United Nations Regional Centre for Preventive Diplomacy for Central Asia

BEST PRACTICES AND INTERNATIONAL EXPERIENCE WITH TRANSBOUNDARY WATER DISPUTE RESOLUTION

Final Report

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1 PREFACE

This report documents the results of an applied research and capacity building initiative undertaken by the United Nations Regional Centre for Preventive Diplomacy for Central Asia in the fall of 2010. The research team included Andrea Menaker and Lauren Mandell whose time was generously donated by the international law firm of White and Case, Richard Paisley from the University of British Columbia and Alex Grzybowski from the UNDPA Mediation Support Unit, Mediation Standby Team. The initiative focused on the international best practices for trans-boundary water dispute resolution. These practices were presented to representatives of Kazakhstan, Kyrgyzstan, Tajikistan and Turkmenistan, as well as numerous international agencies in an experiential learning workshop held in December 2010 in Almaty, Kazakhstan.

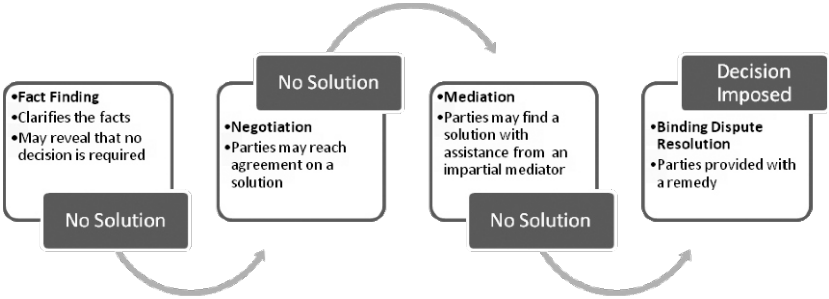
This report is relevant to the development and implementation of trans-boundary water agreements anywhere in the world and will hopefully be of some assistance to those parties that are endeavoring to make those agreements more valuable to all concerned. International recognition of the substantive content delivered in this workshop and documented in this report is reflected by the fact that the majority of this report has been incorporated into the 2011 synthesis report of the recently completed UNDP-GEF International Waters Project, which documents international best practices in trans-boundary water governance based on an exhaustive survey of practices around the world.

2 EXECUTIVE SUMMARY

Systematic and effective dispute resolution mechanisms fulfill a number of key objectives:

1. They reinforce proactive problem solving and dispute prevention;
2. They deliver a remedy based on the facts;
3. They resolve disputes and utilize the human and financial resources of basin states as efficiently as possible;
4. They reduce the risks associated with joint management and investment and expand the potential for mutual gain.

Dispute resolution mechanisms are best structured as a sequence of progressively more intensive steps, each of which contributes to achieving these underlying objectives. Four of the most important elements to consider including within a mechanism are the following: procedures to clarify the facts, negotiation, mediation and binding dispute resolution (including binding arbitration and adjudication). These elements are mutually reinforcing. Clarification of the facts is needed to determine the scope of the actual dispute. It is essential to negotiation, mediation and binding dispute resolution and separates misunderstanding and rumor from the realities of the situation. Both negotiation and mediation provide the disputing parties with the opportunity to design a solution that optimizes their interests rather than having a solution imposed through binding dispute resolution. Alternatively, the prospect of binding dispute resolution and mediation reinforces the incentive to negotiate a solution. Binding dispute resolution provides a guarantee to all parties that there will be a resolution to a dispute.



Each of the elements outlined above contributes to resolving disputes in a different manner. Each has strengths and weaknesses. When they are combined in a systematic manner, the weaknesses of the individual elements are addressed and the strengths are combined to create an effective dispute resolution mechanism.

FACT FINDING

Fact finding procedures are a well-known step in dispute resolution mechanisms for trans-boundary water resource agreements. For example, the 1997 UN Watercourses Convention includes a binding commitment to establish a Fact Finding Commission to investigate a dispute between parties to the Convention. In the event that the parties to the dispute are unable to agree on the composition of a Fact Finding Commission to investigate a dispute, the Secretary-General of the United Nations is empowered to decide on the composition of the Commission. Kazakhstan and Uzbekistan are amongst the countries that have ratified this Convention. Prior to agreeing on the Columbia River Treaty, Canada and the US were in conflict over the construction of infrastructure on the Columbia River. The International Joint Commission (established to resolve boundary water disputes) undertook a fact finding initiative, which developed information that was instrumental to the negotiation of the Columbia Treaty.

NEGOTIATION

Negotiation is likely the most common provision in the dispute resolution mechanisms found in trans-boundary water agreements. It commits the parties to attempt to resolve disputes by agreement. On its own however, a commitment to negotiation does not provide any certainty to the parties that disputes will be resolved, because in the absence of agreement there is no resolution imposed and the dispute will persist. When this occurs, it undermines the confidence of the parties and may cause them to withdraw their commitments, undermining the agreement as a whole. Negotiation is the primary vehicle that is used to develop trans-boundary water agreements at the outset and to make decisions regarding implementation of these agreements. For example, after negotiating the 1995 Mekong Treaty and establishing the Mekong Commission and Secretariat, the parties to the Treaty set up negotiating bodies to decide on procedures for the following purposes: data and information exchange and sharing, water use monitoring, notification, prior consultation and consent and for maintenance of flows on the mainstream. The agreements for the Aral Sea basin and for the Syr Darya and Amu Darya have all been developed through negotiation as was the Columbia Treaty, which establishes a lucrative economic arrangement between Canada and the United States. A key difference among these agreements is the nature of the dispute resolution provisions in the agreements. The Central Asia Agreements include a commitment to negotiate resolutions to disputes with voluntary reference to arbitration in at least one agreement. The Columbia Treaty, like the Indus River Treaty between India and Pakistan, includes a dispute resolution provision that culminates in binding arbitration that can be triggered by either party, which ensures that disputes will be resolved.

MEDIATION

Mediation is negotiation that is assisted by an impartial individual or organization that assists the parties in reaching an agreement. Mediators are not empowered to resolve the dispute. By working with the parties inde-

pendently and together, mediators are able to help the parties identify and evaluate potential solutions. Where parties have difficulty working together or they need assistance in developing and exploring potential solutions, mediators may propose ideas for consideration. These proposals may be presented to the parties collectively or shuttled back and forth between the parties, identifying what would need to be addressed in order to secure agreement. Alternatively, mediators may shuttle proposals and counter-proposals between parties. Mediation is often included as an optional step in dispute resolution provisions in trans-boundary water agreements and it has been instrumental in the development of a number of challenging agreements such as the Indus Treaty between Pakistan and India and the 1995 Mekong Agreement between the lower four Mekong States. As with negotiation, mediation does not guarantee an outcome for the parties as the parties must agree on the solution for mediation to deliver.

BINDING DISPUTE RESOLUTION

Binding dispute resolution is often the final stage in the process of dispute resolution. By agreement of the parties, a single decision-maker or a panel of decision-makers hears the parties' arguments, reviews evidence and issues a binding decision that may not be appealed. There are three primary types of binding dispute resolution mechanisms for resolving State-to-State disputes: (1) international courts, such as the International Court of Justice, (2) standing regional courts and tribunals, such as the Southern African Development Community Tribunal and (3) ad hoc arbitration, such as arbitrations administered by the Permanent Court of Arbitration. Each of these mechanisms has advantages and disadvantages, depending on the nature of the dispute and the parties' interests. For example, one mechanism may promise a speedy resolution of the dispute, but may be costly to administer; another mechanism may allow the parties to choose the decision-makers, but may be less predictable and consistent. All three mechanisms have been used to resolve territorial and water disputes. Recently, for instance, the International Court of Justice rendered a decision

in a high-profile dispute between Argentina and Uruguay over Uruguay's construction of industrial facilities on the banks of a river shared by the two States. The Court's decision, holding that the construction did not violate an 1975 Treaty between the States, has been well-received by the States and by the international community.

ENFORCEMENT

The outcomes of negotiation, mediation and binding dispute resolution need to be implemented for the parties to have any confidence in the dispute resolution mechanism. What assures implementation? This varies depending on the means used to resolve the dispute. The underlying guarantees of implementation are the prospect of binding dispute resolution and withdrawal of the benefits associated with cooperation.

Where States are committed to binding dispute resolution, they are obligated under customary international law to comply with the decision. States, nonetheless, may wish to choose a binding dispute resolution mechanism that offers additional incentives for compliance and/or penalties for non-compliance. At the International Court of Justice, parties have a right to bring an enforcement issue to the UN Security Council. At the regional and *ad hoc* level, some States have agreed to give the UN or other neutral third parties a role in enforcement and others have created more novel tools. For example, States have required the parties in arbitration to contribute funds to a security account that will be used to pay a judgment rendered by the tribunal. The Iran-U.S. Claims Tribunal is one such example. States also have tied the benefits of regional associations to which the States belong to compliance with decisions. In the Southern African Development Community, for example, a failure to comply with a tribunal decision will be referred to the policy-making arm of the Community, which may choose to suspend or withdraw the benefits of the delinquent State, including benefits related to regional trade and investment. The 1992 Agreement between Central Asian States included an article (12),

which made reference to developing economic measures for violations against the agreed water regime and limits of use.

CONCLUSION

Fact finding, negotiation, mediation and binding dispute resolution can be combined to create a powerful dispute resolution mechanism that will strengthen trans-boundary water agreements. In addition, the prospect of such a mechanism provides the confidence that parties need in order to seriously consider more substantial commitments and cooperative development initiatives that can yield the potential benefits of cooperation on trans-boundary water management.

There are a number of key principles and best practices associated with these different dispute resolution approaches.

Fact finding should be:

- Jointly sponsored by the parties in order to provide a neutral and impartial process;
- Transparent and participatory;
- Utilized to engage key stakeholders in a meaningful manner;
- Supported by effective peer review.

Negotiations should be conducted on the basis of interests rather than positions and should incorporate information sources that are either mutually supported or developed through effective fact finding.

Mediation should be:

- Conducted by a qualified mediator that has the confidence of all parties and a track record for success;
- Implemented in concert with legal and technical experts to provide a coordinated and efficient process support team.

Binding dispute resolution mechanisms should be designed in a manner that reflects the nature of the co-riparian circumstances, while ensuring the

necessary impartiality and independence of the process. Choices need to be made that address the differing costs, efficiencies and standing of alternate binding dispute resolution arrangements such as regional bodies, ad hoc arbitration and the International Court of Justice.

From a geographical point of view, Central Asian states together with Afghanistan are bound to share the waters of the Aral Sea Basin. Development of a systematic dispute resolution mechanism that includes the elements outlined above will enhance this cooperation and help unlock the significant potential for mutual gain that exists in the region.

3 INTRODUCTION

There are 263 international river basins in the world, which include 50% of the land mass, 60% of the freshwater, 40% of the population and parts or all of 145 countries. The oldest civilizations on earth have been sharing water for 1000s of years. The oldest agreement governing shared water resources dates back to 2500 BC between the city-states of Lagash and Umma on the Tigris River. In modern times, cooperative water sharing arrangements are usually articulated in treaties governed by international law.

