

**An Interdisciplinary Model
For Environmental Dispute Resolution:
Integration of Science, Law and ADR
Within a Sustainable Development Framework**

Dr Ted Christie, Revised 03 February 2025



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SUMMARY: Environmental dispute resolution should not be seen as the sole province of law - nor as the exclusive domain of science. Rather, there needs to be a more effective integration between science and law, facilitated by the accepted principles and concepts for ADR and effective public participation, within the framework of sustainable development.

The Handbook of Dispute Resolution provides a stimulating analysis on the challenges and opportunities confronting dispute resolution in the 21st century e.g., *the need to resolve multi-party conflicts based on interdisciplinary collaboration and the use of knowledge and resources.*

Addressing this challenge is especially significant for environmental dispute resolution, given that information is a primary source of conflict.

***The model pathway recognizes
that the roles for legal and non-legal environmental professionals
in environmental dispute resolution
as different, but complementary.***

***However, both law and science have shared goals:
To find sustainable solutions for environmental conflicts
through creative problem-solving processes based on ADR,
interest-based negotiation and consensus-building.***

Not all the components shown in Figure 1, necessarily occur in every environmental conflict. A relatively simple conflict, such as an application for a licence for an environmental activity, will impact on a small number of the components. However, this is not always the case!

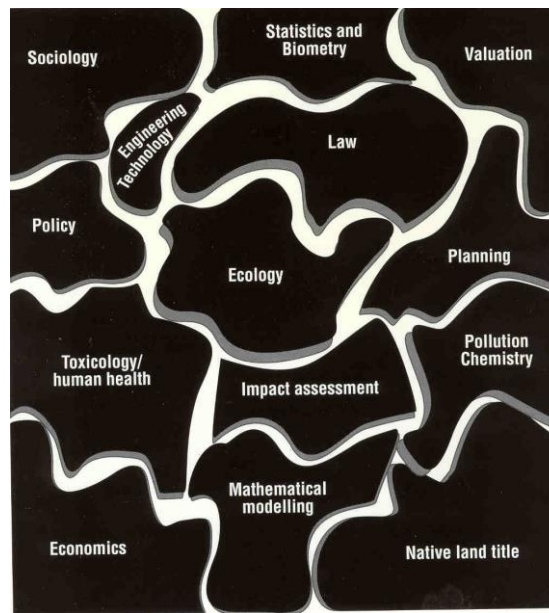


Figure 1: Information needs for resolving environmental conflicts (Christie 2008)

A complex public interest environmental conflict, such as a major development proposal, will require information from a very wide range of professional disciplines.

In addition, a feature of many environmental conflicts is that there may have been only limited research and so a lack of information directly available on the disputed factual issues. In this situation, the information available for resolving the conflict may have to be derived indirectly through expert scientific opinion, rather than from facts acquired directly through experimentation.

*As a result, when the environment is in issue,
conflicts over information arise because of
scientific uncertainty, divergent scientific opinion,
different interpretations of the same information
or different opinions as to what information is relevant.*

Another feature of environmental dispute resolution is multi-party involvement, particularly in public interest environmental conflicts.

Environmental conflicts are also invariably sustainable development problems. [Finding sustainable solutions](#) requires an evaluation and equitable balancing of multiple objectives - *ecological, economic, social and cultural*. This adds to the complexity of the information conflict.

All of these specific features of environmental dispute resolution makes resolving environmental conflicts challenging for ADR.

The Author's model for resolving environmental conflicts through [interdisciplinary collaboration](#) focuses on three sequential stages: *Conflict Assessment* extending to *Conflict Management*, then *Conflict Resolution*.

- *Different ADR processes are used that are specific to the needs for each stage. Flexibility, depending on the stage of the conflict, is a paramount consideration in choosing the appropriate ADR process.*
- *The model pathway achieves interdisciplinary collaboration by linking the appropriate ADR process and knowledge skills required for a dispute resolver to the scope and content of each stage.*

Stage 1: Conflict Assessment ~ Facilitative Mediation

Given that an environmental conflict will involve complex and numerous scientific facts, the dispute resolver needs to have both ADR process skills and expertise in the scientific subject matter of the conflict.

The outcomes of the conflict assessment stage include: -

- *the scoping and identification of issues in dispute and their potential adverse environmental impacts; and for finding common ground on factual issues.*
- *The identification of all relevant parties and to ensure an adequate representation of affected interests; as well as their willingness on the need to negotiate in good faith.*
- *Whether the parties have "an adequate basis of power to participate effectively in the conflict" to work towards a resolution.*

Stage 2: Conflict Management ~ Independent Expert Appraisal: [The Scientific Round-Table](#)

The scientific round-table is based on the ADR process of *Independent Expert Appraisal*. The only issues addressed at the scientific round-table are factual issues in which information conflicts exist.

The dispute resolver must have ADR process skills as well as expertise in the scientific subject matter of the conflict.

The parties at the scientific round-table will be scientific experts, nominated by each specific interest group, to act for and to represent them.

The purpose of the scientific round-table is for the scientific experts to reach agreement, by consensus, on each disputed factual issue identified at the Conflict Assessment stage.

The summary of outcomes from the Scientific Round-Table would include:-

- *Conclusions on disputed issues where agreement is consistent with all relevant and reliable scientific data and/or scientific opinion;*
- *Where agreement cannot be reached by the experts 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 a lack of information, must be identified — especially where it would lead to conclusions being seen as speculation; and*
- *A number of alternative pathways may be suggested where the available scientific information associated with a specific issue in dispute is either uncertain or missing.*

Stage 3: Conflict Resolution ~ Evaluative Mediation: Round Table Negotiations

The final stage is a collaborative process of joint problem-solving involving the representative of each relevant party identified at the Conflict Assessment stage. Factual issues are not in dispute, as this stage has its foundation in the scientific round-table outcomes.

Where the negotiated agreement needs to take into account legislative obligations, the dispute resolver must have subject matter expertise in the law as well as ADR process skills.

The joint problem-solving approach to conflict resolution is structured on fundamental elements of *Principled Negotiation*:

- *Interest-based negotiation; and*
- *Creating a number of options for mutual gain.*
- *Agreement on the objective criteria to use for resolving factual issues in dispute.*

The interest-based approach to negotiation in multi-party environmental conflicts requires agreement to be reached by consensus.

CONCLUSION

The outcome of the round-table negotiations is to reach consensual agreement on whether approval should be given for a proposed action or activity that may have potential adverse environmental impacts.

The negotiated outcome should resonate with the goals of conflict resolution, including: -

- i. Finding a creative solution that is amongst the best of the available options, and which secures as much available value as possible.*
- ii. A solution from which all parties can emerge with some sense of gain and certainly with the knowledge that their views have properly been taken into account by the ultimate decision.*
- iii. A commitment that is firm, can be implemented and is sustainable.*
- iv. A process that preserves or enhances the relationships between the parties.*

TEXT SOURCE:

[Finding Solutions for Environmental Conflicts: Power and Negotiation \(2008\)](#)

Chapter 10, pp. 263-94: *Managing and Resolving Environmental Conflicts by Negotiation: NIMBY or NIMBI?*