

# DEVELOPING MECHANISMS FOR RESOLVING WATER DISPUTES

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## Abstract

The objectives of this paper are, Part 1, to analyse recent Australian conflict arising from water reform and what, if any, dispute resolution mechanisms were used; Part 2, to compare the range of conflict resolution mechanisms used in water disputes overseas with specific intra-state, national and transboundary case-studies; Part 3, to discuss the legal, social and political limitations of these mechanisms. This paper observes that that resolution processes are still not being seriously considered by policy makers and that this omission needs to be addressed.

## Introduction

Cooperation and conflict are two characteristics of water resource management. In the mid 1990s State and Commonwealth governments at a series of Council of Australian Government (COAG) meetings adopted the Water Reform Framework in order to address the widespread natural resource degradation. Efficiency and sustainability were objectives of the reform. A year after the COAG meetings, the States accepted a report which amongst other principles, endorse that where environmental water requirements could not be met due to existing uses, action (including reallocation) should be taken to meet environmental needs (ARMCANZ 1999).

While there has been outstanding co-operation between Federal and State governments over water policy reform, it has not been a feature of the implementation of the reform on the ground. This is not surprising given the scale and pace of the reform. After all, what was proposed would deliver radical change to entrenched perceptions of rights of access to water in rural Australia. These rights were poorly defined and with escalating demand, impossible to manage effectively.

Conflict has arisen over numerous issues including environmental flows, water pricing, and third party effects of water transfers. In at least two states, Victoria and NSW, parties have resorted to litigation. Litigation is expensive, divides regional communities, and delays nationally important reforms. In general, mediation, when used properly, is said to produce fairer outcomes, more efficient results, more stable political commitments, and wiser use of the best scientific and technical information available (Adler 2000). It has also been found to promote continuity of working relationships, something which is vital for watershed management (Napier 1998, McKinney and Harmon 2004). A comprehensive regime of resolution processes should have been adopted as part of the implementation of the water reform framework.

## Clarification of Terms

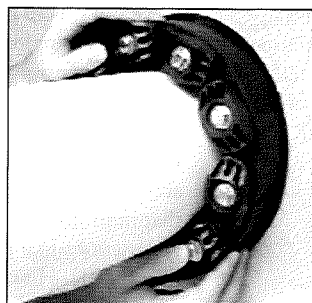
Environmental dispute resolution (EDR) has been practiced elsewhere for over 20 years. Its import into Australia has been slow although alternative dispute resolution (ADR) has been used widely in private law matters. Firstly terms need to be clarified. ADR is a broad term that encompasses all forms of dispute resolution other than court-based adjudication. Whereas ADR refers mostly to private disputes where the parties are individuals or

private entities, environmental disputes involve public issues. Private individuals or entities may also be involved, but several public entities are likely also to be parties. By definition, EDR disputes are over environmental quality or natural resource management involving multiple parties and complex issues.

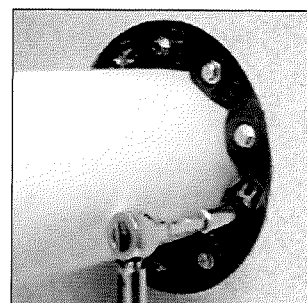
While some of the literature refers to 'conflict' resolution, others refer to 'dispute' resolution. Generally 'conflict' refers to a long-term underlying disagreement whereas 'dispute' refers to individual episodes within such long-running conflict. Because much conflict cannot be resolved, 'conflict management' is used to make the conflict less destructive: resulting in goals being clarified, communication improved, and facts sought and clarified, and procedures improved. 'Dispute resolution' refers to negotiated or arbitrated outcome of a dispute, and includes other mechanisms, for example arbitration, mediation, med-arb (a combination of mediation and arbitration), private judging, neutral expert fact finding, mini-trials and summary jury trials.