In addition to adhering to the key underlying principles of customary international water law – avoidance of significant harm, cooperation and reasonable and equitable utilization - opportunities for mutual gain are a driving force that fosters cooperative water management between basin states. In essence this is the opportunity for basin states to generate more of the benefits associated with water utilization through cooperation than can be generated by acting independently[1]. Unfortunately, basin states do not always have the confidence that commitments will be maintained and/or that joint or coordinated investments will be safe. And as a result, many trans-boundary water agreements do not deliver on the enormous potential gains that can be achieved through cooperation. Many agreements simply restate principles of customary international law in a regional context or articulate commitments that are not fully implemented. One of the key elements that are needed in order to facilitate full implementation of agreements and achieve a greater share of the potential benefits of cooperation is an effective dispute resolution mechanism. Such a mechanism not only increases the confidence of all basin states that com-

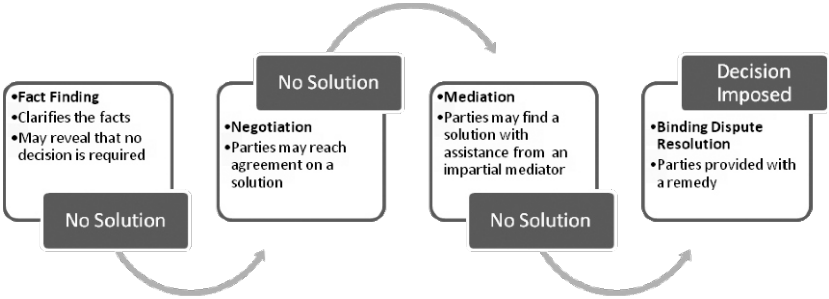
[1] Grzybowski, Alex, Stephen C. McCaffrey and Richard K. Paisley (2010), "Beyond International Water Law: Successfully Negotiating Mutual Gains Agreements for International Watercourses" in *Pacific McGeorge Global Business & Development Law Journal*; Sadoff, C.W. and David Grey (2002), "Beyond the River: the Benefits of Cooperation on International Rivers", 4 *Water Policy* 389.

mitments will be fulfilled; it also provides a more secure foundation for consideration and development of more substantial commitments.

Systematic and effective dispute resolution mechanisms fulfill a number of key objectives:

5. They reinforce proactive problem solving and dispute prevention;
6. They deliver a remedy based on the facts;
7. They resolve disputes and utilize the human and financial resources of basin states as efficiently as possible;
8. They reduce the risks associated with joint management and investment and expand the potential for mutual gain.

Dispute resolution mechanisms are best structured as a sequence of progressively more intensive steps, each of which contributes to achieving these underlying objectives. Four of the most important elements to consider including within a mechanism are the following: procedures to clarify the facts, negotiation, mediation and binding dispute resolution (including binding arbitration and adjudication). These elements are mutually reinforcing. Clarification of the facts is needed to determine the scope of the actual dispute. It is essential to negotiation, mediation and binding dispute resolution and separates misunderstanding and rumor from the realities of the situation. Both negotiation and mediation provide the disputing parties with the opportunity to design a solution that optimizes their interests rather than having a solution imposed through binding dispute resolution. Alternatively, the prospect of binding dispute resolution and mediation reinforces the incentive to negotiate a solution. Binding dispute resolution provides a guarantee to all parties that there will be a resolution to a dispute.



Each of the elements outlined above in figure 1 contributes to resolving disputes in a different manner. Each has strengths and weaknesses. When they are combined in a systematic manner, the weaknesses of the individual elements are addressed and the strengths are combined to create an effective dispute resolution mechanism. The scope of each of these elements, their strengths and weaknesses and some examples where they have been applied are discussed below.

4 GENERAL RULES OF LAW CONCERNING THE USE OF INTERNATIONAL WATERCOURSES

There are several rules of international law of a general and fundamental nature that govern the conduct of states in relation to international watercourses.

The most basic of these are the following requirements:

- A state use an international watercourse in a way that is "equitable and reasonable" vis-à-vis other states sharing the watercourse;
- International watercourse states take "all appropriate measures" to prevent the causing of "significant harm" to co-riparian states;
- The requirement that international watercourse states provide "prior and timely notification" to other international watercourse states concerning any "new use or change in existing uses" of an international watercourse, together with relevant technical information, and that they "consult" with the other international watercourse states.

It is probable that there is also an emerging rule requiring the protection of the ecosystems of international watercourses.

The following paragraphs provide an overview of these general rules and some of their implications.

EQUITABLE UTILIZATION

There is no more fundamental rule of international law concerning the use of international watercourses than that of equitable and reasonable utilization. In its judgment in the *Danube Case* the International Court of Justice referred to the "basic right" of a state to "an equitable and reasonable sharing of the resources of an international watercourse."[2]

This obligation requires each riparian state to ensure, in an ongoing manner, that its use is equitable and reasonable vis-à-vis other riparian states.

[2] International Court of Justice, 1997, p. 54, para. 78.

What is equitable and reasonable in any given case may be determined only by taking into account all relevant factors and circumstances – both natural (ex. climate, hydrography) and human-related (ex. social and economic needs of the riparian states, effects of uses in one state on co-riparians, existing and potential uses).[3]

How States value water is an especially relevant issue for resolving conflicts and negotiating over trans-boundary freshwater resources. The idea of valuation often is at the core of disputes over fresh water resources pitting farmers against municipalities, businesses against environmentalists and those who have fresh water against those who don't.

Furthermore, conditions may change over time producing consequential changes in the weight assigned to given factors. For example, a drought would reduce the available water supply; a population increase would result in greater need for water. Maintaining a regime of utilization that is equitable in relation to other riparian states is therefore necessarily a dynamic process. It requires regular communication between the countries sharing the watercourse – communication regarding data and information relating to the condition of the watercourse (ex. flow and any regulation thereof, pollution, meteorological factors that could influence utilization) and regarding any new projects or changes in existing uses. Many countries sharing international watercourses have found that this kind of systematic communication may be effectively and efficiently accomplished through a joint management mechanism, such as a commission.

Absent such an organization or some other system allowing regular communication, it can be challenging at best to maintain a regime of utilization that is equitable vis-à-vis a state's co-riparians.

EQUITABLE PARTICIPATION

Often a river or other form of watercourse will be used so intensively by co-riparian states that it will be necessary for them to take affirmative

[3] UN Convention, art. 6.

steps, such as construction or maintenance of works or other forms of regulation of the watercourse, to make it possible for other riparians to utilize the shared watercourse equitably. This notion is captured in the concept of "equitable participation", a principle reflected in the UN Convention.[4] In the *Danube Case* the International Court of Justice laid stress on the importance of equitable participation in the "common utilization of shared water resources for the achievement of the several objectives mentioned in the Treaty [in question]".[5]

PREVENTION OF SIGNIFICANT HARM

It is also a fundamental rule of international law that one state should not cause "significant harm" to another. This principle has been recognized in several important decisions in international cases.[6] However, the application of the principle to international watercourses is highly controversial. While it is clear that one state may not intentionally cause harm to another through, for example, flooding or deliberate releases of toxic pollution, there is dispute about whether one state's use that reduces the available supply in another state is prohibited by this norm.

The better view is that the latter situation is governed first and foremost by the principle of equitable utilization: if harm is caused through a pattern of utilization that is otherwise equitable, it should not be prohibited.

Otherwise, for example, a later-developing upstream state would be prevented from developing the portion of an international watercourse in its territory to the extent that such development impaired existing uses in downstream states. This view – that in respect of apportionment the prin-

[4] See art. 5(2) of the UN Convention, setting forth this concept. See also Paisley, Richard Kyle (2002), Adversaries into Partners: International Water Law and Down Stream Benefits in 3 *Melbourne Journal of International Law* 280.

[5] International Court of Justice, 1997, p. 80, para. 147. The objectives referred to included hydropower production, improvement of navigation, protection from floods and protection of water quality and riverine ecosystems.

[6] Chiefly the TrailSmelter, Lake Lanoux and Corfu Channel cases.

ciple of equitable utilization prevails over that of harm prevention if the two come into conflict – would appear to be borne out by the UN Convention.[7]

Moreover, the International Court of Justice in the Danube Case referred only to the principle of equitable utilization when addressing the parties' respective rights to the uses and benefits of the river; the principle of prevention of harm figured only, although importantly, as a constraint on actions that would affect the environment of other states.

Regardless of its relationship to equitable utilization, the duty to prevent significant harm to other states is not absolute; it requires that a country exercise its best efforts[8] to prevent harm. Whether a state has complied with this obligation will thus be, in part, a function of its capability to do so. Presumably, therefore, developing countries would generally have more leeway in this regard than developed countries by virtue of the greater capacity of the latter to prevent harm to co-riparians.

RULES CONCERNING NEW USES

Although it has been controversial in the past, today there is little doubt that customary international law requires a state planning a new use to provide notice thereof to other states that the use might adversely affect.

This rule applies to all projects that have the potential to change the regime of the watercourse in a way that would be prejudicial to other riparian states. In its classical conception it applies to projects (including both new uses and changes in existing uses) that may have adverse factual impacts upon other states. More recently it has been recognized that adverse legal effects should also be covered by the rule. Thus, for example, a planned project in a downstream state might, when implemented, make it impossible for an upstream state to implement a project of its own without

[7] See art. 7 of the UN Convention, especially para. 2 of that article.

[8] Article 7 of the UN Convention requires states to "take all appropriate measures" to prevent harm to other states.

running the risk that its project would result in its overall utilization being considered inequitable. Because of this possibility, notification should be provided to co-riparian states of all planned projects of significance, even if they do not have the potential for causing adverse factual effects in those states.

Once notification has been provided, the state in which the project is planned has a duty to consult with the potentially affected state or states. The planning and potentially affected states are expected to arrive at an equitable resolution of any differences between them with regard to the project.

RULES CONCERNING POLLUTION

The UN Convention provides that states sharing an international watercourse have an obligation to protect and preserve the watercourse's ecosystems. While this obligation is not tied to harm to other states, it seems unlikely that a co-riparian would assert a violation unless it had suffered some harm. More specifically, states are required to prevent, reduce and control pollution that may cause significant harm to co-riparians. Like the obligation to prevent significant harm, this duty is one of due diligence.

LINKS WITH WORLD BANK PROCEDURES

There are at least three key World Bank documents that are relevant to the law of international watercourses:

- Bank Operational Policies (OP 7.50): Projects on International Waterways.
- Bank Procedures (BP 7.50): Projects on International Waterways.
- Bank Good Practices (GP 7.50): Projects on International Waterways.

These documents indicate Bank policy and set forth procedures to be followed in respect of projects on international watercourses.

The documents essentially provide that:

- International water rights issues should be assessed as early as possible in project identification;
- The Bank advises the state proposing the project that it should formally notify the other states sharing the watercourse of the proposed project, including project details, if it has not already done so. (BP 7.50, paras. 1 and 2).

