



Conflict Resolution and Negotiation Skills for Integrated Water Resources Management

Training Manual

2nd Edition

Foreword

It has been some years since the former head of the World Bank, Ismael Seragelden, stated that wars of the 21st Century would be fought over water. What we know, however, is that, in the words of H.H.G. Savenije (2002), water is no ordinary economic good. Its characteristics make it both far more important than oil – because it is essential and non-substitutable – and far less likely to cause violent interstate conflict, partly because it is bulky and renewable. Thus, while access, use and management of water resources often cause disputes, disagreements and occasionally violent conflict on a limited scale, these social struggles often lay the basis for cooperation and mutually beneficial outcomes. At the same time, cooperation may degenerate into conflict, due to external or internal pressures of one kind or another. It is therefore important to recognize and groom the potential pathway from conflict to cooperation, through dispute settlement, and to embed these pathways in an institutional framework that will give conflict a formal space to play out, heightening the likelihood that negotiation will ultimately lead to positive and sustainable outcomes.

Conflict cannot be avoided. It is a common aspect of human social systems and relations. Indeed, many argue that conflict is a necessary fact of life, for it is only through struggle that positive, lasting and meaningful change can be brought about. The Netherlands Organization for Scientific Research (NOSR, 2007) defines conflict in the following way:

- Conflict is a process that begins when an individual or group perceives differences and opposition between oneself and another individual or group about interests and resources, beliefs, values or practices that matter to them. This process view can be applied to all kinds of parties – nations, organizations, groups, or individuals – and to all kinds of conflict – from latent tensions to manifest violence. ●●

Competition for water is normal, regularly giving rise to conflict and cooperation (see www.diiis.dk/water). It is generally acknowledged that water resources of all types are under increasing pressure from a number of actors, forces and factors manifest in the early 21st Century world (WWDR, 2006). The way sovereign states will deal with increasing (seasonal, absolute, natural, human-made) scarcities in shared river basins is of particular concern. Geography is thought to play a special role, with location in the basin (upstream/downstream) and in the environment (arid/semi-arid ecosystems) regarded as key factors in future water conflict. Climate change is also thought to pose particular challenges to water-stressed societies and communities that must develop mitigation and adaptation mechanisms in order to survive. At the national level, important questions have arisen concerning the optimal use of limited resources. Debates and disputes are now occurring between and among a wide variety of users (e.g., urban/rural; industry/agriculture; humans/the environment; rich/poor people) within and across watersheds, ecosystems, basins, political jurisdictions and increasingly crowded cities. In rural areas dependent upon rainfall for crop growth and groundwater for domestic (and

livestock) use, conflicts are a daily fact of life which typically grow more heated in the dry season. According to the World

Economic Forum (2011), water is the key element within a water-energy-food-climate change security nexus.

However, disputes do not always lead to conflict, and conflicts do not necessarily become violent. Some fester perpetually beneath the surface and, as with limited access to potable water and improved sanitation in many parts of the world, are part of settled social relations. Nevertheless, a change in the setting – such as an unexpected drought or flood, or a change in government policy, or the appearance of an NGO willing to drill a borehole for a community – can bring long suppressed grievances to the surface.

What is to be done about such events and eventualities? Should we not be prepared? The intention of this manual is to provide the necessary general information and specific tools in a user-friendly way so that any water resource stakeholder may be able to resolve existing or deflect impending disputes in a way that is agreeable to all parties. The emphasis in this manual is on Alternative Dispute Resolution (ADR), in particular, principled negotiation – an approach that seeks to embed outcomes and processes that will serve sustainable, equitable and efficient long-term social needs.

ADR locates itself within the larger framework of integrated water resources management (IWRM). Within the IWRM framework, Cap-Net, among other institutions, groups and networks, has facilitated numerous conflict resolution and negotiation workshops for water managers in anticipation of impending and/or intensifying struggles over the resource. Each of us has been involved – working separately, together, and as part of a larger team – in the planning and implementation of several of these workshops at local (community-based natural resource management), national (e.g., Ethiopia Country Water Partnership), regional (e.g., SADC, Nile-IWRM) and global (combining regions and countries) levels. We have distilled our experiences into this training manual that will act as a user-centered resource in the field of conflict resolution and negotiation for IWRM.

It is our hope that those trained in ADR techniques, and equipped with the background knowledge provided in this manual will be people who, ideally and through practice:

- are sensitive to context;
- are self-reflective and impartial;
- have expertise but are not the experts;
- are able to think outside the box (with creativity and innovation);
- know how to listen;
- know how to ask the right question at the right time;
- are able to discern the root of the problem;
- can take disparate pieces and make a sensible whole;
- are honest;
- are willing to change gears and directions (meaning that s/he is flexible and adaptable);
- are level-headed;
- are firm but not headstrong and able to manage a group that is being difficult;

- are able to recognize when to back off and when to go in;
- are good at reading character;
- are good observers;
- have leadership qualities;
- remain transparent in negotiating the process towards decisions; and
- enable a community or parties to a dispute to make their own decision and find an acceptable way forward that is satisfactory to all.

In our view, these are the ideal qualities of successful conflict managers. Being trained with our manual is a small, first step in what should be a life-long learning process. We wish you all good luck with these materials.

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Introduction

1. World Water Crisis

Water is central to human development. The ability to harness water resources for human use has enabled the rise of complex civilizations. Globally, aggregate national water use varies directly with both Gross National Income and Human Development Index values. Water is both a common and precious commodity. It exists in abundance but is not always located where or when humans need it. Of course, we have not helped matters. For most of human history, we have had limited impact on the resources around us. With rapid technological and social change throughout the last 500 years, however, our environmental footprint has grown to such an extent that we face the greatest challenge yet to human civilization in the form of climate change. Where blue water surface resources are concerned,

●● ‘From a situation of limited, low-impact and largely riparian uses of water, we have now reached a point where, in many parts of the world, cumulative uses of river resources have not just local but basin-wide and regional impacts. The result is that water resources in many river basins are fully or almost fully committed to a variety of purposes, both in-stream and remote; water quality is degraded; river-dependent ecosystems are threatened; and still-expanding demand is leading to intense competition and, at times, to strife’. (Svendsen, Wester and Molle, 2004: 1) ●●

The crisis is compounded by widespread overuse and depletion of groundwater, which The Groundwater Foundation says is ‘the largest source

Box 1: Water crisis - facts

- Only 0.4% of the total global water in the world is available for humans.
- Today more than 2 billion people are affected by water shortages in over 40 countries.
- 263 river basins are shared by two or more nations.
- 2 million tonnes of human waste per day are deposited in watercourses.
- Half the population of the developing world is exposed to polluted sources of water that increase disease incidence.
- 90% of natural disasters in the 1990s were water related.
- The increase in numbers of people from 6 billion to 9 billion will be the main driver of water resources management for the next 50 years.

Source: WWDR/2, 2006

Box 2: Groundwater depletion

Some of the negative effects of groundwater depletion are:

- Lowering of the water table
- Increased costs
- Reduced surface water supplies
- Land subsidence
- Water quality concerns

Source: groundwater.org

of usable, fresh water in the world’ (www.groundwater.org). Overall, it is generally agreed that we face a world water crisis.

Access to water is fundamental to human survival, health and productivity. But there are many challenges related to ensuring the perpetual sustainability of people’s access to water for various purposes. Many development projects have not viewed water within the environment as an

exhaustible supply and the approach has mainly been sectoral and non-integrated, putting a great deal of pressure on this limited resource. The results of this approach, combined with external factors (most notably population increase and climate change), have produced situations where the water source has either run out or is severely stressed. Moreover, it causes many disasters such as pollution, overexploitation of aquifers, floods and the depletion of springs, while funds are wasted on inappropriate projects.

2. A Crisis of Governance

While an understanding of water resources, their dynamics and limitations on abstraction is considered to be essential to permit the development of sustainable water management strategies, it is generally recognized that the problems of today and tomorrow are as much a consequence of poor governance as they are of absolute scarcity (see, UN WWDR2, chapter 2 for details).

Governance is both outcome and process, involving a variety of legitimate and authoritative actors. As an outcome it reflects settled social relations. If it is good, it suggests widespread – if not universal – social approval of its practices. Good governance can never reach an end point; as a process it depends on the reiteration of activities that deepen trust.

3. Transboundary Water Governance

Complicating the issue further is the fact that most of the planet's people live within one of the estimated more than 300 river basins shared by two or more states (Milich and Varady, 1999). These basins cover more than 45 percent of the earth's surface, and 'of the 145 states occupying international river basins, almost two-thirds (92) have at least half of their national territory lying in an international basin, and more than one-third (50) have 80 percent

Box 3: Water governance

'Water governance refers to the range of political, social, economic and administrative systems that are in place to develop and manage water resources, and the delivery of water services at different levels' (Rogers and Hall, 2003).

According to the authors of the UN *World Water Development Report 2*, water governance has four dimensions:

- A social dimension concerned with 'equitable use';
- An economic dimension concerned with 'efficient use';
- An environmental dimension concerned with 'sustainable use'; and
- A political dimension concerned with 'equal democratic opportunities'.

Each of these dimensions is 'anchored in governance systems across three levels: government, civil society and the private sector'. To realize 'effective governance', the UN Report proposes a checklist that includes the following:

- Participation;
- Transparency;
- Equity;
- Effectiveness And efficiency;
- Rule Of Law;
- Accountability;
- Coherency;
- Responsiveness;
- Integration; and
- Ethical considerations.

The absence of some or all of these practices has resulted in 'bad' or 'poor' governance, a simple definition of which is the inability and/or unwillingness to alter patterns of resource allocation, use and management despite clear evidence of resource degradation, uneconomic behaviour and abiding poverty and social inequality (UN, 2006: 49).

Source: *World Water Development Report 2*, 2006

or more of national territory in an international basin' (Conca, 2006). Given that sovereign states claim the right to develop resources located within their territory, and given that water is fugitive – it is not respecting international political boundaries – as demands for water increase across communities, states and sectors, the likelihood of conflicts over water increases.

4. Integrated Water Resources Management

Avoiding or minimizing the negative effects of physical and human-induced resource scarcity 'will require institutional innovations that allow focusing simultaneously on the goals and trade-offs in food security, poverty reduction, and environmental sustainability' (Molden, 2007: 62). Such a perspective has now crystallized in the concept of Integrated Water Resources Management (IWRM), within which conflict resolution is regarded as an important tool.

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Module 1

Integrated Water Resources Management (IWRM) and Conflict Resolution

Learning objectives

- To describe the meaning and main principles of IWRM and demonstrate its relevance for managing conflicts.
- To describe the various tipping points for conflict and cooperation on water resources.

Outcomes

The participant will have a clear understanding of:

- The link between IWRM, conflict and conflict management;
- The relevance of conflict management skills; and
- The central importance of gender in water management.

Skills

The participant will be able to:

- Identify possible entry points to systematically analyse his or her particular setting through the lens of IWRM; and
- Perceive conflict resolution from the perspective of Alternative Dispute Resolution (ADR).

1.1 What is Integrated Water Resources Management (IWRM)?

It is clear that the basis for integrated water resources management is simply the fact that many different uses of water resources are interdependent. High irrigation demands and polluted drainage flows from agriculture, mean less fresh water for domestic or industrial use; contaminated municipal and industrial wastewater pollutes rivers and threatens ecosystems; if water has to remain in a river to protect fisheries and ecosystems, less can be diverted to grow crops; and if less blue water is available for crop production, farmers may then have to change crops or rely on rainfall, heightening the importance of their understanding of green water and of water as part of an ever-cycling system.

Box 1.1: Integrated management

Integrated management means that all the different uses of water resources are considered together. It contrasts with the sectoral approach. When responsibility for drinking water, water for irrigation, for industry and for the environment rests with different agencies, the lack of cross-sectoral linkages leads to uncoordinated water resource development and management, resulting in conflict, waste and unsustainable systems.

