issue and provide a non-binding opinion, or non-judgemental advice, to the scientific panel how they might resolve the issue e.g. options for the scientific panel to consider to reach a compromise; and*
- *The framework for the independent expert's non-binding opinion is the information database provided from the data mediation; and, if appropriate, this information may be complemented by additional research undertaken by the independent expert.*

The Scientific Round-Table: Role of the Representatives

At the round-table, each scientific panel member provides an overview of their interpretation of the key scientific and technical issues in dispute.

As the round-table is structured as a joint fact-finding exercise, the scientific panel members cooperatively interact with one another in conferring - or challenging differing perspectives held - on disputed issues.

The dispute resolver may also question the scientific panel.

Where consensus cannot be reached on any issue, the dispute resolver may provide a non-binding opinion to the scientific panel subject to one qualification: To facilitate reaching consensus on the disputed issue in question.

Outcomes from the Scientific Round-Table

A summary of outcomes arising from the joint fact-finding process of the scientific round-table is prepared by the dispute resolver. The summary of outcomes would include:

Agreement by the scientific panel, consistent with the standards and criteria of science, on disputed issues where divergent scientific opinion exists.

Where agreement cannot be reached by the scientific panel 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* – especially where it would lead to speculation in the conclusions; and

Alternative pathways may be suggested to address circumstances where scientific information for a specific issue in dispute is uncertain, incomplete or not available. For example: -

- (i) *Considering applying the precautionary principle and whether there is a need for the precautionary principle to be reflected in any conditions that might be imposed.*
- (ii) *Reaching a contingent agreement for the issue – but one that provided the opportunity to review and vary the commitments for the decision made when the available scientific information changed.*
- (iii) *Following on to (ii), recommending the need for further scientific studies where the study could be undertaken, subject to qualifications: -*

“The overall costs of obtaining it are not exorbitant²”, that timelines to complete the study are acceptable and that generally accepted research methodologies to undertake the study exist in the scientific community. The scientific round-table would draft the terms of reference for the proposed study and recommend appropriate scientific experts or organisations who should undertake the study.

(iv) *Where a further scientific study could not be undertaken within the framework of these qualifications, the limitations for environmental decision-making must be addressed.*

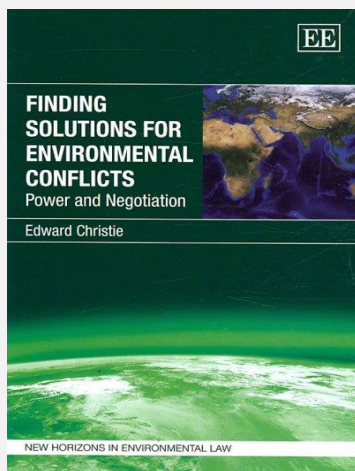
In this situation, the scientific round-table would need to prepare a statement outlining:

The consequences of the omission of this information for effective decision-making on environmental management, monitoring and protection; and

☑ *The consequences of the omission of this information for achieving sustainable solutions.*

Conclusions

1. The summary of outcomes becomes the foundation for the parties to share scientific knowledge equally in the final stage - conflict resolution. Conflict resolution does not commence until the conflict management stage has been completed. *This pathway ensures that there is an adequate basis of knowledge power for all parties to effectively participate in conflict resolution.*
2. Resolving the information conflict through conflict management, not only promotes effective environmental decision-making, but also avoids litigation. *It is the catalyst for achieving meaningful involvement of parties holding competing conservation ~v~ development interests, when the environment and sustainable development are in issue.*



This article is based on Chapter 10 (“*Managing and resolving environmental conflicts by negotiation: NIMBY or NIMBI*”) of the Author’s book, “[Finding Solutions for Environmental Conflicts: Power and Negotiation](#)”

END NOTES

¹ The use of ADR to resolve environmental conflicts moves along the sequential stages of *conflict assessment*, *conflict management* and *conflict resolution*.

For environmental conflicts, *conflict assessment* includes identifying all relevant parties as well as their willingness to negotiate in good faith; and identifying issues in dispute and common ground.

² This phrase is used in [40 Consolidated Federal Legislation 1502.22](#) ‘(Incomplete or unavailable Information)’ of the United States. It applies where this situation arises when an EIS is being prepared.