The information provided should be sufficient to enable the other states to determine whether the proposed project has potential for causing appreciable harm through water deprivation or pollution or otherwise.

If other states object, the Bank assesses the objection and decides whether and how to proceed. The opinion of independent experts may be sought if needed.

These procedures are generally consistent with the law of international watercourses.

5 FACT FINDING

SUMMARY

Fact finding, including data and information sharing and exchange procedures, is a well-known and important step in dispute resolution mechanisms for trans-boundary water resource agreements.

Fact finding is a process to help stakeholders build a shared understanding of technical and scientific issues and their implications for policy.

Fact finding processes, which are jointly convened and implemented and where terms of reference are collaboratively developed and experts are jointly identified, increase the potential for shared understanding and reduce the potential for disputes over the facts.

Fact finding can also help resolve disputes about scientific and technical methods, data, findings and interpretations.

The legal basis for fact finding is found in both codified and customary international law, e.g. the Helsinki Rules, the 1997 UN Watercourses Convention, customary international law as reflected in various case studies such as the Nile, Mekong and Columbia international drainage basins and the World Bank Rules OP 7.50 and BP 7.50.

Fact finding usually appears to work best when it is: Transparent, Neutral, Participatory and Peer Reviewed.

ANALYSIS

If you can't measure it you can't manage it.[9]

"Fact finding" including data and information sharing and exchange are usually critically important in the good governance of international waters.

[9] This ubiquitous quote is ascribed to various sources, including Peter Drucker, as found at http://blog.marketculture.com/2009/03/20/if-you-cant-measure-it-you-cant-manage-it-peter-drucker/

Access to data and information is often governed by written agreements, which usually recognize different classes of users and the sensitivity of data and information. In the case of international waters, agreements are usually needed on data and information exchange or sharing to define the terms (or modalities) under which access can be granted and to whom. Data and information can be reciprocally transferred between parties or can be collected, processed and compiled in a systematic manner and made accessible for all parties involved.

A classification of development phases introduced by Burton et al (2005) is used here to illustrate how, in the case of international drainage basins, information and data needs evolve with growing development and, thus, usually require an increased allocation of resources. According to this classification, international drainage basins can fall in any of three phases: development, utilization and reallocation.

International drainage basins are said to be in a *development phase* if the amount of naturally occurring water is not a limiting factor for development. In such a situation, growth in demand for water is the prime driving force for the development of infrastructure. In the second phase, the *utilization phase*, a significant proportion of available resources has been committed to use. Governance in such basins shifts more towards effective utilization from available facilities, such as through reuse of drainage water and demand management. With further development of resources as demands grow, a situation can be reached where most of the utilizable water has been committed. This phase is termed '*reallocation*'. The main focus of governance in international drainage basins in this third phase is towards making 'best' use of available water, which may lead to reallocating resources from lower to higher value uses.

The types of data and information needed change as more water and other resources become committed to various uses and the focus of governance moves more towards demand management. Table 1 summarizes the main

types of data and information usually thought to be required at different levels of development in an international freshwater drainage basin.

Every international drainage basin is unique and may not lend itself to be strictly classified into any one of these phases. However, the more water and related resources that are committed to use, the less will purely supply oriented measures be adequate to result in efficient utilization. This usually requires more sophisticated tools and detailed information and data than what would be required in relatively undeveloped situations where resource availability has not yet become a constraint or limiting factor for development.

The *1997 UN Watercourses Convention* includes a binding commitment to establish a fact finding Commission to investigate a dispute between parties to the Convention. In the event that the parties to the dispute are unable to agree on the composition of a Fact Commission to investigate a dispute, the Secretary-General of the United Nations is empowered to decide on the composition of the Commission. Kazakhstan and Uzbekistan have ratified this Convention.

The *1997 UN Watercourses Convention* also recognizes that the exchange of facts is a necessary pre-requisite for good governance.[10] Article 9 requires basin states to regularly exchange data and information on the condition of the watercourse, in particular that of a hydrological, meteorological, hydro geological and ecological nature or related to water quality and related forecasts. The *1997 UN Watercourses Convention* also allows states to request information that is not currently available while providing compensation to the state procuring the data.

The general obligation of international water states to exchange facts has been further affirmed in various ministerial declarations of international water conferences and the resolutions of international organizations. These

[10] United Nations, *Convention on Law of the Non-navigational Uses of International Watercourses 1997,* adopted by the General Assembly of the United Nations 21May 1997 as found at http://untreaty.un.org/ilc/texts/instruments/english/conventions/8_3_1997.pdf

include: the *Declaration of the United Nations Conference on the Human Environment Recommendation* (encouraging the collection and exchange of information through joint mechanisms),[11] the *Dublin Statement of the International Conference on Water and the Environment* (recommending information exchange as a means of minimizing conflict over shared resources)[12] and the *Kyoto Ministerial Declaration of the 3rd World Water Forum* (encouraging information exchange as a mechanism to mitigate natural disasters).[13]

TABLE 1: Development stages and fact finding requirements in an international drainage basin[14]

Data needs	Typical data collected	Developments in information processes
INFANCY: Localized use only		
Rudimentary, limited to water levels and extent of flooding.	Flood water levels, flooded areas (through experience).	Demarcation (and avoidance) of flooded areas, correlation of flood extent and flood levels.
DEVELOPMENT: Water allocation is supply focused; Data collected and used by small number of agencies for specific uses and projects		
Availability of water during the year and extent of agricultural land; Main focus is on surface water, though some interest in groundwater for urban and irrigation development; For initial planning for river basin development.	Project-wise collection of river flow and quality data; Climatic data, particularly rain-fall; Land use in riverine plains and extent of agricultural land; Topographic surveys; Aerial photography; Land ownership, traditional/existing water rights.	Initial data collection systems established for individual projects; Gradually these are linked up and coordinated by the development agency(s); Basin-wide hydrometric stations established to gather base data.

[11] See www.unep.org/Documents.Multilingual/Default.asp?documentid=97&articleid=1503

[12] See www.inpim.org/files/Documents/DublinStatmt.pdf

[13] See www.worldwaterforum4.org.mx/uploads/TBL_DOCS_17_29.pdf

[14] Adapted from Burton *et al.* (2005).

Data needs	Typical data collected	Developments in information processes
UTILIZATION: Water allocation is supply focused; Data related processes and procedures well established		
Detailed knowledge of the available water resources, both surface and groundwater, particularly over-year to establish storage patterns for reservoirs and recharge pat-terns for groundwater; For river basin master planning.	River flow data throughout the basin; Climatic data throughout the basin; Land ownership and traditional/existing water rights; Groundwater level and quality; Some monitoring of pollution levels.	Data collection procedures standardized and co-coordinated; Procedures established for monitoring pollution levels; Procedures established for monitoring groundwater depth and quality; Publication of water resources and climatic data; Development of simple water re-sources models for river basins.
RE-ALLOCATION AND RESTORATION: Demand and supply focused; Data related processes and procedures re-fined and more widely disseminated		
To obtain detailed knowledge of the annual and inter-year water resource situation both for supply and demand; To monitor and control water abstraction by users; To make projections of supply and demand; For water resources modeling, using remote sensing and GIS; For scenario analysis; For river basin master planning; To refine and update supply and demand projections, scenario analysis;	River flow and water quality data throughout the basin; Climatic data throughout the basin; Groundwater level and quality; Pollution levels; Water abstraction by all users; Data for prosecution for over-abstraction and/or pollution; Data analyzed from perspective of different water users; Water needs for various environmental processes.	Hydrometric network extended and automated for direct transmission to data collection stations; Groundwater monitoring network extended; Pollution monitoring extended; Further computerization of data collection, processing and analysis; Development of sophisticated water resource models for river basins, with refinement to become an operational tool; Remote sensing incorporated into water management and decision making; Publication of water resources supply and demand

Data needs	Typical data collected	Developments in information processes
To formulate rules for allocation of water during droughts / shortages.		information; Analysis and presentation of data for a wider range of stakeholders; Scenario analysis to enable participation in decision making.

Some resolutions of international organizations also reaffirming the general obligation to exchange facts include the: *UNECE Decision on International Cooperation on Shared Water Resources,* principle 11 (encouraging members to carry out joint data collection projects);[15] *Draft Principles of Conduct for the Guidance of States in the Conservation and Harmonious Exploitation of Natural Resources Shared by Two or More States*;[16] and *Co-operation in the Field of the Environment Concerning Natural Resources Shared by Two or More States*.[17]

Numerous resolutions also include a duty to exchange facts on transboundary watercourses. See, for example: IDI, Resolution on the Pollution of Rivers and Lakes and International Law, art. VII (encouraging the exchange of data on pollution and the coordination of programs designed to generate data about the basin)[18]; ILA, New York Resolution, art. 3 (recommending that "[co-] riparian states should make available to the appropriate agencies of the United Nations and to one another hydrological, meteorological and economic information, particularly as to stream flow, quantity and quality of water, rain and snowfall, water tables and underground water movements")[19]; ILA, Helsinki Rules, art. XXIX. [20]

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[15] See www.unece.org/env/water/pdf/watercon.pdf

[16] Intergovernmental Working Group of Experts on Natural Resources, U.N. Environment Programme, 6th Sess., Agenda Item 11, U.N. Doc. UNEP/GC.6/17 (1978), adopted by the General Assembly.

[17] G.A. Res. 186, at 128, U.N. GAOR, 34th Session (1979).

[18] See www.idi-iil.org/idiE/resolutionsE/1979_ath_02_en.PDF

[19] Development Law Service, FAO Legal Office, *Sources of International Law, Some General Conventions, Declarations, Resolutions and Decisions adopted by International Organizations, International Non-Governmental Institutions, International and Arbitral Tribunals on International Water Resource*s, FAO Legislative Study 65, Rome 1998 at 289 as found at ftp://ftp.fao.org/docrep/fao/005/w9549E/w9549e04.pdf

[20] Development Law Service, FAO Legal Office, *Sources of International Law, Some General Conventions, Declarations, Resolutions and Decisions adopted by International Organizations, International Non-Governmental Institutions, International and Arbitral Tribunals on International Water Resources*, FAO Legislative Study 65, Rome 1998 9 at 299 as found at ftp://ftp.fao.org/docrep/fao/005/w9549E/w9549e04.pdf

The ILA's Helsinki Rules relate information exchange to the mitigation of water disputes in Article XXIX, which specifies:[21]

> *With a view to preventing disputes from arising between basin states as to their legal rights or other interest, it is recommended that each basin state furnish relevant and reasonably available information to the other basin states concerning the waters of a drainage basin within its territory and its use of, and activities with respect to each waters.*

This statement indicates not only the interconnection between the other key legal principles and the principle of information exchange, but also the legal obligation of riparian states to provide data to co-basin states. By enhancing cooperation and trust, the sharing of information eases the way for discussions on particularly contentious matters such as allocation. Established treaty practice makes clear that there is an obligation to exchange information regarding shared trans-boundary international waters. Procedural rules on information exchange are diverse and, while a general duty to exchange data exists, no specific requirement can be drawn from documented practice.