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## Part 1: Recent Australian conflict from water reform and what, if any, dispute resolution mechanisms were used

Most commentators state that there are two main sources of conflict over water. Firstly, scarcity through over-allocation (in some catchments allocations to water exceed the 'usual' volume of water available in the stream or aquifer), and secondly, over the requirements of the environment. Specific *disputes* may arise over:

- quality of the resource;
- other public interests such as economic issues, water pricing;
- confusion over facts and conflicting interpretation of complex scientific information; and
- Indigenous claims and current uses.

EDR did take place in water matters in the 1980s. Efforts can be summed up thus - informal negotiation, ministerial review and intervention, multi-player workshops, putting out discussion papers to the public, but much of it occurred on an ad-hoc basis in 'matey meetings and casual chat'. (Day, 1990). An overview of the mechanisms for conflict resolution in water management and planning in Australia occurred in the 1990s by a group of Australian and Canadian academics. Literature which emanated from a workshop held by this group suggested that there are four main mechanisms for resolving disputes: political, judicial, administrative, and through the market. When considering the significance of market mechanisms proposed to be adopted in water management the group noted 'it is important to realise that the market mechanisms raise a new agenda for conflict; they do not necessarily solve it. (Dorcey, 1991).

This same group of academics pointed out that there has been limited explicit use of negotiation and mediation techniques in the water field. At around that time training workshops were run by visiting experts from the US, but measures were sporadic. Since that time training and experimental development of techniques in this field with specific application to water management have been very limited, with little serious research or literature on the subject.

In relation to judicial dispute resolution, cases reached the High Court, with arguments involving mainly constitutional law in the Tasmanian Dams case, matters involving the application of the common law of riparian rights, and statutory interpretation of relevant legislation. Many of the disputes related to the building of

dams or levees. This is consistent over all states with examples relating to hydro-electric dams in Tasmania, the Warragamba Dam in New South Wales, levees in NSW and SE Queensland. In the past few years there has been litigation over legislation regulating farm dams in Victoria while in Queensland there was successful court action to ensure that the Environmental Protection and *Biodiversity Conservation Act 1999* (Cth) was complied with in the building of a new dam (McGrath 2004).

Currently disputes occur with water planning when tensions arise over the process and the adequacy of public consultation, the reliability of data and scientific evidence, the amount of water reallocated from consumptive use to ecosystem needs, and the lack of compensation when access to water by existing users is diminished.

Two cases decided in 2005 by the NSW Court of Appeal upheld the water planning in that state, specifically the Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources and that for the Gwydir Regulated River Water Source. These matters reached the courts through the judicial review process which means that decisions have to be based on administrative law issues relating to matters of process. Under the judicial review process it is not possible for the courts to decide on matters of merit (or substance). While the plans have been held as legally valid, matters of substance will probably still provide reason for discontent, if so, with continuing conflict.

In some instances **public participation** in Australian processes has operated as an EDR mechanism and has been somewhat successful in resolving disputes and preventing them from reaching the courts. Take for example the Victorian conversion of existing entitlements to the Bulk Entitlement regime in the Murray in the late 1990s. Irrigators in the First Mildura Irrigation Trust who intended to take court action to protect their interests perceived that their interests had been met through negotiations in a conversion committee (Tan 2001). However public participation does not always head off litigation. Currently Northern Victorian irrigators are contemplating a compensation claim against the Victorian government over terms of converting 'sales' water to a medium security water entitlement.

Public participation in water resources management has not been expressly aimed at conflict management. If it were, perhaps more of the knowledge available in the US regarding consensus building, conflict

assessment, and negotiated rule-making would have been sought and applied where relevant.

After the planning process there are at least three instances where conflict may arise:

- *Management of environmental flows*

With one of the main objectives of reform being the sustainable management of water, new environmental rights to water have been created. The management of environmental flows may prove contentious as concerns have been raised that perceived environmental benefits may not be delivered.

- *Water transfers*

While it may resolve some disputes, for example that of newcomers wanting access to water, the market may prove to be added reason for tensions to occur (Bond and Farrier, 1996). With the ability to transfer water and a growing water market, there are concerns that transfer of water out of a community could have wide social and ecological impacts, eg. where a reduced number of irrigators have to bear an increased burden of maintaining infrastructure. Some of these concerns have been addressed by adoption of procedures. For example in most states transfers within irrigation districts have limited restrictions. Provided they comply with regulations these transfers are not subject to scrutiny. Those that do not comply, or result in water leaving the district or state, are then subject to public notice requirements and a much higher level of scrutiny.