'IWRM is a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.' (GWP, 2000)

Cap-Net (2005) explains IWRM as a systematic process for the sustainable development, allocation and monitoring of water use in the context of social, economic and environmental objectives. That means all the different uses of water resources are to be considered together, taking into account the wide range of people's water needs. Water allocations and management decisions should consider the effects of the different uses on the others, and take overall social, economic and environmental goals into account.

Box 1.2: Meaning of management

Management is used in its broadest sense. It emphasizes that we must not only focus on development of water resources but that we must consciously manage water development in a way that ensures long-term sustainable use for future generations.

IWRM recognizes the following aspects:

1. Linkages of landscape to hydrological cycle:

The hydrological cycle is continuously affected by the modification of the landscape due to land and water use activities. Understanding the linkages between the landscape and the hydrological cycle is important for improved water management. Consideration of the hydrological cycle throughout the year is important since water stored in wetlands and aquifers (groundwater reservoirs), through recharge during the wet season, is the source of base flow in the river during the dry season. Modification of land cover through land use change (e.g., rural to urban, agriculture to urban, forest to agriculture, etc.), encroachment of

floodplains and wetlands, and deforestation bring changes in the physical properties of the land surface. These land use activities modify the landscape, which brings changes in the infiltration and groundwater recharge processes as well as the surface run-off and sediment transport processes that cause increased flood flow and decreased dry season flow in the river and alteration of the river regime.

2. Water resources system functions:

The water resources system performs a wide variety of functions that deliver goods and services to the society and sustenance of ecosystems. Some of the functions are:

- Environmental functions: recharging wetlands and groundwater, augmentation of dry season flow, assimilation of wastes, etc.;
- Ecological functions: providing soil moisture for vegetation, providing habitat for fish, aquatic plants and wildlife, supporting biodiversity, etc.;
- Socio-economic functions: supplying water for domestic use, agriculture, industry and power generation, providing conditions for navigation, recreation & tourism, etc.

IWRM does not only take into account the financial and economic costs and benefits of water management decisions, but also the social and environmental costs and benefits. Ignoring these functions in water management decisions can have large impacts on economies, the environment and livelihoods.

3. Interdependence of land, water and ecosystems:

Many land uses are dependent on water availability and influenced by water related hazards, while they modify the water regime. Availability and quality of water and the aquatic ecosystem are affected by withdrawal of water from rivers, lakes and aquifers for a multitude of different purposes such as domestic, agriculture, industrial, etc.

4. Multiple water users, conflicting needs and increasing demand:

With the growth of population and economic development, demand for water also grows, creating stress on the finite resource – water. If adequate measures to improve water use efficiency and to conserve this scarce resource are not taken, attaining water security will be difficult. Competing water needs cause conflicts e.g., between domestic and agricultural uses; agriculture and industry; agriculture and fisheries; upstream and downstream; highland and lowland; rural and urban areas, etc. A major environmental concern is the conflict between the water uses by humans and the water needed by the river itself to transport sediment, to maintain its morphology in order to satisfy ecological requirements. IWRM incorporates the full range of sectoral interests as well as water resources allocation decisions, taking into account the relevant constraints and objectives of society.

Generally IWRM promotes:

- A shift from a sectoral to a more cross-sectoral approach to integrate ecological, economic and social goals to achieve multiple and cross-cutting benefits;
- The coordinated management of water, land and related resources;

- Integration of the technical, social and political aspects, including conflict resolutions in demand, use and perception, be it in the economic, environmental or geopolitical sense;
- Integration across sectors, integration of use, integration of demand, integration with the environment as well as integration with the people;
- Stakeholder participation to encourage wider ownership and to empower stakeholders. Active involvement of all concerned and interested groups in resolving conflict and promoting general sustainability to bring more efficient and socially responsible water management that benefits all sections of society will involve new institutional arrangements; and
- A systems approach that recognizes the individual components as well as the linkages between them, and that a disturbance at one point in the system will affect other parts of the system.

In summary, water resources management needs to look at the hydrological cycle in the basin, the interaction of surface water and groundwater, and the interaction of water with other natural and socio-economic systems. It should take into account multiple water users, multiple purposes and conflicting needs, consider interdependence of land, water and ecosystems, and address the role of water within the context of social and economic development and environmental sustainability.

1.2 IWRM Principles and Key Criteria

An IWRM approach is underpinned by the Dublin Principles on Water and the Environment. These familiar and virtually universally recognized principles are:

Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment.

Only 3 percent of the global water is fresh water while 97 percent is seawater. Of the 3 percent fresh water, 87 percent is not accessible as it is ice/glacier, mostly in the Polar Regions. That means the accessible fresh water available for use is only 0.4 percent of the global totality.

Water development and management should be based on a participatory approach involving users, planners and policy makers at all levels.

Water is a subject in which everyone is a stakeholder. Real participation only takes place when stakeholders are part of the decision-making process. The type of participation will depend upon the spatial scale relevant to particular water management and investment decisions. It will also be affected by the nature of the political environment in which the decisions take place. A participatory approach is the best means for achieving long-lasting consensus and common agreement.

Women play a central role in the provision, management and safeguarding of water.

The pivotal role of women as providers and users of water and guardians of the living

environment has seldom been reflected in institutional arrangements for the development and management of water resources. Acceptance and implementation of this principle requires positive policies to address women's specific needs and to equip and empower women to participate at all levels in water resources programmes, including design, decision-making and implementation, in ways defined by them.

Water has an economic value in all its competing uses and should be recognized as an economic good.

Water must be managed in a way that reflects the economic value for all its uses by moving towards pricing water services to reflect the cost of its provision. Within this principle, it is vital to first recognize the basic right of all human beings to have access to clean water and sanitation at an affordable price. Managing water as an economic good is an important way of achieving social objectives such as efficient and equitable use, and encouraging conservation and protection of water resources.

There is also a need to recognize the fundamental importance of pursuing water use and management reforms in line with the criteria that take into account social, economic and environmental conditions (GWP, 2000). These constitute the so-called 'Triple E bottom line':

1. Efficiency in water use: Because of the increasing scarcity of water and financial resources, the finite and vulnerable nature of water as a resource, and the increasing demands upon it, water must be used with maximum possible efficiency.
2. Equity: The basic right for all people to have access to water of adequate quantity and quality for the sustenance of human well-being must be universally recognized.
3. Environmental and ecological sustainability: The present use of the resource should be managed in a way that does not undermine the life-support system thereby compromising use by future generations of the same resource.

Box 1.3: Value and charges

These are two different aspects and we have to distinguish clearly between them. The **value** of water in alternative uses is important for the rational allocation of water as a scarce resource, whether by regulatory or economic means. **Charging (or not charging)** for water is applying an economic instrument to support disadvantaged groups, change behaviour towards conservation and efficient water usage, provide incentives for demand management, ensure cost recovery, and indicate consumers' willingness to pay for additional investments in water services.

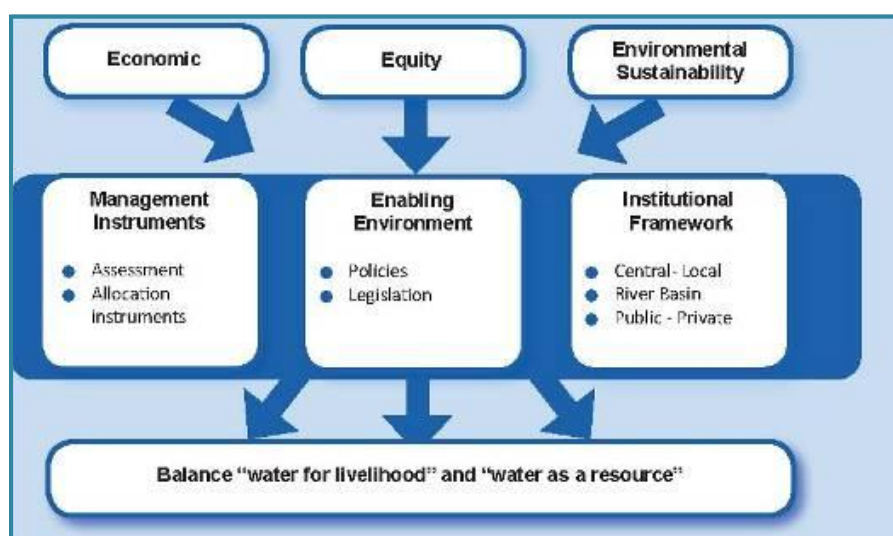


Figure 1.1: The three pillars of water resources management

1.3 Tipping Points for Conflict and Cooperation

Given what has been said about the state of the world's water in the Introduction above, initiating change towards a 'Triple E' practice, although necessary, will certainly touch political, economic and social nerves. While particular practices may lead to environmental degradation or award resources to only certain groups in a society, the beneficiaries of these policies and practices will be resistant to change. It is imperative, therefore, that we understand that IWRM, in counselling change, can create a climate for both conflict and cooperation. Several key tipping points are highlighted below.

Achieving good water governance

In 2004, the Global Water Partnership (GWP) identified 13 key change areas within the overall water governance framework, categorizing them in terms of an enabling environment (policies, legislative framework, financing and incentive structures), institutional roles (organizational framework, institutional capacity building) and management instruments (water resources assessment, planning for IWRM, demand management, social change instruments, conflict resolution, regulatory instruments, economic instruments, information management and exchange). Every one of these areas holds the potential to contribute to more equitable, efficient and sustainable water use and management. Since each one requires current practice to change, it also holds the potential to create conflict within and across user groups and societies. While change is key, how one achieves it – the time, place and pace – are equally important.

Securing water for people

Access to safe and sufficient water and sanitation are basic human needs and are essential to health and well-being. Although most countries give first priority to satisfying basic human needs for water, approximately one-fifth of the world's population does not have access to safe drinking water and one-third of the population is without access to adequate sanitation. These service deficiencies primarily affect the poorest segments of the population in developing countries. In these countries, meeting water supply and sanitation needs for urban and rural areas represents one of the most serious challenges in the years ahead. Halving the proportion of the population lacking water and sanitation services by 2015 is one of the Millennium Development Goals. While the drinking water goal was met by 2012, the sanitation goal remains far out of sight, with only 63 percent of people having access to improved sanitation. In addition, Sub-Saharan African and South Asian statistics regarding access to potable water and improved sanitation reflect abysmal performance in many places. Are these persistent vulnerabilities the breeding ground of future conflicts? So-called 'toilet wars' across much of urban South Africa suggest that poor people are no longer willing to simply 'make do' while the wealthy segments of society receive the best services.

Securing water for food

Population projections indicate that over the next 25 years food will be required for another 2-3 billion people. Water is increasingly seen as a key constraint on food production, equivalent to if not more crucial than land scarcity. Irrigated agriculture is already responsible for more than 70 percent of all water withdrawals (more than 90 percent of all consumptive use of water). Even with an estimated need for an additional 15-20 percent of irrigation water

over the next 25 years – which is probably on the low side – serious conflicts are likely to arise between water for irrigated agriculture and water for other human and ecosystem uses.

Water for ecosystems

Land and water resources management must ensure that vital ecosystems are maintained, and that adverse effects on other natural resources are considered and, where possible, reduced when development and management decisions are made. Terrestrial and aquatic ecosystems produce a range of economic benefits. The ecosystems depend on water flows, seasonality and water table fluctuations and are threatened by, among other things, poor water quality. Does this mean that concerns for environmental protection stand above the needs of economic development? Where financial, human and technical resources are limited, managing both the environment and development, or approaching development in an environmentally sensitive way is not always possible. Trade-offs will be necessary, but how and who will decide?