Fact finding generally appears to work best when it is: Transparent, Neutral, Participatory and Peer Reviewed. Transparency means that the fact finding is done in a transparent manner. i.e. the process of identifying the facts is obvious, clear, visible and understandable. Neutral refers to the fact that it is best to have fact finding that is unbiased, impartial and non-aligned. Participatory means that the fact finding is best done inclusively i.e. that as many stakeholders as reasonably possible are involved. Peer reviewed means that the fact finding is best assessed by credible individuals or institutions of equal standing who are experts on the subject.

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[21] Development Law Service, FAO Legal Office, *Sources of International Law, Some General Conventions, Declarations, Resolutions and Decisions adopted by International Organizations, International Non-Governmental Institutions, International and Arbitral Tribunals on International Water Resources*, FAO Legislative Study 65, Rome 1998 at 299 as found at ftp://ftp.fao.org/docrep/fao/005/w9549E/w9549e04.pdf

The following examples illustrate the application of the above principles:

THE MEKONG

The Mekong River originates high on the Tibetan Plateau and makes its way through six countries: China (Tibet), Myanmar (Burma), Laos, Thailand, Cambodia and Vietnam, before reaching the South China Sea. At 4,800 kilometers (2,976 miles), the Mekong River usually ranks twelfth in the world in terms of length and eighth in terms of average annual runoff. The flow in the Mekong varies with the tropical monsoon climate. The flows begin to increase at the onset of the wet season in May, peaking in August or September and decreasing rapidly until December. The flows recede slowly during the annual dry period from December to their lowest levels in April. An enormous volume of water flows through the Mekong Basin in the wet season resulting in extensive flooding. The floodwaters support a productive and diverse freshwater ecosystem, but also result in loss of human life and damage to crops and structures. During the dry season, a dramatic reduction of flow leads to water shortages for domestic and agricultural use and limits navigation. The coastal plain of the delta constantly suffers from an intrusion of seawater.

The Mekong Basin's water resources have the ability to support economic growth through irrigation, hydropower, navigation, water supply and tourism. Equitable sharing of the water resources and sustainable development of the natural resources in the Basin becomes most critical during the dry season. Laos relies heavily on river transport and the reduction of dry season flows could adversely affect navigation. Cambodia has the long-term potential for increasing its irrigated agriculture. Over the decades, Vietnam and Thailand have developed extensive irrigation systems that currently face dry season water constraints. Vietnam makes use of dry season flows for seawater repulsion and for irrigation. Thailand has recently been studying options for diverting water from the Mekong and for inter-basin diversion from Thai tributaries to the Mekong. Hydropower development in the Mekong Basin has also been gaining momentum in China and Laos.

Currently, there are only 500 MW of installed capacity in the Lower Mekong and 1500 MW along the Chinese portion of the River. China is constructing several hydropower projects on the Mekong River. Laos has plans to construct a number of medium sized hydropower projects on Lao tributaries to the Mekong. Both China and Laos would like to export power to Thailand. Options for creating a regional power grid are under study.

Key to reaching an overall framework agreement in 1995 was the need to find acceptable language that provided both a sense of good faith and cooperation and the assurances that no party would be disadvantaged under its provisions in light of the doctrine of sovereign equality. Efforts to promote sustainable water management in the Mekong River Basin and protection for the environment, aquatic life and the ecological balance of the basin subsequently received a major boost in the form of an $11 million influx of funding from the Global Environment Facility. The Water Utilization Project (WUP) funded by the grant supported the Mekong River Commission in developing an integrated and comprehensive basin hydrologic modeling package, as well as a functional and integrated knowledge base on water and related resources, and in using these tools to establish "Rules", one of five major goals. The first Rule developed using an "interest based" negotiation approach were the "Procedures for Data and Information Exchange and Sharing" dated 1 November 2001. The approach taken was essentially to establish a framework agreement and a committee and then leave implementation to the committee.

THE COLUMBIA

Prior to agreeing on the Columbia River Treaty Canada and the US were in conflict over the construction of infrastructure on the Columbia River. The International Joint Commission (established to resolve boundary water disputes) undertook a fact finding initiative which developed information that was instrumental to the negotiation of the Columbia Treaty.

The Columbia River is one of a number of key international watercourses shared by Canada and the United States where Canada is generally the upstream watercourse state and the US is generally the downstream watercourse state. Stretching 1952 kilometers, the Columbia River is the fourth largest river in North America and the Columbia River basin covers 640 000 square kilometers of territory in Canada and the US. In recognition of the importance of cooperating with regard to their many shared water resources, Canada and the US concluded an agreement in 1909, known as the *Boundary Waters Treaty*, which, among other things, established an entity called the International Joint Commission ('IJC') to govern their relations. The subsequent *Columbia River Treaty* between Canada and the US explicitly recognized that the construction and operation of three treaty projects in Canada would increase both the useable energy and dependable capacity of power plants in the US, as well as provide irrigation and flood control benefits in the US, all of which would not be possible at the same cost without the three treaty projects in Canada. In return for building the three *Columbia River Treaty* projects in Canada, the Treaty specifically entitled Canada to a lump sum payment for various downstream (flood control) benefits, as well as one half of the additional power generated by power plants in the US that resulted from storage across the border in Canada.

Much of the data sharing under the Columbia River Treaty is performed by the Permanent Engineering Board.[22] The Columbia River Treaty established the Permanent Engineering Board, consisting of four members—two appointed by the United States and two appointed by Canada. The Permanent Engineering Board is tasked with the following duties:

- Assemble records of the flows of the Columbia River and the Kootenay River at the Canada-United States boundary;
- Report to the United States and Canada whenever there is substantial deviation from the hydroelectric and flood control operating plans

[22] Columbia River Treaty, art. XV.

and, if appropriate, include in the report recommendations for remedial action and compensatory adjustments;
- Assist in reconciling differences concerning technical or operational matters that may arise between the U.S. and Canadian Entities;
- Make periodic inspections and require reports from the U.S. and Canadian Entities in order to ensure that the objectives of the Columbia River Treaty are being met;
- Make reports, at least once a year, to the United States and Canada of the results being achieved under the Columbia River Treaty and make special reports concerning any matter which it considers should be brought to the countries' attention;
- Investigate and report with respect to any other matter that comes within the scope of the Columbia River Treaty, at the request of either the United States or Canada.[23]

The Permanent Engineering Board must comply with directions relating to its administration and procedures that are agreed upon by the United States and Canada.

The key subsidiary agreement to the Treaty governing data and information and exchange is entitled: "Terms of Reference for the Columbia River Treaty Hydrometeorological Committee" dated 20 May 1968.[24] The approach taken was essentially to establish a framework agreement and a committee and then leave implementation to the committee.

AFRICA

Africa is a region of international drainage basins. With the exception of island states, every African country has territory in at least one trans-boundary river basin and trans-boundary river basins cover 62% of Af-

[23] See U.S. Army Corps of Engineers Columbia Basin Water Management, *Permanent Engineering Board, Columbia River Treaty* as found at www.nwd-wc.usace.army.mil/PB/PEB_08/peb.htm

[24] See Appendix B Terms of Reference for the CRTHMC as found at www.nwd-wc.usace.army.mil/PB/PEB_08/docs/Entity/01HydroMetAnnRep.pdf

rica's total land area.[25] In the realm of fact finding, there are a number of possible lessons learned from recent African experience, including the Nile and data and information sharing and exchange:

- Responsibilities for data collection and analysis for trans-boundary water resources management in Africa are typically divided up among different levels of government. As a result of this, a division of labor between the member countries responsible for collecting and analyzing data in their own territories and an international commission responsible for setting standards and responsible for coordinated basin wide analysis, probably offers the best prospects of success.
- The methods used to collect data in different African countries do not always appear to be in line with international standards and this often means that the information derived from these data cannot be directly compared with data from neighboring countries.
- In supporting trans-boundary water resources management in Africa, the transaction costs involved in information transmission should be carefully considered. The widespread "what we need is more data" paradigm must give way to efforts to specify the information required to make management decisions.
- Synergies with other information-generating initiatives should be sought. Close coordination with other national or international initiatives is a good way to make optimal use of synergies. Targeted co-financing of relevant programs is a good way to harness synergy potentials.

[25] "Cooperation on Africa's International Water Bodies: Information Needs and the Role of Information-sharing" by Malte Grossmann (part of a study by the German Development Institute) and "Trans-boundary Water Law in Africa: Development, Nature and Geography" by Jonathon Lautze and Mark Giordano (2005) in 45 *Nat. Resources J.* 1053. The former article explores the instruments that basin organizations in Africa have assumed to facilitate the transmission of information. The former article concludes with lessons to be drawn for development cooperation. The latter article focuses more on documenting and analyzing a large body of trans-boundary water agreements relating to Africa with a view towards providing guidance for future institutional development.

- There is an important lesson to be learned regarding the play of tensions between various requirements concerning the level of public accessibility of information for Integrated Water Resource Management (IWRM). The principles of best IWRM practices are grounded on transparent mechanisms for the allocation, protection and basic supply of scarce water resources and these mechanisms are best ensured by clear-cut institutional arrangements designed to set the stage for planning and management at the lowest possible level and with the participation of all stakeholders. Participation requires public accessibility of information. Publication of information may prove beneficial to the political and civil society discourse on possible riparian cooperation. On the other hand, trans-boundary water resources management is for the most part a governmental task with political accountability. If riparian states withhold information for strategic reasons, creation of a shared information base (i.e. one that is not public but accessible only to the parties) may constitute an important trust-building measure for initiating trans-boundary negotiations.
- Any successful information and decision support system should best be perceived as “owned” by the riparian countries concerned.
- It is essential to ensure that both the database and the methods used for calculation of data and information for IWRM are transparent and inspire confidence. This requires that all riparian states concerned are involved “at eye level” in the specification and development of the models. There should also be consensus on assumptions, methods and technical descriptions and these must be accessible to all users and decision-makers.
- It is essential to ensure that the set of instruments used to collect data and information will be maintained and developed over the long term. This means that due consideration must be given to the institutional, financial and technical aspects.

6 NEGOTIATION

Negotiation is an essential part of treaty making and dispute resolution. All treaties are agreements and therefore by definition they are a product of negotiation. Where these negotiations are assisted by a neutral party (as in the Indus treaty for example) the process is called mediation as outlined below. Similarly, the decision processes that facilitate treaty implementation are normally negotiation processes as voting or other means for making decisions are unlikely to be acceptable to all parties to a treaty.

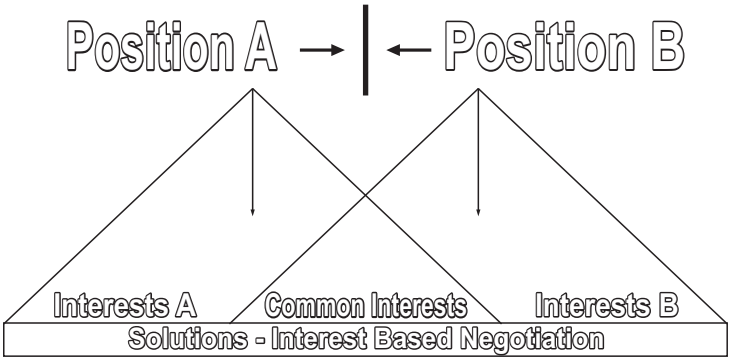
What is Negotiation?