- *Further reallocation when water allocation plans are revisited*

In most states water allocation plans have a life of ten years whereupon a fresh planning process is started. At this point in time reallocation of water may occur, and in catchments where ecosystems are degraded, more water may be allocated for environmental flows. This is again highly contentious.

In Queensland a 'new' statutory mechanism has been developed for resolution of grievances arising from conversion of licences under the previous regime to tradable water allocations. This is a mechanism adapted from an anomalies committee used in NSW around 1977 when licensees had volumetric limits attached to their water licences. Section 1004, *Water Act 2000* (Qld) provides for the establishment of a **referral panel** to advise the Chief Executive on these matters and its recommendations are not binding. The panel comprises at least 3 individuals drawn from a pool which has relevant expertise or a community background in

water matters. It is provided with technical and administrative help. The panel plays an important albeit limited role in resolving disputes. It is cost effective for water users with a grievance, and has the aim of providing an unbiased review of the implementation of the conversion exercise. However the advice from the referral panel is not made available to the complainant and decisions of the Chief Executive are not able to be challenged on substantive grounds. This mechanism supports administrative resolution of a small range of disputes.

Innovative regulations adopted in March 2004 by the NSW Land and Environmental Court may also be helpful if extended and adapted to resolve water disputes (McClellan, 2005). The new rules relate to the appointment of a single 'Court expert' and the giving of 'concurrent evidence' by all the experts in relation to a particular topic. The first mechanism involves a **single expert** being appointed by the court where it is satisfied that the integrity of the decision will benefit or that there may be savings to cost. The expert's duty is to the court and not to any of the parties. It is seen to produce a better quality of evidence and avoid the adversarial treatment that ordinarily applies to all evidence. Parties generally agree on the specific expert appointed, and if there is disagreement, the court steps in. The expert's fee is agreed upon by the parties who are jointly responsible for its payment.

Where multiple experts are retained, the mechanism of **concurrent evidence** is used. All experts giving evidence on a particular matter in court are assembled to do so at the same time. In effect they constitute a panel and engage in a structured discussion which highlights points of agreement or disagreement and is designed to inform the judge hearing a matter.

Other mechanisms outlined below may also prove helpful.

## Part 2. Conflict resolution mechanisms used in water disputes overseas

### Resolution of water conflict in the United States of America

Litigation over water disputes in the US has occurred over Indian water rights, inter-state water rights, quality issues and water transfers. After a study of key cases, one commentator considers that besides litigation, parties need to pursue several different methods of conflict resolution or problem solving to reach their goals (Arnold, 2002). In the US conflict and dispute resolution by federal agencies are

encouraged by key pieces of federal legislation thus contributing to the growth of EDR.

Which type of EDR mechanism and what sort of processes should be adopted very much depends on the specific dispute (Susskind et al, 1999). The US literature suggests that disputes fall into three broad categories. 'Upstream' disputes involve planning or policymaking. 'Midstream' disputes involve administrative permitting. 'Downstream' disputes involve compliance and enforcement.

However where disputes relate to water transfers, they may cut across all of these categories because the issues relate to policy, new permits or licences and also enforcement of legislation. Water transfers in California have led to protracted conflict. Local governments and environmental organisations often had to undertake one round of major litigation before state government, and the buyer and seller were willing to negotiate 'area of origin' concerns.

**Collaborative watershed initiatives** have been adopted in many catchments to manage upstream disputes. For mid-stream and downstream disputes, **mediation** is often used. State agency administrative mediation and court annexed environmental mediation have been used in Florida and Oregon. Arbitration and med-arb are seldom used in water dispute matters. It is beyond the scope of this report to analyse mechanisms in detail, but two examples stand out - **joint fact finding**, and the **amalgam of mechanisms** adopted by the US Federal Energy Regulatory Commission.