Gender disparities

Formal water management is male dominated. Though their numbers are starting to grow, the representation and influence of women in water sector institutions is still very low. This is important because the way that water resources are managed affects women and men differently. Throughout the world, and particularly in rural areas, women are the custodians of family health and hygiene and providers of domestic water and food. Therefore women are the primary stakeholders in household water and sanitation. Yet, decisions on water supply and sanitation technologies, locations of water points, and operation and maintenance systems are mostly made by men. How may this effectively be changed? What, exactly, does 'gender mainstreaming' mean?

Managing risks

Drought, flood, point-source and diffuse pollution, upstream actions with downstream impacts – these are all common events, often with uncommon and unpredictable outcomes. Ensuring early warning systems and adequate structural responses to both natural and human-made calamities are key activities in conflict avoidance. Positive initial responses must be built upon and lead to appropriate mitigation and adaptation procedures – this is even more important in the face of the anticipated negative effects of global warming on local and global hydrological cycles.

Valuing water

Water is not merely an input into production processes, although it is too often treated this way. In addition to the economic value, water in all its uses has social, environmental and cultural values. At the same time, as the world becomes increasingly urban, and as the demand for food increases, the economic cost of systems of delivery – for whatever use in light of whatever value – proves the point that while rain falls freely, pipes cost money. How water is priced must also reflect issues of equity, meeting the needs of the environment, the poor and the vulnerable. Studies show that consumers are willing to pay for water services – but those services must be affordable and, above all, reliable. Taken in combination, these facts suggest the need for decisions about best practice and wise use made in culturally, socially, economically and environmentally sensitive ways: undoubtedly a recipe for conflict.

Water for industry and cities

Economic wealth, created in sufficient quantity to benefit entire societies, depends on secure supplies of bulk water. As basins approach closure – meaning that there is no more blue water to be allocated – difficult decisions need to be taken regarding best use. Should irrigated agriculture continue to utilize 70 percent of all withdrawals when the sector contributes only 4 percent to the national Gross Domestic Product? While industry uses less water to more profitable effect, there are often ecological costs involved. As many states are eager to attract new industry, but lack the capacity to monitor their behaviour and sometimes fear that applying the polluter pays rule will drive them out to a neighbouring country, many governments are unwilling to adhere to their own laws regarding environmental and social health. As cities grow, the demand for water rises and governments may be faced with decisions about building dams or transferring water from one basin to another. Rural people may lose out in these decisions. What are the ways forward? And, how to manage the conflicts that are sure to arise?

Water in a transboundary setting

All of the above points become more serious where sovereign states are involved. As shown below in Module 4, states often act unilaterally when it comes to the management of transboundary waters. This is especially the case when the upstream state is more politically and economically powerful than the downstream state. International law is notoriously weak. As described in Module 4 below, there are numerous global agreements, statements and conventions that are in place, and also in the making, to address the issues of the prevailing or expected conflicts. One such convention is the United Nations (UN) Convention on the law of the Non-Navigational uses of International Water Courses (1997; ratified in 2014). However, too often states act unilaterally – i.e. in the ‘national interest’ – when it comes to water resource planning, use and management. What do states disagree upon? The pie chart (on page 14) shows that states mainly argue about the quantity of water and the types of infrastructure in place that affect the amount and timing of flows.

The charts below (Fig 1.2) also show that states cooperate on the same issues – thus forming the basis for conflict avoidance and mutual gain. The adoption of an IWRM-oriented, basin-wise planning and management approach could further cooperative practice and lead to collective participation across a number of shared interests:

- Equitable sharing of rivers during lean periods;
- Sharing of data and expertise for flood forecasting;
- Watershed management;
- Hydropower generation;
- Augmentation of flow during the lean period;
- Cooperation in flood management;
- Cooperation in navigation system;
- Control of seepage, sedimentation and other losses;

- Cross-border pollution management; and
- Cooperation in river basin management training.

Indeed, the evidence shows that while there are many conflicts, there is much more cooperation on the use of surface waters of all kinds.

Box 1.4: Water wars?

Animating much of the research conducted on transboundary waters over the last twenty years, is the persistent sense that water will be ‘the oil of the future’ and that ‘future wars will be about water’. Gleick (2000) shows that through history water has been involved in conflict as: a political or military tool, a military target, an object of terrorism, part of development disputes, and an object of control. Worries about climate change have resurrected this discourse, so that water and conflict is once again high on policy makers’ agendas.

However, according to Wolf et al. (2005: 84), ‘[N]o states have gone to war specifically over water resources since the city-states of Lagash and Umma fought each other in the Tigris-Euphrates basin in 2500 B.C. Instead, according to the Food and Agricultural Organization of the United Nations, more than 3,600 water treaties were signed from A.D. 805 to 1984’.

In the conclusion to an empirical study conducted by Gleditsch and Toset (204: 17, 22), the authors state: ‘While acute conflicts over single rivers are rare, the presence of a large shared river basin provides far more to fight over ... This is not evidence for “water wars”, but shared water resources can stimulate low-level interstate conflict. That in no way excludes cooperation, and indeed the low-level conflict may be an important incentive for more cooperation. That relationship, however, remains to be investigated’.

According to Wolf et al. (2005: 84-85), ‘The incidence of acute conflict over international water resources is overwhelmed by the rate of cooperation’; ‘despite the fiery rhetoric of politicians ... most actions taken over water are mild’; ‘there are more examples of cooperation than of conflict’; and ‘despite the lack of violence, water acts as both an irritant and a unifier’. In conclusion, they state, ‘The historical record proves that international water disputes do get resolved, even among enemies, and even as conflicts erupt over other issues. Some of the world’s most vociferous enemies have negotiated water agreements or are in the process of doing so, and the institutions they have created

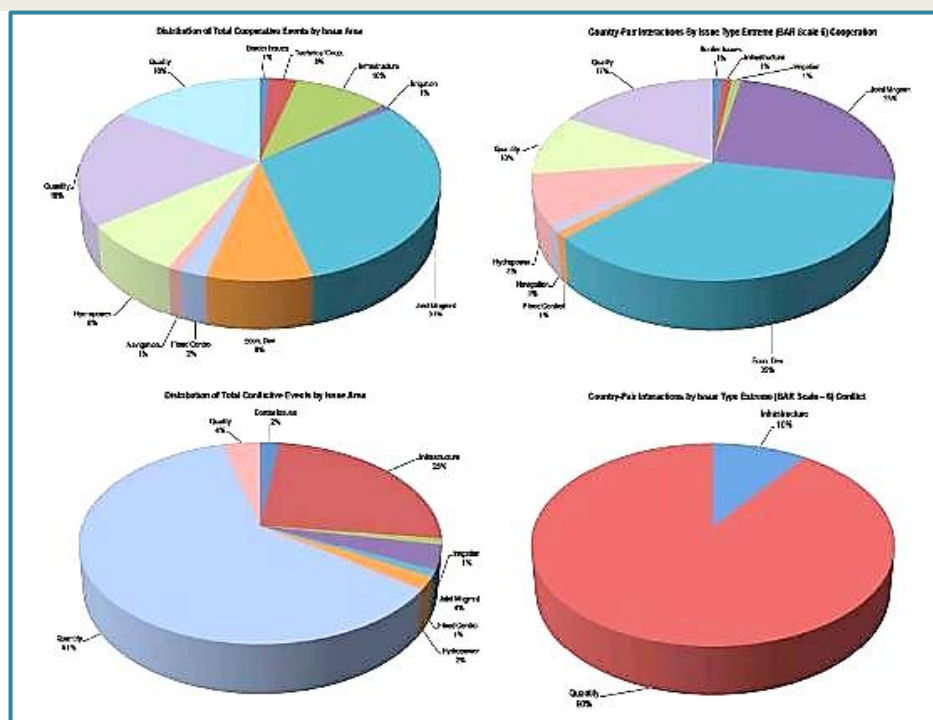


Figure 1.2: Cooperation and conflict in international river basins

Box 1.5: Conceptual innovation

To assist decision makers in achieving IWRM and avoiding conflict, new ways of understanding water have been developed. Given that most international law has been negotiated about the quality and quantity of visible 'blue' freshwater resources – lakes, rivers, streams, wetlands – the world's water experts have taken great pains to alter this narrow understanding of what water is, what its values are, and how it interrelates with other aspects of the ecosystems in which it is found. Thus, Falkenmark and Rockstrom (2004) emphasize the importance of '**green water**' (i.e. water transpired by plants) and '**soil moisture**' (water contained in the root zones of plants) in food production. A.J. Allan's notion of '**virtual water**' – i.e. the amount of water used to make a product – is another innovation that allows policy makers to take more informed decisions about how water is allocated in a basin.

Climate change: into the unknown

While great portions of the world's population are used to facing extreme events, and many have developed ingenious coping mechanisms for dealing with drought, flood, bimodal and trimodal rainfall regimes, El Nino and La Nina events, and so on, climate change suggests that these enviro-culturally derived mechanisms will no longer be sufficient to deal with increased instances and wider fluctuations of these extreme events. There is a great deal of uncertainty regarding the specific biophysical impacts of climate change, as well as the ways in which these changes will impact the other tipping points highlighted above. Scholars of 'resilience' argue that we must be ready for surprise. What will this mean for water resources management? It is being suggested that, among other things, we must institutionalize our plans for and responses to these surprise events, creating flexible and adaptable structures that can cope with the socio-economic and socio-political pressures that will no doubt emerge. In other words, *ad hoc* responses to climate change-induced social stress are a recipe for suboptimal outcomes that will give rise to conflict. This must be avoided at all costs.

1.4 IWRM and Conflict Management

The case for IWRM is strong – many would say incontestable. The problem for most countries is the long history of sectoral development based on a narrow understanding of water as an input into economic development.

According to the UN World Water Development Report 2 (2006: 17), 'Humanity has embarked on a huge global ecological engineering project, with little or no preconception, or indeed full present knowledge, of the consequences ... In the water sector, securing reliable and secure water supplies for health and food, the needs of industrial and energy production processes, and the development of rights markets for both land and water have hugely changed the natural order of many rivers worldwide'.

We are now coming to grips with the enormity of the problems we have created for ourselves through the unselfconscious manipulation of nature for particular ends. The need for change is undeniable. With change comes challenge, and challenges lead to both threats and opportunities. There are threats to people's power and position, and threats to their sense of

themselves as professionals. IWRM requires that platforms be developed to allow different stakeholders, often with apparently irreconcilable differences to somehow work together.

As the Global Water Partnership puts it:

IWRM is a challenge to conventional practices, attitudes and professional certainties. It confronts entrenched sectoral interests and requires that the water resource is managed holistically for the benefit of all. No one pretends that meeting the IWRM challenge will be easy but it is vital that a start is made now to avert the burgeoning crisis.

IWRM provides a solid framework for thinking systematically about a future where water use is ecologically sustainable, socially equitable and economically efficient. Today more than 154 countries around the world are in the process of reforming their water use and management practices in line with IWRM principles. Arriving at progressive, 'Triple E' outcomes will not be easy. The primary challenge is to transform the inevitable conflicts that will arise into productive, win-win, mutually beneficial outcomes that will lead to long-term gains. As Mirumachi (2015) and her colleagues (Zeitoun and Mirumachi, 2008) have shown: cooperation and conflict are not mutually exclusive. Rather, they can coexist across a wide range of issues at multiple levels of society. It will be important for us, as practitioners of conflict resolution, to not only learn but heed the lessons of where and why things went wrong, or right, and for whom, and to build this knowledge into our practice.

Box 1.6: Key IWRM-oriented questions to ask yourself

- What is the evidence of commitment to Integrated Water Resources Management in your country?
- Considering the water management structures in your country, what institutional and legal reforms are needed to implement IWRM?
- Is it urgent to manage water resources in an integrated manner and how is this best done? What will the benefits be for the different sectors?
- How are men and women affected differently by changes in water resources management in your country?