Negotiation is a decision making process in which two or more parties (people, organizations, governments or Nation States) communicate with each other in an effort to reach agreement on a decision. It is one of the most common approaches used to make decisions. Given the sovereign status of nation states, negotiation is the principle means for decision making and dispute resolution between states.

Negotiations can be conducted in a variety of ways and there are many tools and techniques that can increase the effectiveness of the negotiation process. Two of the most contrasting negotiation approaches are interest based and positional negotiation, sometimes referred to as integrated and distributive negotiation. These two approaches are radically different in terms of the negotiation strategy and tactics and the likely outcomes. For the purposes of negotiating trans-boundary water agreements an interest based approach has a much greater potential for generating mutually beneficial and sustainable results.

Figure 2 illustrates the relationship between parties that are in conflict in terms of their positions and interests. Positions A and B are irreconcilable. For example, party A may insist on constructing a dam while party B may insist that no dam be constructed. If these parties adopt a positional approach to resolving their differences, they will rely on negotiation tactics such as threats and ultimatums, while at the same time attempting to un-

dermine each other's positions by negatively affecting external factors such as potential investment sources, markets and related trade arrangements. If this positional approach ever results in an agreement the agreement will likely involve some compromises such as reducing the height of the dam and perhaps an unenforceable guarantee of a minimum flow. Other interests, such as an optimal flow regime, joint investment in the infrastructure, development of electricity markets, flood control and agricultural trade will be left unaddressed and will represent value "left on the negotiating table".



Positions are an ideal solution from one party's perspective. They are often presented as an opening demand. Unlike interests, positions cannot be provided for by alternative means. Interests are what the parties really want or "need" to get out of a negotiation. They are what motivate a party to negotiate. Interests are the needs, wants, fears, concerns and hopes that underlie a position. They are substantive, procedural, psychological or political. Substantive interests include such things as the quantity and quality of water or the timing of the flow. Procedural interests include such things as monitoring and evaluation processes, provisions for dispute resolution, mechanisms for review and decision making and the timing of payments or profit sharing arrangements. Psychological or political interests include such things as who gets the credit in the media, appearing to have negotiated a good deal for constituents and public acknowledgement for generosity and compassion.

Positional negotiations are particularly effective when:

- The currencies being negotiated are very straightforward and valued in the same way by all parties;
- The importance of future relationship is relatively low;
- The consequences of not reaching agreement are not that significant because the alternatives to an agreement are relatively good.

Purchasing goods in a marketplace is a transaction where most people adopt a positional approach with success.

The costs and benefits of positional negotiations include:

Costs

- May damage and polarize relationships
- Limits ability to explore alternatives
- Undermines tailor made solutions
- Produces compromises where better solutions may have been available
- Risk of unnecessary loss and unrealized gain

Benefits

- Transaction costs are minimized
- May be useful in dividing fixed sum resources
- Does not require trust to work
- Does not require disclosure of privileged information

Interest based negotiations, instead, are particularly effective when:

- The currencies being negotiated are complex and valued differently by the parties;
- Future relationships are important;
- The consequences of not reaching agreement are significant for all parties.

Negotiating solutions to natural resource issues such as water management and allocation are best resolved through interest based negotiation for a number of reasons including:

- There are many different values associated with water and they often have quite different significance for different riparian states;
- Co-riparians need to share water for millennia and therefore positive relationships are important;
- Mutually beneficial and enduring solutions to trans-boundary water issues are often complex involving a multitude of factors that can only be clearly integrated through a constructive interest based negotiation.

The costs and benefits of interest based negotiations include:

Costs

- Transaction costs associated with effective communication
- Requires some trust
- Requires negotiators to disclose information and interests
- May uncover extremely divergent values or interests

Benefits

- Produces solutions that accommodate interests
- Reduces the risk of unnecessary loss and unrealized gain
- Builds relationships and promotes trust
- Models cooperative behavior that may be valuable in future
- May open the door to new opportunities

Negotiations often trend towards a positional approach because parties usually characterize their perspectives on issues in terms of their positions. It is also much simpler and less risky for leaders to provide guidance to negotiators in terms of the positions that they must adhere to rather than identifying the interests that need to be accommodated, allowing flexibility for how that is achieved. This latter, interest based, approach has the advantage of enabling the design of potential solutions that attempt to maximize the gains that both parties can realize from the agreement.

Whether an interest based or positional approach to negotiations is adopted, negotiation has both strengths and weaknesses as a means for resolving disputes, solving problems, or building partnerships. The key strength of negotiation is that the parties are in complete control of the outcome. They are individually responsible for developing a solution that meets their needs to the greatest extent possible. If any party is unsatisfied with a potential outcome they need not agree. The weakness of negotiation as a dispute resolution approach is that it does not guarantee an outcome. As a result, it does not provide any certainty that previous commitments will be fulfilled. If negotiations fail, there is no obvious consequence other than the overall agreement being jeopardized, which may or may not provide an incentive to find a solution or stand by previous commitments.

In summary, conditions that favor negotiation as an effective dispute resolution approach include:

- Interdependence between the parties where no party can achieve their objectives without support from the others: the Columbia River Treaty is a classic example of this, as neither Canada nor the US could have realized the benefits of the agreement acting alone;
- Readiness to negotiate and strive for settlement;
- Agreement on the issues and some interests;
- Unpredictability of alternatives to negotiated outcomes;
- Status quo is not satisfactory.

7 MEDIATION

What is Mediation?

Mediation is negotiation that is facilitated by a mutually acceptable and impartial individual or team. Like negotiation, mediation is also a common provision in dispute resolution mechanisms. For example, the mechanism or clause may state that "in the event of a dispute the parties will meet together and attempt to agree on a resolution. If they are unable to agree they may retain the services of an independent and neutral mediator to assist them in reaching agreement." As with negotiation, mediation does not guarantee an outcome but it does enable the parties to both control and optimize the outcome. Some water treaties, such as the Indus, the Mekong and the Senegal, have been developed using mediation.

Mediators are almost always independent of the parties to the negotiation. Moreover, in order to be effective, mediators need to have the confidence of all parties.

The roles that mediators often play in supporting negotiations include:

- Talking to all parties prior to initiating negotiations to help them assess the probability of agreement and the appropriateness of negotiation;
- Designing and convening the mediation process;
- Providing process design advice and leadership;
- Assisting the parties as they undertake internal reviews of their interests and potential solutions to sensitive issues;
- Brokering ideas for consideration by all parties and drafting initial proposals. This helps the parties to avoid circumstances where a proposal may be rejected because one of them tabled it. It also enables the parties to be critical of what is on the table for discussion without being critical of each other.

Mediation is an effective tool because it increases the potential for all parties to engage in an intensive discussion of potentially sensitive issues. It

also enables the consideration of options that would not otherwise be considered.

Typical stages in a negotiation process where a mediator may be engaged include:

- Helping the parties to design the process to maximize the potential for success;
- When there is an impasse in negotiations;
- When there is a high level of mistrust or resentment between the parties;
- When the issues are really complex;
- When discussions and the process have reached an impasse;
- When there is a need to increase efficiency – only meeting when there is something to deal with.

The following criteria are worthy of consideration in selecting a mediator:

- Proven track record for having assisted parties in resolving disputes by agreement;
- Trustworthy and known to be able to maintain confidentiality;
- Impartial with respect to the outcome;
- Effective communicator;
- Effective listener;
- Demonstrated persistence in mediating previous negotiation processes;
- Enough substantive knowledge regarding the issues in dispute in order to understand the technical issues under negotiation.

Riparian states that are seeking mediation support for the resolution of disputes associated with shared waters can resort to a number of different mediation resources including:

- International organizations such as United Nations agencies, the World Bank and Civil Society Organizations;
- Regional organizations that all the parties are members of;

- Private sector resources such as international law firms and mediation consultants.

Finally, mediation resources are not the only process support resources that can enhance a trans-boundary dispute resolution initiative. International legal advice and technical support are also instrumental to effective dialogue and problem solving. Where mediation resources are brought together with legal and technical advice, a process support team can be established that provides an impartial platform for the parties' problem solving and negotiation.

8 BINDING DISPUTE RESOLUTION

The essential feature of binding dispute resolution in an international waters context is that a third party issues a decision that the parties agree in advance to respect and comply with. To reach a decision, the third party decision-maker typically hears arguments from the parties and reviews evidence.

BENEFITS

There are several benefits to having a binding dispute resolution mechanism in a treaty.[26] The provision provides a means for resolving disputes that may arise in the future. It also may provide benefits even if a dispute never arises or if the parties choose not to use the mechanism when a dispute does arise.[27]

Having a binding dispute resolution mechanism in place may assist the parties in reaching agreement at the treaty negotiation stage. In treaty negotiations, parties on all sides must make commitments. Parties will be inclined to make commitments only if they believe that the other parties' commitments are meaningful and that there will be negative consequences for a failure to comply. Having a binding dispute resolution provision is useful because negotiating parties will take into consideration that a decision-maker with the power to issue binding decisions will enforce commitments.

After the treaty is negotiated, the existence of a binding dispute resolution option encourages the implementation of treaty commitments. Parties may be less likely to defy a treaty if they face the prospect of a binding decision issued against them.

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[26] See Malintoppi**,** ***supra*** **note** 1.

[27] Kraska**,** James (2003), Sustainable Development is Security: the Role of Trans-boundary River Agreements as Confidence Building Measure (CBM) in South Asia, 28 *Yale Journal of International Law* 465.

In many cases, once a dispute arises and before binding dispute resolution is invoked, the parties engage other dispute resolution methods, including fact-finding, negotiation and/or mediation. The existence of a binding dispute resolution provision in the treaty enhances the effectiveness of these other dispute resolution mechanisms. Without it, a party could refuse to participate in good faith in the other mechanisms without facing consequences. If a binding dispute resolution procedure looms, parties may take these other dispute resolution methods more seriously. This may produce faster settlements and a less acrimonious dispute resolution process.

Binding dispute resolution provides the parties with the means to resolve their dispute definitively. If the dispute reaches binding dispute resolution, the decision of the third party decision-maker will be recognized as binding by the international community. Perhaps for this reason, a high percentage of decisions of international binding dispute resolutions mechanisms have been complied by states.[28]

TYPES

There are several different types of binding dispute resolution mechanisms: (1) global mechanisms, (2) regional mechanisms (3) dispute-specific mechanisms.