Joint fact finding (JFF) has been used with some success since the early 1990s in the US. (McCreary et al, 2001). JFF relies on interested parties pooling information, meeting in face-to face dialogues with technical experts, decisions makers and other parties, translating technical information so that it is understood by parties, mapping areas of scientific agreement or uncertainty, and recording results in a single text document. To some extent this is carried out in Australia when technical advisory panels are convened and consultation meetings and information exchanges are arranged between the panel and stakeholders. However these meetings and exchanges often take place when the experts have drawn up a draft report, and stakeholders seldom have the opportunity to help to draw up the terms of reference or give information during the fact finding process. Distrust of the scientific experts' reports may delay or derail processes.



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When JFF pinpoints specific areas of uncertainty a jointly appointed expert may be asked to furnish an opinion which would then gain acceptance. There is an instance in Australia where this was carried out but it appears to be the exception rather than the norm (Tan, 2001).

The next example refers to processes within Federal Energy Regulatory Commission (FERC). JFF and other collaborative processes are well established in FERC which amongst other matters regulates both the construction and operational phase of a hydropower project. Issuance of licenses for the continuance of an existing hydro project (relicensing) is an important aspect of FERC's portfolio, involving multiple parties and complex questions.

Early FERC relicensing process was 'traditional' in the sense that the hydropower applicant developed and filed a study plan, supporting the application with limited stakeholder input but no FERC involvement. A study plan is a critical document which gives information on the project operations and effect on resources, explains the nexus between operations and effects, and how the applicant, in accordance with generally acted practice in the scientific community and with consideration of relevant tribal knowledge and values, proposes to deal with effects.

After a transitional 2 year period where an applicant may choose between several licensing processes, the Integrated Licensing Process (ILP) has become the default process on July 23, 2005. It includes an **environmental scoping process** to facilitate early issue identification for the making of the study plan. Pre-filing consultation with stakeholders is increased, with assistance from FERC staff. Meetings are held and **informal dispute resolution** is available to all participants which results in a revised study plan. If further disputes regarding the revised study plan arise between a federal or state agency, or Indian Tribe, **formal dispute resolution** occurs. A dispute resolution panel consists of:

- an Office of Energy Projects officer not otherwise involved in the proceeding;
- a person nominated by the agency or Tribe (if more than one agency or Tribe is involved then these parties jointly select one nominee); and
- a third person, selected by the other two panelists, from a list of persons with expertise in the matter.

Prior to engaging in deliberative meetings, the panel holds a **technical conference**, open to all participants, for the purpose of clarifying the matters in dispute. Then the panel issues findings and

recommendations. The Director of the Office of Energy Projects reviews and considers the recommendations and issues a written and final determination. If the panel's recommendations are rejected, the Director must explain why.

Although the specific process will not be directly applicable to Australian water disputes, the idea of a well considered process made known in advance to all participants will surely find resonance with members of the community who have been involved with public participation processes in water resource planning. The initial environmental scoping process to facilitate early issue identification *before* technical studies are done is one that should be explored. That and the fact that these dispute resolution processes both formal and informal are embedded within the process are take-home lessons for us. FERC studies have shown that a trial of the process has been found to work well cutting down litigation and the length of time taken to finalise the re-licensing of the hydropower station.

## Resolution of transboundary conflict under International Law

There are many sources of international law including negotiated agreements between sovereign countries. In relation to transboundary water conflicts, these agreements exist in addition to non-binding documents, action plans strategies etc. Many negotiated agreements contain dispute resolution provisions that mostly refer to the International Court of Justice, but there are few examples where referral has actually occurred. In the few cases where adjudications have taken place, years pass before an award is made. Duda and La Roche (1997) refer to the appropriateness of joint river commissions in resolving disputes. In particular, they refer to JFF by the International Joint Commission formed by US and Canada, and a similar process for establishing a strategic action program for international water projects under the Global Environmental Facility.