EXERCISE

In My Country

Linked to Session 2 (Integrated Water Resources Management (IWRM) and water conflict and cooperation)

Participants should be organized into 4-6 groups (depending on the number of participants, the optimum number of participants per group being about 5). The easiest way to organize the groups, and to prevent self-organizing cliques from forming, is to have participants count off in a repetitive 1-2-3-4-5-1-2-3-4-5-etc. fashion and then group all number 1s together, number 2s together and so on.

Structure conversation around the following questions:

- What are the three top water management issues in your country?
- How are they being addressed?

Each group should appoint a rapporteur.

Having provided course members with numerous examples in the formal presentation, this exercise allows them to compare and contrast their own settings and to exchange ideas about the various ways and means for addressing common problems. This exercise will also quickly build rapport among participants as they will see that they are 'all in the same boat'.

Time: 30 minutes, followed by a 30-minute report back from the groups.

Session handouts: Below is a sample session handout that should be completed ahead of the workshop for each activity in a session. The one below is attached to the formal presentation by the facilitators in this Module (Appendix 3).

Box 1.7: Sample session handout			
TOT on conflict resolution and negotiation skills for IWRM19-23 June 2006 Lusaka, Zambia			
Session	Understanding Conflict	Day 1	Monday 19 June 2006
Topic	Introduction to IWRM and water conflict and cooperation		
Rationale	Water resource conflicts take many forms – from mild disagreement to threats and acts of physical violence. It is generally accepted that many parts of the world – including southern Africa – are or will soon be facing water scarcities. It is thought that scarcity may lead to various types of conflict: supply-induced; demand-induced; or structurally induced. IWRM is a process that seeks to manage these conflicts by, among other things, changing the way the resource is currently used; changing the process by which decisions regarding allocation and usage are taken; and providing new ways of thinking about the resource so that equitable, efficient and sustainable use may be achieved. In short, IWRM is a tool for conflict management and resolution.		
Duration	One hour		
Objectives	To illustrate the various ‘tools’ provided by IWRM in preventing, managing and resolving water related conflicts; to illustrate likely tipping points for cooperation and/or conflict on water.		
Course Material	N/A		
Resource Person	Larry A. Swatuk, Associate Professor, Harry Oppenheimer Okavango Research Centre, University of Botswana, Private Bag 285 Maun Botswana		
Learning Methods	¾ PowerPoint overview of issues; ¼ semi-structured debriefing		
Background Reading	Mostart, E., Conflict and Cooperation in the Management of International Freshwater Resources: a global review, (UNESCO-IHP #19) available from www.unesco.org/water/wwap/pccp)		
References	<p>Van der Zaag, P., 2005, Integrated Water Resources Management: irrelevant buzzword or key concept? Physics and Chemistry of the Earth 30, Elsevier, 867-871</p> <p>Global Water Partnership-Technical Advisory Committee, 2000, Integrated Water Resources Management, Technical Paper No. 4, GWP, Gland</p> <p>Moriarty, P., J. Butterworth, C. Batchelor, 2004, Integrated Water Resources Management: and the domestic water and sanitation sub-sector, Delft, IRC International Water and Sanitation Centre (May)</p> <p>Wolf, A., M. Stahl, M. Macomber, 2003, ‘Conflict, Cooperation and University Support for Institutions in International River Basins’, paper presented at the annual meeting of the ISA, Portland, Oregon</p>		

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Module 2:

Approaches to Conflict Management

Learning objectives

- To highlight different methods for conflict management.
- To emphasize the utility of techniques of Alternative Dispute Resolution (ADR), also called Alternative Conflict Management (ACM) or Alternative Conflict Resolution (ACR).
- To develop the methodology for dispute resolution and conflict management.

Outcomes

- Knowledge of ADR as a necessary component of successful Integrated Water Resources Management (IWRM).

Skills

- Application of particular tools for the systematic analysis of the root causes of conflict as a necessary starting point for its management.

2.1. Managing Conflict

Conflict is a fact of life, and it comes and goes as life moves on. Conflict is part of a larger process since it may arise out of an array of objective and subjective conditions that demand resolution on a sustainable basis.

Within the IWRM context, these are some of the areas that generate conflict:

- Interdependence of people and responsibilities;
- Jurisdictional ambiguities; functional overlap;
- Competition for scarce resources;
- Difference in organizational status and influence;
- Incompatible objectives and methods;
- Differences in consumption styles;
- Distortions in communication; and
- Unmet expectations.

There are two ways of handling conflict. The first is 'conflict management' which has emerged as a much broader approach. The second is the more conventional 'conflict resolution' method. While conflict resolution methods concentrate on using techniques after the occurrence of a conflict, conflict management assumes a more proactive role in preventing conflicts by fostering productive communication and collaboration among diverse interests, addressing the underlying causes of conflicts, developing trust and understanding, and using participatory and collaborative planning to undertake complex tasks.

Along with its proactive focus, the conflict management approach also uses methods that involve negotiation, mediation, conciliation and consensus building.

The conflict management process does not begin with the identification of a particular conflict. For example, it fits in the planning stage of a project or programme of water resource development, anticipating potential conflict in the use rights of stakeholders defined in terms of time-frame, space and magnitude.

Thus it is an ongoing process in which the stakeholders constantly work to create the conditions that discourage dysfunctional conflict and encourage conflict resolution processes

Box 2.1: Conflict

Conflict is present when two or more parties perceive that their interests are incompatible, express hostile attitudes or ... pursue their interests through actions that damage the other parties. Interests can differ over:

- Access to and distribution of resources (e.g., territory, money, energy sources, food);
- Control of power and participation in political decision-making;
- Identity (cultural, social and political communities); and
- Status, particularly those embodied in systems of government, religion, or ideology (Schmid, 1998).

Source: WWDR

that facilitate 'win-win' outcomes.

In a more technical sense, conflict management refers to a broad array of tools used to anticipate, prevent and react to conflicts. A conflict management strategy will involve a combination of these types of tools. These tools are used to encourage the parties to open up, identify the real issues behind the publicly pronounced positions, and find win-win solutions that leave both parties better off with the outcome. However, it is not possible to come up with win-win outcomes all the time. In order to succeed, trade-off and compromise could be necessary. Even then, in some cases, if a party is convinced that collaborative efforts will not yield better results than those that can be gained through unilateral action, it will not attempt any collaborative action.

Generally, we associate the resolution of disputes or conflicts with legal outcomes: two aggrieved parties turn to the law in search of a 'once and for all, who's property is it?' approach that too often leads to win-lose outcomes and a settlement that leaves one party frustrated, disappointed and perhaps in search of revenge. Since we all need water, these methods are to be avoided. In place of formal legal approaches, there are Alternative Dispute Resolution (ADR) mechanisms. These are based on principled negotiation – i.e. the desire to bargain in good faith towards mutually beneficial, win-win outcomes for long-term gain.

An important issue in conflict management is the overall question of change at all levels of a society. Conflict is a doorway that may hold the potential for change. On the surface, conflict may be highly deceptive. When unfolded, some situations may reveal the structural parameters that hamper progress in some sectors of the society. This may even trigger the development of a national agenda for broad societal and institutional reforms that may result in a more equitable and sustainable use of natural resources. It is therefore questionable whether all conflicts should be managed at their first appearance. Hasty solutions may lead to the suspicion that one party is trying to hide something from public view in order to advance their own self-interest.

Box 2.2 Text Box: Resource scarcity conflicts: demand, supply, social structure

Research shows that the vast majority of water conflicts result from issues related to quantity, with drought significantly heightening tensions among users competing for rural water supply, and flood tending to bring people together in cooperation. Homer-Dixon categorized resource scarcity conflicts in three ways: demand-induced (e.g., from an increase in population or a change in local use patterns such as investments in irrigation), supply-induced (e.g., where water is seasonally or permanently scarce due to a change in the hydrological cycle), and structural scarcity (e.g., where powerful actors have captured the resource and driven others to the margins of the systems of supply, such as commercial agriculture in relation to smallholder agriculture across much of the world today). Structural scarcity is often underpinned by cultural factors – such as men accessing water for their cattle ahead of women who need it for their gardens and domestic use in rural areas – and other deep-rooted socio-economic factors such as caste, class, race, religion, gender, ethnicity and tribe, which form hierarchies of power and privilege around the world. A third-party mediator, facilitator, negotiator must be aware that these factors may make the successful remediation of demand induced or supply induced scarcity conflicts next to impossible. There are numerous techniques, such as inter-group dialogues, available to help steer these deep-rooted conflicts onto a more cooperative path.

Box 2.2 Text Box: Resource scarcity conflicts: demand, supply, social structure (continued)

This manual, however, is neither focusing on structural types of conflict, nor the techniques for their resolution. In dealing with supply or demand induced scarcity conflicts, it is important nevertheless, to always be on the lookout for structural factors, which may be revealed through the use of the onion tool and the conflict mapping tool (see figures 2.6 and 2.7). In general, around the world, we have either ignored structural factors (because powerful actors make and uphold the laws) or attempted to deal with them through legislation (e.g. new Water Laws, laws against discrimination based on a variety of factors, and the articulation of constitutional rights and responsibilities).

Connected with the above is the distinction between the symptoms and the underlying causes of a conflict. In complex cases it is difficult to distinguish between the two, and people are unwittingly led to believe that a certain conflict has been effectively resolved when in reality it is only the symptoms that have been taken care of without touching the deep-seated causes. For long-term solutions of conflicts, it is necessary to identify the root causes and address them properly.

2.2 Methods of Conflict Resolution

While conflict may be difficult, it is by no means a destructive process. As has already been pointed out, conflict has a positive role to play if only we have the necessary skills to create the synergy for the well-being of all the contending parties. There are no particular tailored techniques, either formal or informal, to manage conflicts although the techniques are based on intuition, logic and communication arts. The following are the most commonly known methods of conflict resolution. The comparisons between different methods of conflict resolution are presented in the table below.

Litigation

Short of coercion and physical violence, the ultimate formal mechanism for conflict resolution is taking recourse to the legal system of the country. In a legal proceeding, the parties to a dispute are heard by a court of law that decides upon the case on the basis of existing laws in force in the country. In many instances, this is the only way to resolve a conflict but in many other cases, it may not be so. This is particularly true in the context of IWRM where:

- Conflicts involve the use of a common resource over which no party has a clearly superior legal claim;
- Legal rules prevent parties from bringing an action to court if they do not have a right that has been directly infringed;
- Legal rules may also prevent a party with a grievance from having access to the courts to have its case heard; and
- Narrow procedural and legal issues have precedence over policy issues, thereby failing to resolve the real differences between the contending parties.

Alternative Dispute Resolution (ADR)

To overcome the limitations of litigation, Alternative Dispute Resolution (ADR) techniques have been developed in the West in the past century and are frequently applied in many jurisdictions successfully. ADR techniques, with their emphasis on consensus-seeking outcomes, resonate with many traditional societies. Here, we shall briefly review those techniques.

Box 2.3: In search of a happy medium

The United States of America is generally regarded as a highly litigious society, meaning that people prefer to let the courts decide the outcomes of specific grievances rather than trying to work through them on their own. In some ways, this reflects the respect for the rule of law in a mature democracy. In other ways, however, it also reflects a cultural preference for 'let the winner take all' outcomes. In many parts of the world, the law is not regarded with such respect. In many cases it is viewed as a tool developed by powerful actors to serve their own interests.

Even where the law is highly respected, too often poor people in particular lack the knowledge and financial means to resort to the courts for the righting of a perceived wrong – for example, where an upstream textile company is polluting a downstream fishery and negatively impacting the livelihoods of people there. The primary tool in the hands of the urban and rural poor is mass action.

In Cochabamba, Bolivia, people took to the streets to demonstrate their dismay with the process of the privatization of water delivery systems. ADR seeks a happy medium – between 'winner takes all' and mass action. In both cases grievances tend to linger and conflict continues to simmer just below the surface.