Global mechanisms are theoretically available for all states to use to resolve disputes concerning specified subject matters. The most prominent example is the ICJ, seated at the Peace Palace in The Hague. It was created in 1945 as the judicial organ of the UN to resolve disputes of a general nature between states that have consented to its jurisdiction.[29] Other examples are the International Criminal Court[30] and the International Tribunal for the Law of the Sea.[31]

[28] Llamzon, Aloysius (2007), Jurisdiction and Compliance in Recent Decisions of the International Court of Justice, 18 *Eur J Int Law* 815.

[29] See International Court of Justice as found at www.icj-cij.org

[30] See International Criminal Court as found at www.icc-cpi.int

[31] See International Tribunal for the Law of the Sea as found at www.itlos.org

The ICJ has a long and distinguished history of resolving disputes between states involving trans-boundary water bodies. The ICJ is composed of 15 judges who are elected by the UN General Assembly and the UN Security Council to nine-year terms. The ICJ's rules of procedure are codified in the Statute of the International Court of Justice, an annex to the UN Charter. Its official languages are English and French.

Regional mechanisms resolve specific types of disputes involving parties in the same region, as well as situations where more than one dispute arises out a particular event. Should sovereign states choose to have their disputes resolved by a regional mechanism, they would need to create one either by drafting a regional water treaty containing a binding dispute resolution provision, or by grafting a binding dispute resolution provision onto an existing regional treaty. SADC features an example of the latter.[32] The SADC, a 15-State regional bloc focused on trade, development and security, established a tribunal in 1992 to issue binding decisions to resolve disputes involving the interpretation of the SADC treaty and its protocols. In 1998, SADC members enacted a protocol on shared water bodies and referred all disputes involving the protocol to the SADC tribunal.

Another prominent example of a regional mechanism outside an international waters context is the Iran-US Claims Tribunal.[33] The Iran-US Claims Tribunal is composed of nine judges – three Iranian, three US and three non-nationals – seated at The Hague, who render binding decisions in disputes between Iran, the US and their nationals arising from the Iranian Revolution.

Dispute-specific mechanisms are another option for binding dispute resolution. By creating a dispute-specific mechanism in a treaty, states agree in advance on a procedure to choose decision-makers (typically three to five decision-makers) when a dispute arises, as well as the procedural rules and law that will guide the proceedings. There is no standing body of decision-

[32] See Southern African Development Community Tribunal as found at www.sadc-tribunal.org

[33] See *Iran-US Claims Tribunal*, *supra* note 26.

makers that hears all disputes arising out of the treaty, as is typical for global and regional mechanisms. Dispute-specific dispute resolution often takes the form of arbitration. For each dispute that arises under the treaty, a distinct arbitral panel would be constituted to hear and decide that particular dispute. Arbitration may be "administered" meaning that an arbitral institution provides certain assistance to the arbitrators and the parties, or it may be ad hoc, in which case it is not administered under the auspices of any arbitral institution.

Arbitrations involving state parties often are administered by the PCA.[34] The PCA provides facilities for use in arbitrations, model rules of procedure and numerous secretarial and substantive services. Established in 1899, the PCA is experienced in administering arbitrations involving both state and non-state parties, including disputes involving territorial boundaries. Even in ad hoc arbitrations, the parties may make use of the PCA's model procedural rules, such as the PCA Optional Rules for Arbitrating Disputes between States.[35]

ICJ DECISIONS

In *Pulp Mills on the River Uruguay* (2010), Argentina challenged Uruguay's construction of two pulp mills on the banks of the River Uruguay, which forms the boundary between the two states.[36] Argentina alleged that the construction of the pulp mills violated numerous provisions of a 1975 treaty between the states, including the obligation to contribute to the optimum and rational utilization of the river, the obligation to coordinate measures to preserve the ecological balance and the obligation to prevent pollution. Argentina also argued that Uruguay failed to give advanced notice of its construction plans in violation of the procedural provisions of the treaty. Argentina requested that the Court declare Uruguay to be in

[34] See Permanent Court of Arbitration as found at www.pca-cpa.org

[35] See Permanent Court of Arbitration, *Optional Rules for Arbitrating Disputes between Two States* as found at www.pca-cpa.org/upload/files/2STATENG.pdf

[36] See International Court of Justice, *supra* note 23.

breach and order Uruguay to stop construction of one mill, dismantle the second mill, pay damages and provide guarantees that it would comply with the treaty in the future. The Court denied the requested relief, reasoning that notwithstanding Uruguay's failure to inform, notify and negotiate with Argentina as required by the treaty, Argentina failed to show a substantive violation of the treaty. To reach that conclusion, the Court closely examined expert submissions from both sides regarding the environmental impact of the pulp mills.

The *Case Concerning the Dispute Regarding Navigational and Related Rights* (2009) concerned the interpretation of an 1858 treaty which granted Nicaragua sovereignty over the San Juan River, a natural border between Nicaragua and Costa Rica, but granted Costa Rica the right of free navigation for purposes of commerce.[37] Costa Rica alleged that Nicaragua violated the treaty by denying it free navigation in at least nine ways, including, for example, by requiring passengers on Costa Rican vessels to carry Nicaraguan visas. Costa Rica sought declaratory, injunctive and monetary relief. The Court reaffirmed Nicaragua's sovereignty over the river, but held that Nicaragua's practice of requiring Costa Rican passengers to carry Nicaraguan visas, charging Costa Rican vessels special taxes and interfering with Costa Ricans' subsistence fishing along the banks of the river violated the treaty. The Court denied all other requests for relief.

Case Relating to the Gabčíkovo-Nagymaros Project (1997) concerned the interpretation of a 1977 treaty between Hungary and Czechoslovakia to construct a system of locks on the Danube River.[38] After Hungary unilaterally suspended and then abandoned work on the project and Czechoslovakia proceeded to dam a portion of the river on its own, Hungary and Slovakia (which succeeded to Czechoslovakia's rights and obligations un-

[37] See International Court of Justice, *Dispute Regarding Navigational and Related Rights (Costa Rica v. Nicaragua)* as found at www.icj-cij.org/docket/index.php?p1=3&p2=3&k=37&case=133&code=coni&p3=5

[38] See International Court of Justice, *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)* as found at www.icj-cij.org/docket/index.php?p1=3&p2=3&k=8d&case=92&code=hs&p3=5

der the treaty) executed a special agreement to refer the dispute to the Court. The Court declared that Hungary violated the treaty and that while Slovakia was within its rights to prepare an alternative means to dam the river, it breached the agreement by putting its solution into operation unilaterally. As to future conduct, the Court ordered the parties to negotiate in good faith to achieve the objectives of the treaty. The Court added that the parties should take evolving international environmental norms into account, as it recognized that the project might cause environmental harm and that the treaty required the States to consider these norms.

Decisions of Other Global and Regional Mechanisms

In *Southern Bluefin Tuna Cases* (1999), Australia and New Zealand requested that the International Tribunal for the Law of the Sea find that Japan's experimental fishing program violated its international legal obligation to preserve southern Bluefin tuna.[39] Pending the Tribunal's final decision, Australia and New Zealand moved for the temporary suspension of Japan's fishing program as a provisional measure. The Tribunal ordered the provisional measure on the basis of the precautionary principle. The provisional measure remained effective for 11 months until the Tribunal issued a final decision denying Australia's and New Zealand's claim for lack of jurisdiction.

In *Campbell et al. v. Republic of Zimbabwe* (2008), Mike Campbell, a white farmer in Zimbabwe, requested that the SADC Tribunal find Zimbabwe's seizure of his land pursuant to Amendment 17 of the Zimbabwean Constitution violated the SADC treaty.[40] The Tribunal ruled that Amendment 17 violated the SADC treaty, because it made the acquisition of white farmers' land immune from judicial review and because it discriminated against white farmers, and ordered Zimbabwe to stop interfer-

[39] See International Tribunal for the Law of the Sea, *Southern Bluefin Tuna Cases,* as found at www.itlos.org

[40] See Southern African Development Community Tribunal, *Campbell et al. v. Republic of Zimbabwe,* as found at www.sadc-tribunal.org/docs/case032009.pdf

ing with white farmers' land under Amendment 17 and to pay compensation to farmers who had lost their land on that basis.

DECISIONS OF DISPUTE-SPECIFIC MECHANISMS

In *Abyei*, a five-member tribunal in an arbitration administered by the PCA heard a boundary dispute between the Government of Sudan ("Government") and the Sudan People's Liberation Army ("SPLA").[41] The arbitration was the culmination of 20 years of civil war between the north and south. In 2005, the Government and the SPLA, a powerful southern faction, signed a peace agreement which created a commission to fix the boundaries of the oil-rich Abyei province. After the Government rejected the commission's findings, the parties agreed in July 2008 to arbitrate under the PCA Optional Rules for Arbitrating Disputes Between States. In July 2009, the tribunal issued its decision, finding that the commission exceeded its mandate in drawing Abyei's northern, eastern and southern boundaries. The tribunal re-drew those boundaries.

The *Ethiopia v. Eritrea* arbitrations, administered by the PCA, also took place against the backdrop of civil war.[42] In 2000, the States created a five-member boundary commission to resolve the status of the disputed Badme territory and the boundaries between the two States and a five-member claims commission to determine damages from the armed conflict. In 2002, the boundary commission held that Badme territory was a part of Eritrea and it demarcated boundaries in 2007. In 2009, the claims commission awarded damages.

CHOOSING A BINDING DISPUTE RESOLUTION MECHANISM

While no one type of binding dispute resolution mechanism is suitable for all states in all situations, objectives that are commonly sought with re-

[41] See Permanent Court of Arbitration, *The Government of Sudan / The Sudan People's Liberation Movement/Army (Abyei Arbitration)* as found at www.pca-cpa.org/showpage.asp?pag_id=1306

[42] Permanent Court of Arbitration, Eritrea-Ethiopia Claims Commission, as found at www.pca-cpa.org/showpage.asp?pag_id=1151

spect to a binding dispute resolution mechanism are: (1) obtaining an effective remedy, (2) obtaining a correct decision (3) maximizing the efficiency, in terms of cost and time, of the decision-making process.[43] To determine which mechanism is appropriate to resolve water disputes in international waters situations, states are advised to scrutinize the ICJ, regional mechanisms and dispute-specific mechanisms in terms of these objectives and any other objectives that they identify.

OBTAINING AN EFFECTIVE REMEDY

To provide an effective remedy, a binding dispute resolution mechanism must provide (1) meaningful relief, (2) incentives for voluntary compliance with decisions (3) means to enforce decisions where voluntary compliance is not forthcoming.[44]

MEANINGFUL RELIEF

In international practice, an award in favor of a state may consist of an order to pay monetary compensation, an injunction (an order to perform a certain action), a declaratory judgment (a statement of the rights and obligations of the parties) or some combination thereof. A provisional order, which is an order for a party or parties to take certain action pending further consideration by the decision-makers at the conclusion of the proceedings, may also be an element of meaningful relief.

The ICJ typically issues declaratory judgments.[45] Injunctions are infrequently issued and an award of monetary compensation is extremely rare. By contrast, regional and dispute-specific bodies may order monetary compensation or injunctive relief depending on the unique features of each mechanism and their rules of procedure. All three types of dispute resolution bodies may issue provisional orders.