Another source of international law is the 1997 Convention on the Law of the Non-Navigational Uses of International Watercourses which has been adopted by the United Nations General Assembly. The Convention adopts a staged approach for the avoidance and resolution of disputes. Article 33 provides that parties should first conduct negotiations. Decisions of the International Court of Justice have said that there is an obligation for parties to act in a meaningful manner, not to insist upon one's own position without contemplating any modification of it. If negotiations fail, then parties may seek to settle differences in

a non-binding way through a third party or through any applicable joint institution that they may have set up. Alternatively the matter may be sent for binding arbitration or to the International Court of Justice.

Compulsory fact finding is resorted to if the parties fail to resolve differences. After 6 months from the time negotiations have been requested, the dispute 'shall be submitted, at the request of any of the parties to the dispute, to impartial fact-finding.

## Part 3: Legal, social and political considerations

Strong political and policy commitment followed by legal requirements, capacity building and financial support are needed for development of EDR processes.

### Social, political and agency commitment:

Voluntary consensus-based resolution models have traditionally been used in many Asian and African societies for resolving conflict. Its acceptance into US has been gradual and is seen as preferable to litigation. In Europe, rather than avoiding litigation, EDR is seen to produce agreements that better satisfy the interests of parties. US Federal agencies have committed strongly to EDR processes (O'Leary and Raine, 2003). For example the Federal Aviation Administration, the Department of Transport, the EPA used negotiated rulemaking (reg-neg) since the 1980s and seventeen agencies have produced at least one reg-neg. In particular since 2000 the EPA has committed to increase the use of dispute resolution techniques and practices across all agency programs.

**Legal requirements:** Several laws have been enacted to better implement ADR. After experimentation with reg-neg, Congress enacted the Negotiated Rulemaking Act 1990 (NRA) which was reauthorised as the Administrative Dispute Resolution Act 1996.

**Capacity building within institutions:** A report into the practice of dispute resolution at the US EPA noted that there was strong support for EDR from top management but a need to educate middle management, a need to consistent quality amongst mediators, and a need to integrate dispute resolution as part of the dominant culture of the agency.

**Financial support.** During the 1970s and early 1980s, many public dispute resolution services were offered at little or no cost to disputants by foundation sponsored, non-profit private or university-based institutions. Experiments in EDR were funded by the Ford Foundation who also sponsored numerous institutes for dispute



resolution. The Hewlett Foundation over 10 years funded millions of research into building the theory of conflict resolution. The US Institute for Environmental Conflict Resolution which provides services in relation to federal matters or agencies is funded by the Morris K Udall Foundation established in 1992 by the US Congress.

## Conclusion

This article sets out to raise issues for consideration in policy-making, not give the definitive view on EDR on water matters. Litigation and arbitration are important mechanisms both under national and international law for dispute resolution particularly where parties are in dispute over their rights. Seldom do these mechanisms provide a complete resolution of tensions over water. While tensions will always exist because water is scarce and humans place different values on it, EDR is seen to provide more lasting solutions in disputes. I have presented only a few of the numerous examples of mechanisms used in conflict resolution in the US and at international law.

EDR principles, if embedded within the public participation processes that lead to water sharing plans, should be helpful in preventing conflict. For example decision-making in major water transfers and the management of environmental flows are heavily dependent on a large amount of scientific evidence, with often differing views of facts and important issues. This is precisely the scenario where EDR has been found to be most useful. My initial findings are that JFF could play a role in an early scoping process to pinpoint specific areas of uncertainty before positions by parties get entrenched. In addition the appointment of a single expert (agreeable to all parties) should be explored. If further dispute occurs then a formal dispute resolution process may occur with a panel appointed. An adapted form of FERC's integrated licensing process should be considered. JFF and appointment of single experts are also mechanisms which could be trialed where conflict has occurred. These are but two in a whole range of mechanisms which need to be explored.

In the early 1990s it was pointed out that there is a need for experimental development of negotiation and mediation techniques along with associated conflict resolution mechanisms. Results of experimentation should then be fed into the policy development and implementation. There has been little evidence that this has been done, and given the pace and scale of water reform the need for research in this area is all the more urgent.

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