Negotiation

Negotiation is a process where the parties to the dispute meet to reach a mutually acceptable solution. There is no facilitation or mediation by a third party: each party represents its own interest. Large disputes over public policy are increasingly being settled using processes based on mediation and negotiation, commonly referred to as negotiated rule making or regulatory negotiation. Representatives of interested parties are invited to participate in negotiations to agree on new rules governing issues such as industrial safety standards and environmental pollution from waste sites.

Facilitation

Facilitation is a process in which an impartial individual participates in the design and conduct of problem-solving meetings to help the parties diagnose, create and implement jointly owned solutions. This process is often used in situations involving multiple parties, issues and stakeholders, where issues are unclear. Facilitators create the conditions where everybody is able to speak freely, but they are not expected to volunteer their own ideas or participate actively in moving the parties towards agreement. Facilitation may be the first step in identifying a dispute resolution process.

Mediation

Mediation is a process of settling conflict in which an outside party oversees the negotiation between the two disputing parties. The parties choose an acceptable mediator to guide them in designing a process and reaching an agreement on mutually acceptable solutions. The mediator tries to create a safe environment for parties to share information, address

underlying problems and vent emotions. It is more formal than facilitation and parties often share the costs of mediation. It is useful when the parties have reached an impasse.

Arbitration

Arbitration is usually used as a less formal alternative to litigation. It is a process in which a neutral outside party or a panel meets with the parties in a dispute, hears presentations from each side and makes an award. Such a decision may be binding or not according to agreements reached between the parties prior to formal commencement of hearings. The parties choose the arbitrator through consensus and may set the rules that govern the process. Arbitration is often used in the business world and in cases where parties desire a quick solution to their problems.

Preventing conflict before it begins: Consensus building/stakeholder approach

It is generally recognized among water experts that stakeholder participation is key to sustainable resource use and management. Conflict resolution techniques are generally employed once a dispute has already arisen. However, anticipating the forms of future conflict is an important element of conflict resolution itself. In the context of a river basin, where disputes arise from time to time, it is useful to give a home to these issues through the creation of a setting where stakeholders can regularly meet and communicate with each other regarding interests, needs and positions. While there are no uniform methodologies for undertaking the process, it is important to create an enabling environment whereby the stakeholders are able to actively participate in the policy dialogues and subsequent planning and design process.

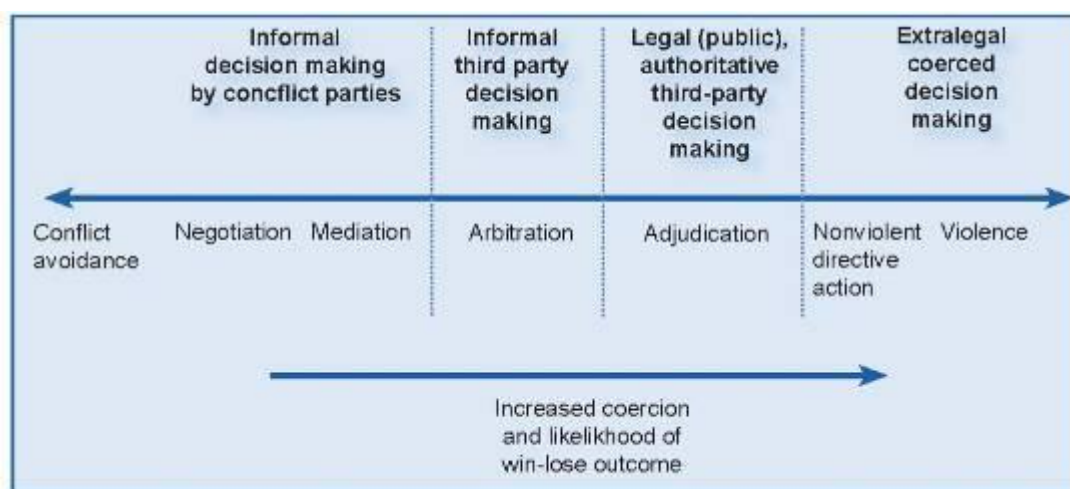


Figure 2.1: Continuum of conflict management approaches

Among others, these may include the following steps:

- Defining the problem rather than proposing solutions;
- Focusing on interests;
- Identifying various alternatives;
- Separating the generation of alternatives from their evaluation;
- Agreeing on principles or criteria to evaluate alternatives;

- Documenting agreements to reduce the risk of later misunderstanding;
- Agreeing on the process by which agreements can be revised and the process by which other types of disagreements might be solved;
- Using the process to create agreement; and
- Creating a commitment to implementation by allowing the stakeholders specific roles in the execution of the agreed action/programme.

Box 2.4: Modelling and Decision Support Mechanisms (DSMs)

In recent times, various **interactive modelling** tools have been quite helpful in the process of consensus building. Such models produce a simulation tool that is owned by the parties and is manipulated and used in a visual way. Since the stakeholders create the model, they are more willing to engage in scenario analysis. The best modelling applications try to show parties an overall picture of the situation in order to put the water conflict situation in context. A shared vision can also be useful to begin to illustrate how benefits can be generated from cooperation and thus begin to push parties towards a focus on sharing benefits, rather than simply sharing flows. There are several instances of river basin forums being established following the peaceful resolution of a conflict or heated dispute.

Modelling may also be assisted through the use of numerous **Decision Support Mechanisms (DSMs)** – innovative tools such as time-series GIS photos to show ground cover changes over time, and base-flow simulations depending on crop water uptake. Accurate information is key to sustainable dispute resolution. Dispelling myths and building trust are key aspects of ADR, each of which may sometimes be expedited through the use of DSMs.

Conflict Resolution and Negotiation Skills for Integrated Water Resources Management

Technique	Litigation	Negotiation	Mediation	Arbitration
Result sought	Court judgement	Mutually acceptable agreement	Mutually acceptable agreement	Arbitration award
Voluntary/involuntary	Involuntary	Voluntary	Voluntary	Voluntary
Binding/non-binding	Binding	Agreement enforceable as contract	Agreement enforceable as contract	Binding
Private/public	Public	Private	Private	Private
Participants	Judge and parties	Parties only	Mediator and parties	Arbitrator and parties
Third party involvement	None	Parties communicate directly	Mediator, selected by parties, facilitates negotiation process	Arbitrator
First steps	One party initiates court proceedings	Flexible	Parties agree on mediation and appoint mediator	Parties agree on arbitrator and appoint him
Approach /Methodology	<ul style="list-style-type: none"> Formal Structured by predetermined rules Adversarial 	<ul style="list-style-type: none"> Usually informal and unstructured Non-adversarial 	<ul style="list-style-type: none"> Flexible Usually informal and unstructured Non-adversarial 	<ul style="list-style-type: none"> Less formal Procedural rules and substantive laws may be set by parties
Advantages	Application of legal rules may help to address power imbalances	<ul style="list-style-type: none"> Quicker and cheaper Parties retain control over policy and outcome Parties work together to find win-win solutions Decisions can be tailored to needs of parties Agreements more likely to be implemented and future problems solved in non-adversarial way 	<ul style="list-style-type: none"> Quicker and cheaper Enables creative solutions to be found Can resolve conflicts over policy issues and/or where clear legal rights/obligations are lacking Parties retain control over process and outcome Parties work together to find win-win solutions Substantive issues of importance to parties can be addressed Decisions can be tailored to needs of parties Parties can directly contribute expert understanding and expertise Agreements more likely to be implemented and future problems solved in non-adversarial way Can restore communication between alienated parties and break deadlock 	<ul style="list-style-type: none"> Quicker and cheaper than litigation Parties can tailor procedure to suit their needs Parties can choose subject matter experts as arbitrators
Disadvantages	<ul style="list-style-type: none"> Slow and expensive May result in further litigation Decision restricted within narrow legal parameters Parties relinquish control over process and decision Inappropriate for disputes involving wider policy issues 	<ul style="list-style-type: none"> This method may not be useful in big and complex cases Failure to implement agreement may necessitate enforcement through courts 	<ul style="list-style-type: none"> Power imbalances may be enhanced Agreement may not be reached Failure to implement agreement may necessitate enforcement through courts 	<ul style="list-style-type: none"> Parties relinquish control over final decision Success depends on competence of arbitrators No appeal against decision

Table 2.1 Conflict resolution techniques

2.3 Requirements for Successful Conflict Resolution

The techniques discussed above need to fulfil certain conditions for successful outcomes. Some of these are:

- **Willingness to participate**

The participants must be free to decide when to participate and when to withdraw from a conflict resolution process should that be necessary. They should set the agenda and decide on the method to be followed in the process. It is, however, impossible even to agree to discuss a problem if either of the parties holds a deeply entrenched position or system of values.

- **Opportunity for mutual gain**

Linked to the above is the requirement of opportunity for mutual gain. The key to success of conflict resolution is the probability that the contending parties will be better off through cooperative action. If one or both believe that they can achieve a better outcome through unilateral action, they will not be willing to participate in the process.

- **Opportunity for participation**

For successful conflict resolution, all interested parties must have the opportunity to participate in the process. Exclusion of an interested party is not only unfair but also risky because the concerned party may obstruct the implementation of the outcome by legal or extra-legal means.

- **Identification of interests**

It is important, in working towards consensus, to identify interests rather than positions. Conflicting parties often engage in positional bargaining without listening to the interests of the other parties. This creates confrontation and a barrier to consensus.

- **Developing options**

An important part of a conflict resolution process is the neutral development of possible solutions and options. An impartial third party can be a great asset to the process as it can put forward ideas and suggestions from a neutral perspective.

- **Carrying out an agreement**

Not only must the issue be capable of resolution through the participatory process but the parties themselves must also be capable of entering into and carrying out an agreement.

2.4 Staying on Track: The Conflict Process Map

According to Engel and Korf (2005), 'ADR is a complex, iterative process that may suffer drawbacks or experience sudden moves forward. The process can be subdivided into four major milestones and ten steps, each with its own specific activities. These steps form the process map – designed as a tool to help facilitators and mediators in ADR to keep on track and to move the process forward towards successful outcomes.'

Once a conflict situation has arisen, and acknowledging the effectiveness of ADR, the process map becomes a useful tool for assisting the mediator/facilitator in helping to successfully resolve a conflict. A mediator/facilitator generally enters a conflict situation in one of four ways: s/he is invited by one or more of the parties to the conflict; s/he self-initiates her/his participation; s/he is referred to the parties by a second party; or s/he is appointed by a government authority. As shown in the text box on culture below, preparing for entry can be tricky business, and it should not be taken lightly.

Box 2.5: Cultural contexts

Often a third party external to the local context – you! – will be asked to mediate among parties competing over a water resource, and to negotiate an end to the conflict that will be satisfactory to all. Conflict resolution is complicated by cultural context. Given the universally shared need for water, but the varied social, economic, political and environmental settings in which the resource and its users are to be found, it is easy to see how we can often put a foot wrong when all we wanted to do was the right thing. Something as simple as wearing an open-collared shirt when a tie is required can sidetrack a negotiating process for months. A meeting's location can also inadvertently 'stack the deck' in favour of those who feel most comfortable in a particular physical setting, such as an office with sealed windows in a high-rise building in the capital city. In some rural settings, the mediation may take place in a sacred place, where it is thought competing parties will be more likely to tell the truth. In other instances, however, the sacred place will be avoided so it is not tainted with ill feeling; instead parties will only go to the sacred place at the conclusion of the negotiation to bless their agreement.

Inappropriate greetings, clothing, footwear or touching someone who does not want to be touched, arriving unexpectedly or sitting down before the elders have been seated: all of these appear to be innocent mistakes, but they can have terribly negative effects. Even your age and/or your sex can work against you as a facilitator, mediator, negotiator or active participant. If you are a young woman, you are likely to face challenges of gaining the respect of the older men in the room, some of whom may feel it is entirely inappropriate that you are there in the first place.