[43] See Malintoppi, ***supra* note** 1.

[44] See Malintoppi, ***supra* note** 1.

[45] See International Court of Justice, *supra* note 33.

INCENTIVES FOR VOLUNTARY COMPLIANCE[46]

Compliance with a decision of a binding dispute resolution mechanism is an international legal obligation. Global, regional and dispute-specific mechanisms have a variety of methods to compel states to comply. However, states are sovereign actors. The means to compel states to comply with international decisions are limited. Therefore, it is important for a dispute resolution mechanism to create incentives for voluntary compliance to provide an effective remedy.

The ICJ has several aspects that may promote voluntary compliance. First, the obligation to comply with ICJ decisions is written into the UN Charter. Second, the Court has a unique international public profile because it is composed of leading judges and has issued frequently-cited decisions in dozens of significant cases. Third, the parties' pleadings and the Court's decisions are made publicly available after a case ends, increasing the likelihood that a state's non-compliance will receive international attention, which many states may wish avoiding.

For regional mechanisms, the role that states play in establishing and maintaining the body may promote compliance with that body's decisions. For example, where the regional mechanism plays an ongoing role in the state parties' relationships, as is the case with the SADC, for instance, this may promote compliance with the regional mechanism's decisions. Similarly, because the same regional body will be called upon to decide future disputes, where any non-complying state may need to seek the assistance of that regional body, states may have an added incentive to comply with the decisions of regional mechanisms. As for dispute-specific mechanisms, the role states play in choosing decision-makers for a particular dispute may increase the likelihood of voluntary compliance with a decision. In the case of both regional and dispute-specific mechanisms, the visibility of a particular dispute may affect voluntary compliance.

[46] See ECE/UNEP Network of Expert on Public Participation and Compliance, *supra* note 24.

For regional and dispute-specific mechanisms, the pleadings and decisions may very well remain confidential, unless there is agreement by the states in the treaty or at a later time to make them public. In the Abyei arbitration, the parties chose to make the pleadings and decisions public and then went further and posted hours of video from the proceedings on the internet.

ENFORCEABILITY[47]

In situations where a state delays or refuses to comply with a binding decision, a dispute resolution mechanism's ability to enforce the decision may become critical.

With respect to decisions issued by the ICJ, a state has a right to request that the UN Security Council make recommendations or enact measures to aid the enforcement of an ICJ decision. [48]

Existing regional and dispute-specific mechanisms offer several models of enforcement. At the SADC, the Tribunal shall report any failure to comply with a decision to the Summit, the SADC's supreme body, which has the authority to issue sanctions, including the withdrawal of benefits enjoyed

[47] *Ibid.*

[48] International Court of Justice, *How the Court Works*, as found at www.icj-cij.org/court/index.php?p1=1&p2=6

See also Llamzon, *supra* note 32 at 822:

> *This clearly manifests the strong link between the ICJ and the Security Council as institutions with related but decidedly different competencies in the settlement of international disputes – the ICJ is tasked with allocating rights and responsibilities and assessing competing legal claims among states party, and the Security Council is tasked, upon judgment, to give effect to that decision, should the debtor state refuse to comply.*
>
> *A number of subtle points are discernible from the text: first, only 'judgments' of the ICJ are subject to Article 94 enforcement. Secondly, only the judgment creditor state has the right to seek recourse from the Security Council; this was not the case with the League of Nations and Permanent Court. Thirdly, the Security Council appears to retain discretion both as to whether it shall act to enforce at all and, if so, what concrete measures it decides to take. Clearly, therefore, the enforcement of ICJ judgments involves quintessentially political acts by both parties and the Security Council, in which the Court itself has little involvement and over which it has no power.*

by the state as a result of its SADC membership.[49] In the Iran-U.S. Claims Tribunal, Iran is required to place funds in a security account and maintain a minimum balance to be used to pay awards issued against it.[50] As for dispute-specific mechanisms, in the *Ethiopia v. Eritrea* arbitration, the boundary commission requested that the UN assist in enforcement of the new boundaries.[51]

OBTAINING A CORRECT DECISION

To increase the likelihood that the binding dispute resolution mechanism provides a correct decision, several factors should be considered, including (1) the expertise of the decision-makers, (2) the impartiality of the decision-makers (3) the predictability or consistency of decisions.[52]

EXPERTISE OF DECISION-MAKERS

In state-to-state disputes concerning the interpretation of treaty rights and obligations, the decision-makers' expertise in international law, including the rules concerning treaty interpretation, may affect the correctness of the decision. In the context of disputes over international waters, states may also consider whether it is important to them to have decision-makers who have expertise in hydrology or in regional issues.

The judges at the ICJ are prominent experts in international law who are selected to reflect the diversity of the world's legal systems.[53] The judges are experienced in resolving disputes involving trans-boundary water bodies, though they are not necessarily experts in hydrology or engineering. Very often, parties will engage experts when arguing a case before the ICJ

[49] See SADC, *supra* note 27.

[50] See Iran-US Claims Tribunal, *supra* note 26.

[51] See Permanent Court of Arbitration, *supra* note 46.

[52] The International Bureau of the Permanent Court of Arbitration (ed.) (2002). *Resolution of International Water Disputes*, Papers emanating from the Sixth PCA International Law Seminar, 8 November 2002, Kluwer Law International, The Hague.

[53] See International Court of Justice, *supra* note 33.

or before another dispute resolution body. In terms of regional expertise, if no sitting judge is a national of a state that is party to a case, the state may appoint a national as judge ad hoc to take part in the consideration of the matter and the rendering of a decision.

With respect to both regional and dispute-specific mechanisms, states may determine the desired qualifications of the decision-makers. For example, the SADC requires that judges be accomplished jurists or highest-level civil servants.[54] While the governing documents of the Iran-U.S. Claims Tribunal and the *Abyei* and *Ethiopia v. Eritrea* arbitrations do not state minimum qualifications for decision-makers, in practice, the decision-makers have included former ICJ judges, as well as prominent academics and practitioners.[55] Because decision-makers in a regional mechanism will decide all disputes arising under the treaty, they tend to be more expert with regard to that treaty than ICJ judges, who may infrequently examine that treaty, or any arbitrator in a dispute-specific mechanism, who is likely to be called upon to decide only one specific dispute arising out of that treaty.

IMPARTIALITY OF DECISION-MAKERS

It is important to ensure that decision-makers with the power to issue a binding decision are impartial. Having decision-makers who are nationals of the states that are party to the dispute or of other interested states may present at least the appearance of partiality. On the other hand, States may deem such risks to be outweighed by the need to ensure that the decision-makers have sufficient knowledge of regional issues. One of the most important decisions states must consider in deciding upon a dispute resolution mechanism is what role they wish to play in appointing decision-makers and whether the appointment of party nationals would make a correct decision less likely because of concerns regarding the decision-

[54] See SADC, *supra* note 27.

[55] See The International Bureau of the Permanent Court of Arbitration, *supra* note 56.

makers' partiality or the increased likelihood that the decision-making process will become politicized.

At the ICJ, cases typically are heard by all 15 judges in general session.[56] No two judges may be from the same state. If a state party wishes to have a national serve as a judge in the proceedings and none of the sitting judges is a national of that state, the state may appoint a national as judge ad hoc for the duration of the case. Outside of general session, the ICJ rules provide for cases to be heard by ad hoc chambers, if the parties so desire. The identity and number of judges of an ad hoc chamber is subject to consultation between the parties and the Court. Potentially, multiple party nationals may serve as judges. To date, ad hoc chambers have been used only in a handful of cases.

For regional and dispute-specific mechanisms, states may determine the desired rules concerning the nationality of decision-makers. In the SADC Tribunal rules and in the agreements establishing the *Abyei* and *Ethiopia v. Eritrea* arbitrations, there are no nationality provisions.[57] Nonetheless, in the Abyei and *Ethiopia v. Eritrea* arbitrations, the parties did not select party nationals as arbitrators. The Iran-U.S. Claims Tribunal requires that the nine-member full tribunal consist of three U.S. nationals, three Iranian nationals and three non-nationals and that smaller three-member chambers consist of one U.S. national, one Iranian national and one non-national.[58]

PREDICTABILITY OR CONSISTENCY OF DECISIONS

States may find it desirable for the dispute resolution mechanism to issue predictable and consistent decisions, which may assist states in understanding their obligations under the treaty and may even lessen the possibility of resorting to the dispute resolution mechanism. A decision-maker

[56] See International Court of Justice, *supra* note 33.

[57] See SADC, *supra* note 27; see Iran-US Claims Tribunal, *supra* note 26; see Permanent Court of Arbitration, *supra* note 46.

[58] See Iran-US Claims Tribunal, *supra* note 26.

may be more likely to reach a correct decision if the decision is informed by previous decisions. On the other hand, a decision-maker that approaches each case anew may be less likely to be repeat previous errors.

The ICJ is not bound by prior decisions, but in practice the judges follow precedents stretching back to the ICJ's predecessor, the Permanent Court of International Justice.[59] This yields consistency. Regional mechanisms also tend to produce consistent results as the same body hears multiple disputes arising out of the same treaty. However, if the caseload of a regional dispute mechanism becomes great, the regional mechanism may need to develop a system whereby the full body only hears a portion of the cases and the remaining cases are heard by smaller panels. In bodies that employ this system, such as the Iran-U.S. Claims Tribunal, the decision of the smaller panels or chambers do not bind the full tribunal or future panels and inconsistencies between the decisions of different panels or chambers may arise. For dispute-specific mechanisms, there is potentially no consistency because a new tribunal is constituted for each dispute and prior decisions rendered by other tribunals are not binding. As a matter of practice, however, a tribunal may choose to rely on earlier decisions rendered by other ad hoc tribunals that have interpreted the same treaty.

EFFICIENCY

There are three aspects of efficiency in binding dispute resolution: (1) the cost of establishing the dispute resolution mechanism, (2) the cost of resolving a dispute through the dispute resolution mechanism and (3) resolving the dispute in a timely manner.[60]

Cost of Establishing the Dispute Resolution Mechanism

There is no cost involved in deciding to submit a dispute to the ICJ, as the ICJ is a standing body.[61] States would need to indicate that they are con-

[59] See International Court of Justice, *supra* note 33.

[60] See Malintoppi**, *supra* note** 1.

[61] See International Court of Justice, *supra* note 33.

senting to ICJ jurisdiction in their treaty. Choosing to submit disputes to a regional dispute resolution mechanism typically entails significant up-front costs, as it is likely to require considerable time, money and effort to establish a regional body to resolve disputes under the treaty. These costs are lessened if states choose to submit their disputes under the treaty to a pre-existing regional body. Dispute-specific mechanisms have almost no establishment costs, as the only cost involved is that connected with drafting the arbitration clause in the treaty.

Cost of Resolving a Dispute through the Dispute Resolution Mechanism

At the ICJ, the expenses of the proceedings are paid for by UN member-states' dues.[62] Parties do not pay a filing fee, the judges' salaries or administration fees. The parties, however, must bear the expense of holding hearings at The Hague, translating pleadings and evidence into English or French and making a substantial number of copies of pleadings, as required by the Court's rules. To offset these costs, states may seek assistance from the Secretary-General's Trust Fund, which awards funds to states based on their financial needs and the availability of funds.

For regional mechanisms, there are potentially fewer translations and travel costs if the body is located in the region. The parties, however, must pay the decision-makers a salary or stipend and pay for dedicated hearing space and administrative support.

For dispute-specific mechanisms, like regional mechanisms, translation costs and travel costs may vary. Unlike a regional body, the states may choose to site arbitration outside of the region out of concern for neutrality, as was done in both the Abyei and Ethiopia v. Eritrea arbitrations. The parties to arbitration must pay for arbitrators and administration per case, generally at an hourly fee. For arbitrations that are administered by the

[62] See International Court of Justice, *supra* note 33.

PCA, states that meet certain objective eligibility requirements may seek financial assistance from the PCA Financial Assistance Fund.[63]

Resolving the Dispute in a Timely Manner

ICJ proceedings generally take three-to-five years.[64] The length of proceedings may be due, in part, to the great number of judges who preside over each case and the ICJ's significant caseload. The Court's ad hoc chamber or chamber of summary procedure, which would have fewer judges, may be faster, but the former has been used infrequently and the latter has never been used.

Regional and dispute-specific mechanisms generally have fewer decision-makers and a lesser caseload and the parties can prescribe in the treaty timing requirements for the proceedings and the issuance of judgments. In the *Abyei* and *Eritrea v. Ethiopia* arbitrations administered by the PCA, the parties and the tribunals abided by strict schedules which the parties had developed.[65] As a result, the *Abyei* tribunal rendered a decision within one year and the *Ethiopia v. Eritrea* boundary commission rendered a decision within 16 months.

ENFORCEMENT

Having the means to enforce binding decisions ensures that a state can obtain an effective remedy even when the opposing state fails to voluntarily comply with a decision in a timely manner.[66] More importantly, providing for enforcement may itself encourage voluntary compliance, as it may move states to consider the costs of non-compliance. The ICJ, as well as some regional and dispute-specific mechanisms, has successfully attained high levels of compliance through a combination of incentives for volun-

[63] Permanent Court of Arbitration, *Financial Assistance Fund* as found at www.pca-cpa.org/showpage.asp?pag_id=1179

[64] See International Court of Justice, *supra* note 33.

[65] See Permanent Court of Arbitration, *supra* note 46.

[66] See Malintoppi**, *supra* note** 1.

tary compliance and methods to compel compliance. States are advised to consider these examples and case studies.

ICJ

Statistical data indicates that States ordinarily comply with ICJ decisions.[67] From 1946 to 1987, for example, 80% of ICJ decisions were fully complied with. From 1987-2004, 60% of decisions gained full compliance and the remainder were partially complied with. Compliance since 2004 has been viewed as consistent with historical trends. States may comply with ICJ judgments, in large part, because they want to be seen as responsible actors in the international community.

In *Pulp Mills on the River Uruguay* (2010), both Argentina and Uruguay accepted the Court's decision that Uruguay's action did not violate the applicable treaty.[68] In its decision, the Court noted that Uruguay was obligated to monitor the effects of the mill. Accordingly, in November 2010, the states signed an accord setting up a scientific committee composed of experts from both states to monitor the pollution levels on the river. This appears to be the end of a conflict that threatened relations between the States and which at times nearly turned violent, as thousands of protestors from Argentina blocked a bridge serving the pulp mills intermittently for three years.

In the *Case Relating to the Gabčíkovo-Nagymaros Project* (1997), Hungary and Slovakia complied with the Court's order to negotiate to achieve the objectives of a treaty between the States calling for the joint construction of a dam on the Danube River.[69]

In *Certain Activities Carried out by Nicaragua in the Border Area* (2009), since the Court recognized Costa Rica's right to navigate the San Juan River for ordinary commercial activities, including tourism, Costa Rican

[67] See Llamzon, *supra* note 32.

[68] See International Court of Justice, *supra* note 23.

[69] See International Court of Justice, *supra* note 42.

officials have periodically complained that Nicaragua has disregarded the decision by demanding tolls and seizing commercial goods transported on the river.[70] In November 2010, Costa Rica filed a new, separate claim against Nicaragua before the ICJ, arguing that Nicaragua has made illegal incursions into Costa Rican territory in connection with its construction of a canal off the San Juan River. Nicaragua has responded that the disputed territory is part of Nicaragua.

REGIONAL MECHANISMS

The SADC and the Iran-U.S. Claims Tribunal are examples of two regional mechanisms that have adopted novel means to enforce decisions.

In 2000, the SADC ratified a protocol to promote the sustainable and equitable utilization of shared water resources and empowered the Tribunal to rule on disputes under the protocol as well. If a state fails to comply with a Tribunal decision regarding the treaty or the water protocol, the Tribunal shall report the non-compliance to the Summit, SADC's supreme body, which has the power to issue sanctions. In *Campbell et al. v. Republic of Zimbabwe* (2008) the Tribunal reported Zimbabwe's non-compliance to the Summit, which has yet to take action.[71]

At the Iran-U.S. Claims Tribunal, the treaty establishing the body provided for a US $1 billion security account to be created from Iran's assets frozen by the US in order to pay awards issued against Iran.[72] Iran is required to maintain a minimum balance of US $500 million and promptly make deposits if the amount falls below that figure. To date, the Tribunal has ordered Iran at least twice, in 2000 and 2004, to replenish the security account after extended periods of delinquency. Numerous awards,

[70] See International Court of Justice, *Certain Activities Carried out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)* as found at www.icj-cij.org/docket/index.php?p1=3&p2=3&code=crn&case=150&k=ec&PHPSESSID=8131530fabafdebbd60b6a2ddf96 12d9

[71] See Southern African Development Community Tribunal, *supra* note 44.

[72] See Iran-US Claims Tribunal, *supra* note 26.

amounting to more than two billion dollars, have been paid out from this account.

DISPUTE-SPECIFIC MECHANISMS

In 2002, the *Ethiopia v. Eritrea* boundary commission ruled that the disputed Badme territory is part of Ethiopia and it demarcated boundaries in 2007.[73] Despite these rulings, Ethiopia has refused to relinquish the Badme territory. In the arbitration agreement, the UN was tasked with assisting implementation of the commission's decision by facilitating the resolution of issues related to the transfer of territorial control, but the UN has not been in a position to act because the territory has not changed hands. As for the claims commission, it awarded Ethiopia approximately US $12.5 million (US $174 million minus US $161.5 million that it was held to owe Eritrea). Afterward, Eritrea stated publicly that it accepted the decision without equivocation.[74]

After the Abyei decision, which re-drew the boundaries of the disputed province, the Government of Sudan and the SPLA issued a joint communiqué stating that they would enforce the decision. The demarcation of the boundaries, however, has been delayed. Further, in July 2010, a senior advisor to the Government stated that the decision was inadequate and did not resolve the dispute. The size of the province is a key issue, as Abyei residents will vote in a referendum on whether to join southern Sudan, which held a separate referendum in January 2011 on whether to secede and which was overwhelmingly passed.[75]

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[73] See Permanent Court of Arbitration, *supra* note 46.

[74] See President Isaias Afwerki's declaration at www.eritrea.be/old/eritrea-ethiopia-boundary.htm

[75] According to the Southern Sudan Referendum Commission, 98.8% of voters voted to secede. Voter turnout was 97.58%. See www.ssrc.sd/SSRC2

The situation in the Aral Sea Basin is also illustrative.[76] There is an extensive history of trans-boundary water cooperation in the Aral Sea Basin. However, critical review of past Central Asia (CA) water agreements reveals that the dispute resolution provisions could be much stronger. While these agreements have fostered significant cooperation, implementation could have been greater and agreements have expired, which are principle reasons that basin organizations are working to strengthen the management system. Regardless of how CA states decide to improve their management of shared water resources, a systematic and effective dispute resolution mechanism will significantly strengthen these arrangements and potentially help open the door to opportunities that have yet to be realized.

[76] See Paisley, Richard Kyle, *The Challenge of International Watercourse Negotiations in the Aral Sea Basin*, *A NEGOTIATE Case Study*, Gland 2009 as found at http://cmsdata.iucn.org/downloads/centralasia.pdf

9 CONCLUSION

Fact finding, negotiation, mediation and binding dispute resolution can be combined to create a powerful dispute resolution mechanism that will strengthen trans-boundary water agreements. Each of these approaches reinforces the other. Fact finding helps clarify what is at stake in a dispute, while separating myth from reality. The data and information sharing process that is integral to ongoing provision of facts builds confidence between riparian states and strengthens their ability to identify potential problems before they manifest as disputes. Negotiation and mediation enable the parties to develop tailor made solutions to problems without the imposition of a decision from the outside. Binding dispute resolution, on the other hand, provides the insurance that all parties need that disputes will be resolved fairly and on the basis of the facts if the parties are unable to resolve them themselves through negotiation or mediation.

There are a number of key principles and best practices associated with these different dispute resolution approaches.

Fact finding should be:

- Jointly sponsored by the parties in order to provide a neutral and impartial process;
- Transparent and participatory;
- Utilized to engage key stakeholders in a meaningful manner;
- Supported by effective peer review.

Negotiations should be conducted on the basis of interests rather than positions and should incorporate information sources that are either mutually supported or developed through effective fact finding.

Mediation should be:

- Conducted by a qualified mediator that has the confidence of all parties and a track record for success;
- Implemented in concert with legal and technical experts to provide a coordinated and efficient process support team.

Binding dispute resolution mechanisms should be designed in a manner that reflects the nature of the co-riparian circumstances while ensuring the necessary impartiality and independence of the process. Choices need to be made that address the differing costs, efficiencies and standing of alternate binding dispute resolution arrangements such as regional bodies, ad hoc arbitration and the International Court of Justice.

The prospect that an effective dispute resolution mechanism will be part of an agreement can provide increased confidence that parties need in order to seriously consider more substantial commitments within a negotiation. As a result, parties benefit from considering dispute resolution mechanisms at the beginning of their negotiations rather than at the end, when they are typically addressed. Given the pivotal role that dispute resolution mechanisms play within implementation of agreements, one might expect that the more substantive an agreement is, the more likely it is that it will include a dispute resolution mechanism that guarantees an outcome. As such, framework type agreements that foster cooperation would likely tend towards dispute resolution mechanisms that involve dialogue and negotiation at progressively higher levels within the relevant states without guaranteeing resolution (e.g. Mekong). By contrast, agreements that involve ongoing financial transactions would be expected to contain dispute resolution mechanisms that do guarantee a fair resolution based on the facts (e.g. Columbia).

From a geographical point of view, Central Asian states together with Afghanistan are bound to share the waters of the Aral Sea Basin. Development of a systematic dispute resolution mechanism that includes the elements outlined in this report will enhance the basis for future cooperation and help unlock the significant potential for mutual gain that exists in the region.

FOR NOTES

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