Moreover, just because you have trained others successfully in conflict resolution techniques, or have successfully mediated a conflict, does not mean that you will be successful the next time round, particularly if you assume that what passed for appropriate behaviour in one case will be appropriate in the next case. Thus, in preparing entry (step 1 of the process map), the mediator must do her/his homework regarding the cultural context in which the conflict is taking place.

As shown on page 27, the process map consists of ten steps and four milestones (see Engel and Korf, 2005 for a detailed description). The first four steps involve conflict analysis, initially by the mediator/facilitator and later by the parties to the conflict with the help of the mediator/facilitator.

Following step 1 (preparing entry where the mediator/facilitator clarifies his/her role in the process) and step 2 (where the mediator/facilitator enters the conflict setting), step 3 requires the mediator/facilitator to analyse the conflict as accurately and comprehensively as possible. Sound conflict analysis is fundamentally important to a sustainable outcome based on principled negotiation. In contrast to litigation, an agreement reached through consensual processes requires the willingness of all parties to uphold it for it to have any value.

Accurately assessing the roots of the conflict, therefore, is vital to the stability of the agreement.

The balance of Module 2 focuses on the techniques of conflict analysis (step 3) and broadening stakeholder participation (step 4). In Module 3 we discuss steps 5-10.

Box 2.6: The Process Map

- Step 1:** Preparing entry: the role of the mediator is clarified
- Step 2:** Entering the conflict scene: the mediator meets the parties to the conflict
- Step 3:** Analysing conflict: several tried and tested techniques are utilized to accurately assess the conflict

MILESTONE 1: ENTRY

Reached if and when the mediator decides that the situation is amenable to ADR processes

- Step 4:** Broadening stakeholder engagement: the mediator employs a variety of techniques to assist parties to the conflict in their own analysis of the conflict
- Step 5:** Assessing options: the mediator employs techniques such as brainstorming, visioning and determining each party's best alternative to negotiated agreement (BATNA) to present the broadest possible range of options

MILESTONE 2: BROADENING STAKEHOLDER ENGAGEMENT

Reached when parties to the conflict agree to participate in negotiations

- Step 6:** Preparing negotiations: the mediator 'sets the table' for negotiations
- Step 7:** Facilitating negotiations: generally regarded as the most difficult part of the process, this stage is complete only when parties agree on an option
- Step 8:** Designing an agreement: the agreement is designed and includes appropriate implementation and monitoring mechanisms

MILESTONE 3: NEGOTIATION

Reached when parties mutually develop and ultimately accept an agreement

- Step 9:** Monitoring agreement: the mediator assists the parties to determine how compliance with the terms of the agreement will be monitored (possibly involving the mediator him/herself)
- Step 10:** Preparing exit: the mediator assists the parties in developing confidence building measures and possibly in designing a platform for dealing with future disputes

MILESTONE 4: EXIT

Reached when the mediator feels the parties to the agreement are comfortable with the new agreement.

Source: Engel and Korf (2005)

2.5 Analysing Conflict

Successful conflict resolution depends on accurate analysis of conflict. The mediator/facilitator must consider, among other things:

- The sociocultural setting for the conflict;
- The parties to the conflict (including those who seem to be 'on the outside');
- The kind of conflict that it is;
- The different handling styles available to parties to the conflict and to the mediator/facilitator; and
- The general pathways of conflict – that is, an understanding of how conflicts typically progress. Tools available to the mediator/facilitator include conflict mapping and the 'onion tool' (see below), which allows the mediator/facilitator to peel away from the stated positions of the parties to the conflict to reveal the underlying interests and the core needs.

Kinds of conflict

Conflicts can manifest in different ways and at different geographical and socio-political levels. In general, there are four kinds of conflict:

- Intrapersonal (that which occurs within ourselves);
- Interpersonal (that which occurs between two or more people);
- Intra-group (that which occurs within one group); and
- Inter-group (that which occurs between two or more groups).

Water conflicts occur at all of these levels. Should I take a bath or a shower when I know that the bath uses more water but that is what I'd prefer? This kind of conflict becomes interpersonal when there are limited supplies of water – where water is really a stock, or fixed amount – so my first use reduces the amount available for those who come after me. Such a simple example can be scaled up further to the group and inter-group level where, in the extreme case, states threaten each other with military action should particular water interventions – dam building; inter-basin transfer schemes – take place.

Conflicts become more complex when there are intervening factors involved. While a dispute over access to a bath among family members is unlikely to be about anything other than who has the right to the water, as we move up the scale of social organization, water conflicts become interrelated with a variety of other issues such as value differences, relationship problems, the lack of or questionable value of data and structural issues (such as the unequal distribution of the resource among actors due to class, race, location along the river or in the basin, among others).

Different types of interests are also a common source of conflict.

- They may be about procedures (e.g., how is it that you came to dominate that resource or take that resource use decision?);
- They may be psychological, e.g., where one actor believes that they are being treated unfairly for prejudicial reasons; or one group does not believe the data regarding water supply and continues to believe that upstream actors are hiding the truth; or

- They may be substantive (e.g., where a downstream user is dependent on consistent flow for year-round hydropower generation while upstream smallholders' and large scale farmers' actions create seasonal shortages).

Box 2.7: Types of conflict (see also the conflict circle below)

Data or information conflict – which involves lack of information and misinformation, as well as differing views on what data are relevant, the interpretation of that data and how the assessment is performed.

Relationship conflict – which results from strong emotions, stereotypes, miscommunication and repetitive negative behaviour. It is this type of conflict, which often provides fuel for disputes and can promote destructive conflict, even when the conditions to resolve the other sources of conflict can be met.

Value conflict – that arises over ideological differences or differing standards on evaluation of ideas or behaviours. The actual or perceived differences in values do not necessarily lead to conflict. It is only when values are imposed on groups, or groups are prevented from upholding their value systems, that conflict arises.

Structural conflict – that is caused by unequal or unfair distribution of power and resources. Time constraints, destructive patterns of interaction and unfavourable geographical or environmental factors contribute to structural conflict.

Interest conflict – which involves actual or perceived competition over interests, such as resources, the way a dispute is to be resolved, or perceptions of trust and fairness.

Conflict handling styles

Once a conflict has arisen, different individuals and groups of people have different ways of handling the problem. Some handling styles actually exacerbate the problem. Seeking to avoid the problem by ignoring it may lead to the conflict becoming more serious and more intractable over time. As shown in the graph below, different handling styles yield different outcomes in situations where the problem is the same. Choosing to press for victory may yield short-term gains but is likely to lead to long-term difficulties.

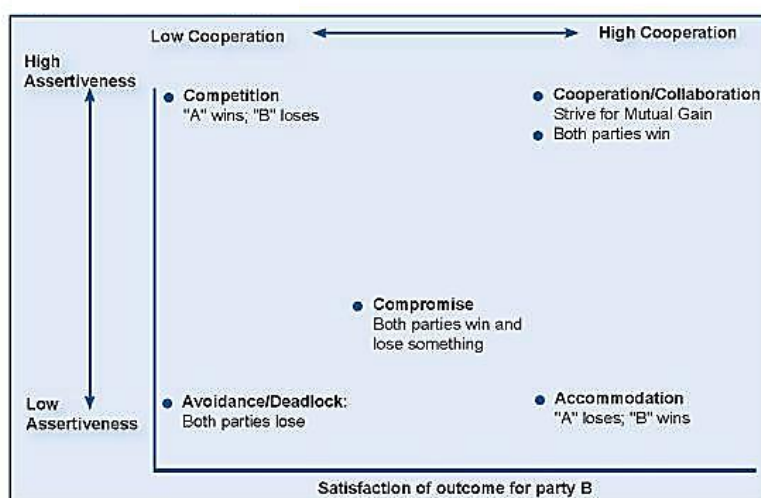


Figure 2.2: Conflict Handling Styles

Figure derived from Kilmann and Thomas, 'Interpersonal conflict-handling behaviour as reflections of Jungian personality dimensions' (Psychological Reports, No 37, 1975. pp. 971–980)

Conflict progression

Conflict is dynamic by nature, and conflicts that are not dealt with may grow and change. Many conflicts develop out of nothing – a simple misunderstanding. If they are not dealt with quickly, they may fester and grow. Other conflicts arise due to an unexpected change in circumstances that come as a shock to some parts or all of a community or society. The types of flooding that occur once in a thousand years constitute such a shock. Most conflicts progress along a typical pathway, and therefore they are predictable. To regard a conflict as 'out of control' is to misunderstand the nature of conflict. Below is a typical pathway of conflict progression:

The problem emerges

In terms of water use, the catalyst for a conflict may be something as simple as a change in government policy or the announcement of a government's intention to change past practice. The introduction of water kiosks in shanty towns, and municipal council decisions to outsource water provision to private companies are two examples. Too often these decisions are taken without public participation so the intended 'beneficiaries' of changed practice often regard the decision as a threat to their livelihoods.

Sides form

People who previously did not think they had a stake in the issue begin to move towards one side or the other. More people form definite opinions and feel the need to get together with others who have similar views. They meet and support positions similar to theirs. They choose sides. The media and non-governmental organizations (NGOs) may actually contribute to this 'us versus them' mentality. The conflict expands as more people learn about it.

Positions harden

People talk more with others who share similar views and less to people they disagree with, even in circumstances that are not related to the dispute. Positions harden, and people become rigid in their definitions of the problem and of their opponents. Often the focus becomes the proposed action or intervention (e.g., the water kiosk), rather than the needs and interests of the parties.

Communication stops

Information is exchanged haphazardly between the parties. In the case of vast power disparities (e.g., central government and rural people), communication is often sporadic, even at the best of times. Misunderstandings are common, and communication takes on an increasingly adversarial tone. The timing and methods used by officials to involve the public may be inappropriate in terms of what is happening in the developing conflict. Public meetings can be too adversarial to have a positive influence in the early stages of conflict. Although people talk with each other and exchange opinions, somewhere along the way, public discussions become public debate. People are frustrated by the situation and angry with each other. They become intolerant of other points of view and lose interest in talking about perspectives other than their own. Conversation between the parties stops, and information is used as a weapon to promote a position or win a point. Information that would lead to a solution no longer flows between the parties.

Resources are committed

So far, most community members have been worried about the growing controversy. Outspoken leaders have been seen as troublemakers. From this point on, moderates will be given less attention and militants will become more rigid. Questions of fairness, or the shades of right and wrong, are no longer important. Individuals gain a sense of personal power in being a part of the group, and they are ready to commit resources and incur costs.

Conflict goes outside the community

People begin to look outside the community for support and power. They appeal to state or national political figures and ask for help from national or even international organizations. What was once a localized problem – e.g., municipal water supply – expands into a new, much wider arena of conflict. In forming coalitions with outsiders, the local groups acquire additional financial resources and expert knowledge about the ways to conduct a fight, but their goals are absorbed into broader programmes of the national or international organization.

In terms of water privatization, many urban opposition groups are now aligned to wider, anti-globalization-focused global social movements. At the same time, many actors within the community may support the change in policy because they anticipate it will create new job opportunities. Municipal councils are often torn between the needs of their citizens, many of whom are poor, and their need to generate capital to deliver services.

Lawyers or other professional ‘hired guns’ come between the parties and prevent personal negotiation. Moderates lose control to new, more militant leaders. Relationships between the parties become openly hostile and threats are exchanged. People do not like to be threatened, so the threats become issues within the conflict themselves and are often interpreted as personal attacks.

Perceptions become distorted

Parties lose objectivity in their perceptions of the character and motives of their adversaries. Shades of grey disappear and only black and white remain: our side is honest; their side is dishonest. Neutrals are seen as enemies because they are ‘not on our side’. As the conflict progresses, people narrow their focus and become less capable of generating new strategies to solve the original problem.

Sense of crisis emerges

The community – perhaps even the wider society – is divided into factions. Normally residents are accustomed to altercations between officials and irate citizen groups and they expect the town to work out its disagreements. But now, it seems, there is little hope of resolving the original dispute. Long-established confidence in the community's ability to handle its problems wavers and gives way to a sense of crisis. Newspapers highlight arguments between community leaders and ignore positive efforts toward resolution. The parties are now willing to bear higher costs that would have seemed unreasonable earlier. Progressively, their goal becomes to win at any cost. They may try intimidation and destructive use of power, thus adding to the issues and to the heat of the conflict. Parties commit themselves to actions that in more peaceful times would have been rejected as not even worth considering.

Outcomes vary

The next step may be litigation. Uncertainty as to which side will gain the most is then replaced by uncertainty about when the trial will be held, which lawyer will prevail, and how close the magistrate or judge will come to solving the problem. All chances of direct negotiations between the parties are gone. Costs continue to mount. Alternatively, the government may have to intervene and act as enforcer. Inevitably, flexibility in the choice of options is lost, and the best solution does not prevail.

Violence is another possibility. Vindictiveness and desire for revenge are sometimes present in public conflicts, and can lead to personal injury or vandalism where, for example, political leaders are assassinated, or schools are burnt down.

Costs of conflict and non-negotiated outcomes

Enforced outcomes, or those decided by the courts, generally remain unresolved. Peace may prevail for a while, but grievances remain just below the surface. Partially resolved or unresolved conflicts become more serious because the people involved in them are anxious, fearful and suspicious of the other side. Parties to a conflict often do not realize that their perceptions of themselves and of their adversaries are changing and that they are progressively incurring risks and costs that would have seemed out of the question earlier in the conflict. Many conflicts start with a resolvable issue and grow beyond hope of resolution because they are not dealt with early on, or are dealt with inappropriately.

The costs of conflict can include: financial losses, damaged reputations, damaged relationships and disruption of the community. Sometimes resources are spent on continuing the fight, rather than solving the problem.

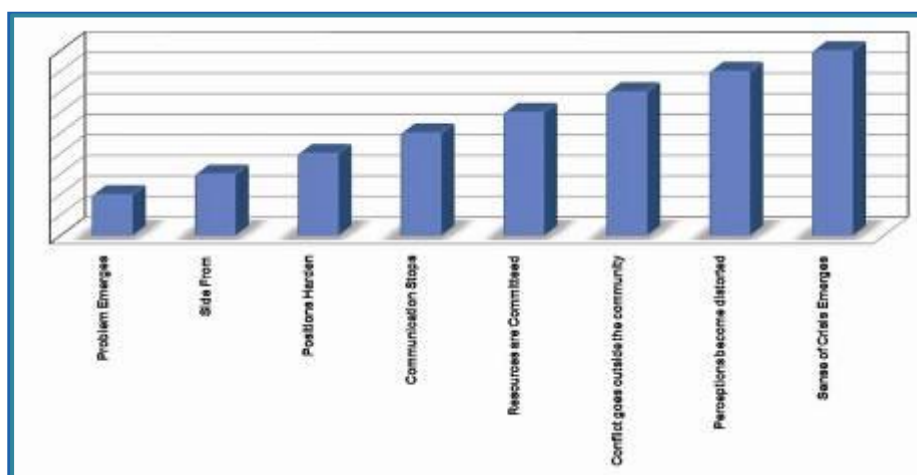


Figure 2.3: Conflict progression

Conflict mapping

For the mediator/facilitator, it is imperative that the conflict is mapped out accurately. This mapping exercise involves a stakeholder assessment; physical mapping of the location of the conflict; and an attempt to build a complete picture of the

Box 2.8: Stakeholder assessment questions

- Who are the parties to the conflict? What are their relations to each other?
- What is the geography of the conflict – are some actors in a better geographical position?

physical, social and psychological layout of the conflict.

Incomplete mapping may lead to an inaccurate picture of the root causes of the conflict, the relations among the parties, and so on. While the challenges of analysing conflict as accurately as possible are great, so too are the potential rewards.

Box 2.9: Useful questions to ask when analysing conflict

- To what extent is there conflict?
- How long has there been conflict?
- How did the conflict start?
- What is the underlying root cause?
- What is the conflict about?
- Who are the people causing the conflict?
- Who are the people involved in the conflict?
- How far did you go in trying to resolve the problem?
- Was there any consultation?
- Who should we involve in resolving the problem?
- To what extent should these issues be resolved?
- What are the lines of formal authority?
- Have the authorities helped or hindered the process?
- What right do you have to use the resource?
- Have there been other similar conflicts?
- When these conflicts occur, who do you involve to resolve them?

The better the analysis, the more likely it is that the mediator will be able to help people uncover a productive pathway to sustainable dispute resolution and to develop a long-term conflict management plan. If the mediator's/facilitator's analysis is weak, however, it is more likely that he or she will contribute to or possibly aggravate the conflict.

Box 2.10: Why is it important to do conflict analysis?

Some answers from previous workshop participants:

- To gain a better understanding of the conflict;
- To determine causal factors and to establish a strategy for resolution/management;
- To acquire more knowledge before taking action;
- To have an understanding of the conflict and apply strategies to resolve it;
- It is important because it will help you to know how you can go about solving the conflict;
- To find the way of resolving different problems;
- For better understanding of how to apply the right technique/method for resolving problems;
- To find solutions to the conflict;
- To know key partners involved; and
- To value the problem.

EXERCISE

I Smell Conflict

Linked to Session 3 (Analysing Conflict)

This is a personal exercise conducted with course members seated around the table. Ask participants to spend about five minutes thinking about a conflict known to them – either experienced personally or witnessed through the media. As they think about or reflect on this conflict they could jot down some notes about it if they wish.

(An alternative method would be to preselect a short video clip of one or more conflict situations that fit one or more of the categories above and then use the video examples to draw out the type of conflict and the handling style. The decision to use one method or another, however, depends upon how much control over the direction of the exercise facilitators wish to exercise.)

After five minutes, the facilitator should ask some or all of the course members whether the conflict they chose to focus on was:

- Intrapersonal (within themselves);
- Interpersonal (between themselves and another person);
- Intra-group (within a group of which they are a part); or
- Inter-group (between two or more groups).

The facilitator should then enquire about the type of conflict (mentally storing this information for later retrieval when discussing the 'conflict circle').

The facilitator should then ask the same respondents in the group how the conflict was handled:

- Did the parties to the conflict initially seek to avoid it?
- Did they seek accommodation at all costs?
- Did they compromise on goals?
- Was it 'winner takes all' and if so by what means?
- Did the parties to the conflict strive for mutual gain?

Ask the course members to write down on the pieces of variously coloured small square papers answers to the following:

- How did the conflict feel?
- How did it taste?
- How did it look?
- How did it sound?
- How did it smell?

After each question is answered the facilitator should solicit answers. The cards can be collected and stuck on a wall as the exercise proceeds or during the next break. The purpose of this part of the exercise is to encourage participants to immerse themselves in the sensory aspects of conflict. Some examples of the types of answers that usually emerge are: a 'bitter taste' or 'loud, crashing sounds'. Participants often choose to focus on the worst case scenarios of conflict, rather than on the many smaller conflicts that resolved themselves or ultimately led to win-win outcomes over time. The challenge is to get them to understand that these sorts of conflicts are but one extreme aspect of conflict – the extreme that we all wish to avoid – and what we would like them to do is to begin to see that alternative dispute resolution is a means for channelling this negative energy towards a positive outcome.

Time: 20-30 minutes

EXERCISE

Not in My Backyard!

Linked to Session 3 (Analysing Conflict) and Session 4 (Water and Conflict)

In the formal presentation On Conflict, the facilitator will review:

1. The location of conflict;
2. Conflict issue analysis through discussion of the conflict circle; and
3. Discussion of handling styles (from avoidance to cooperation).

The presentation should then move on to discuss:

1. Stakeholder analysis;
2. The stages of conflict (through a discussion of conflict progression); and
3. Conflict analysis through the use of conflict mapping and the onion tool.

In the formal presentation Water and Conflict, the facilitator will highlight the various forms taken by water conflicts emphasizing the what (the specific issue), the where (local, national, basin, international), the why (supply, demand, structural drivers), the when (sudden and unexpected; seasonal; predictable; involving a short time horizon); and the how (threats, demonstration, overt violence).

The exercise links directly to these two presentations: Root cause analysis is fundamental to successful negotiation; and conflict resolution. This exercise focuses specifically on this preparatory phase in negotiation and conflict resolution.

Participants should be divided into 4-6 new groups. If you vary the size of the group from the first exercise (say, expand the groups from 5 to 6 people in each group), then a similar count-off method can be used to arrive at a fresh combination of people.

Facilitators can choose either to provide each group with a pre-prepared case study of a simple water conflict (e.g., a relatively straightforward local dispute; or something well known such as the water allocation agreement among Nile Basin countries; or something resource specific such as a fisheries dispute; or the decision to end free water in shanty towns and deploy water kiosks) or allow the group to choose their own case(s) from within their membership. Group members are to analyse the particular conflict(s) in terms of the following:

- Location of the conflict (intra/interpersonal; intra/inter-group);
- Issue analysis using the conflict circle;
- Handling style in terms of the handling style matrix; and
- Stakeholder analysis using conflict mapping and the onion tool.

Each group should be provided with permanent markers (different colours), and a flip chart with numerous sheets of paper. Each group should nominate someone to facilitate the conflict analysis exercise. Visualization is an important part of root cause analysis. Participants should be encouraged to graphically map their case study in terms of its physical location and the location of the stakeholders in the conflict. Stakeholders can be represented by similar shapes (e.g., circles or triangles), but their relative power could be reflected graphically in the size of these shapes. Each group should also present their overall analysis in the same way (using, for example, the onion tool to map out needs, interests and positions of the various stakeholders).

Ninety minutes should be allowed for the exercise, and thirty minutes for the groups to report back. During the organizational phase of the exercise, facilitators should move from group to group assisting where necessary. It is advised to split the exercise with a break, preferably after the first hour. This break can be used to iron out any problems encountered by the groups. For instance, one or more groups may be trying to do too much, for example, by focusing on several cases as a sign of politeness among group members. Facilitators should ensure focus: the case is not as important as the process of using the conflict resolution tools. Following the break, groups should be allotted an additional thirty minutes to wrap up their conflict analysis exercise. This should be immediately followed by the reports from the groups.

Total time: 2 hours

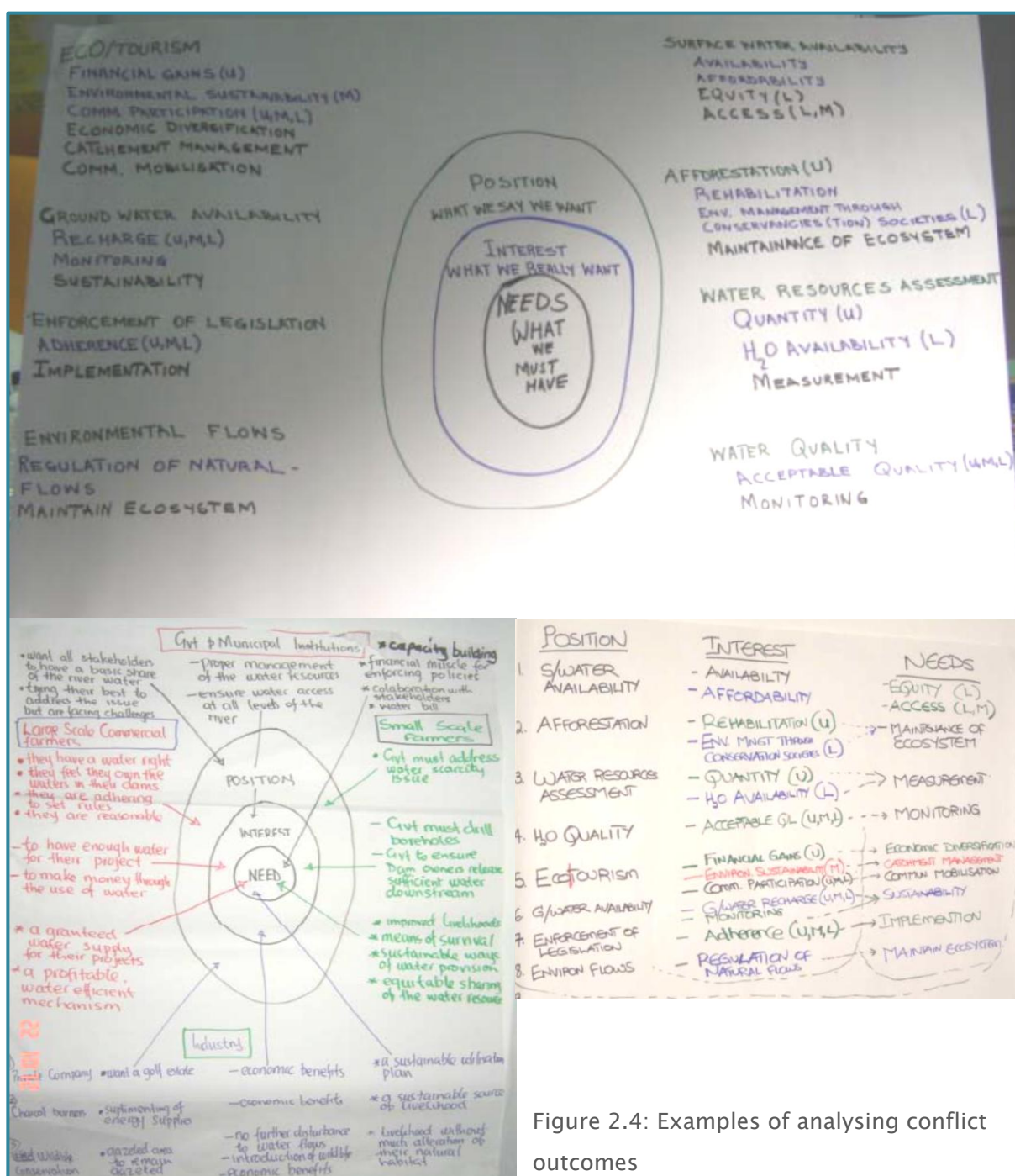


Figure 2.4: Examples of analysing conflict outcomes

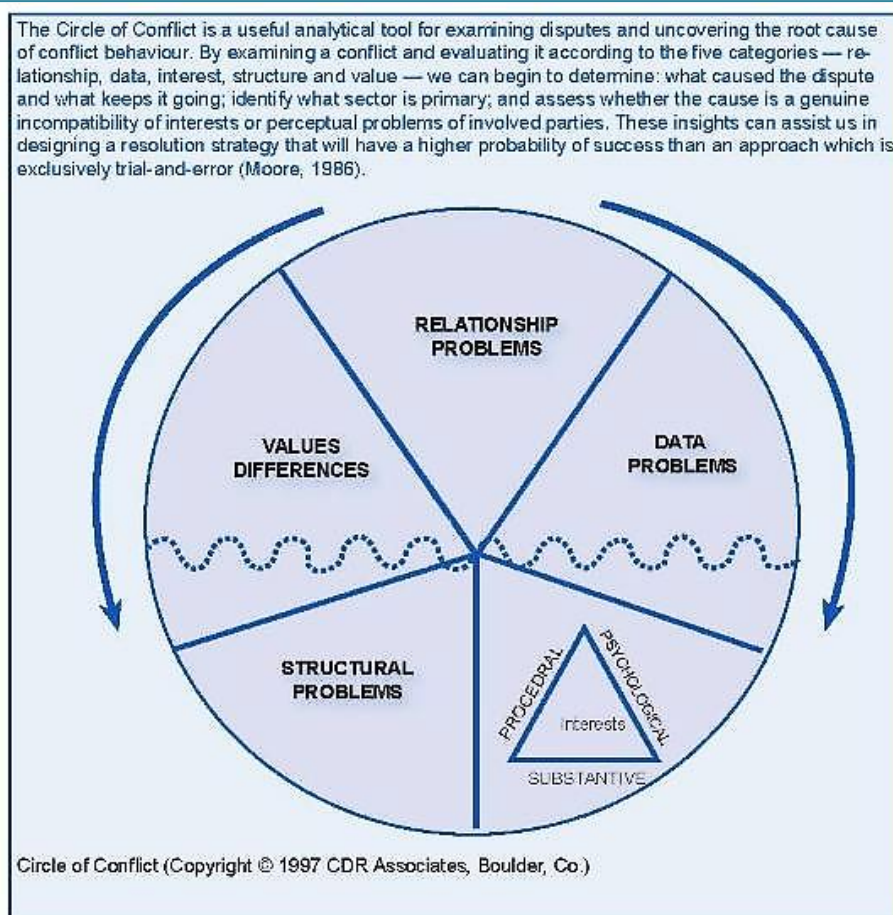


Figure 2.5: The Conflict Circle

Box 2.11: Conflict mapping

Provide the participants with the handout at the start of the exercise. This will allow the facilitator to use the handout as a visual aid to explain the tool once the groups have chosen a case. The participants can choose between using the case of a conflict identified in a previous session, or a conflict that they have dealt with in the past. In general, the tool has to be adapted to the case and not the other way around.

The tool is quite useful for most interpersonal, intra-group, and inter-group conflicts. If conflicts within an organization are analysed, one should make sure that not only the organizational structure is drawn, but also that personal relations and the power structures are indicated (who has how much power within the system). In order to understand the case, further issues such as family relations can be introduced as a new part of the tool with an additional symbol if necessary. In addition, key issues between the parties need to be indicated on the map.

Often alliances and close relationships are difficult to distinguish. An alliance is a cooperation entered into for strategic reasons. A close relationship is a good and personal relation between parties. The map is naturally drawn from the perspective and with the perceptions of the case giver. Her/His role should be indicated as well.

If the participants hesitate to start, encourage the case giver to start visualizing the different parties and their relationship towards each other. The visualization can be developed step by step.

Exploring all the involved parties can be very difficult at times, depending on the complexity of the situation. To further the process the facilitator should ask questions, rather than give suggestions. Possible special relationships might offer openings for an entry point.

Box 2.11: Conflict mapping (continued)

Entry points here refer to relationships or issues on the map where ‘working’ on the conflict constructively might start in a more promising way. In an already resolved case, it is important to ask what the solution was and to see whether the group comes up with further or alternative entry points. These could still be valuable in retrospect for the case giver.

In the end it is useful to indicate that conflicting parties can also apply the tool separately to clarify their different perceptions. It can also be exercised by only one party from their perception adding the assumed perception of the other party.

At the end of the subgroup session, ask how the case giver feels about the process and whether the inputs of the group were helpful for a better understanding of the conflict case.

Box 2.12: The Conflict Map

Description

Mapping is meant to graphically represent a conflict by placing the parties in relation to the problem and in relation to each other. It helps to identify possible entry points for conflict transformation.

Purpose

- To improve the understanding of the situation;
- To identify the relationship between the parties involved in the conflict;
- To understand how power is distributed between the parties; and
- To find entry points for possible intervention.

How to use this tool

Identify the main actors involved in the conflict. Use one circle for each party, and choose the size of the circle according to the party’s power and influence in the conflict map. Do not forget to place yourself and/or your organization on the map.

Connect the different circles by using various lines reflecting the quality of the relationship between them. Examples for different lines will be given below.

If you can identify any key issues between the actors, include them in the map.

Reflect on your position within the parties and try to identify alliances, close contacts, broken relationships and known confrontations.

Think about relationships that offer opportunities for working on this conflict. Plan first steps for intervention.

Comments

It is often useful to repeat the mapping of a conflict situation from a variety of viewpoints in order to understand how the different parties perceive the same situation.

In addition to the mapping tool, one can use the onion tool (page 39) to deepen the understanding of identified key issues.

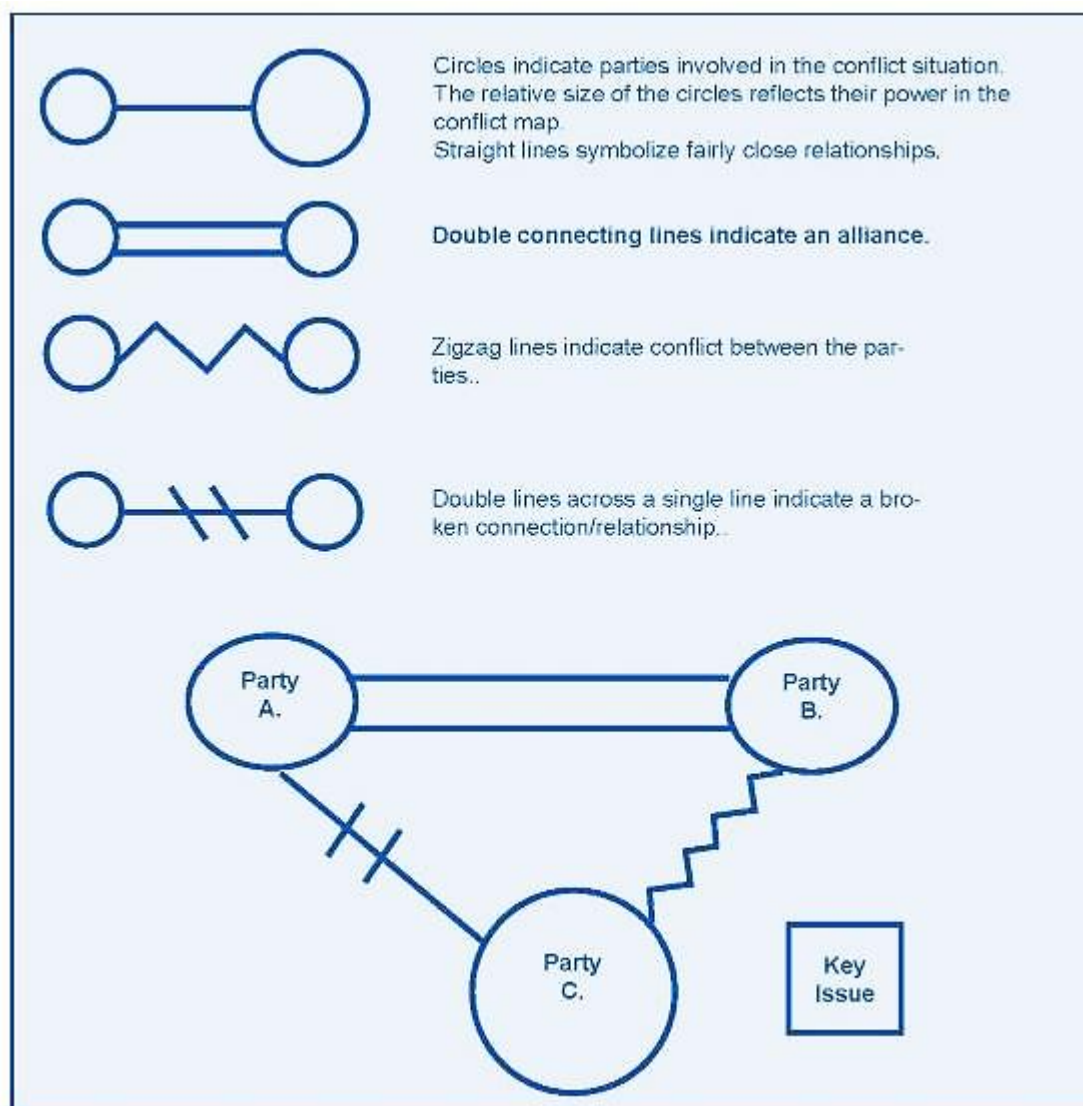


Figure 2.6: Example of Conflict Mapping

The Onion Tool

The onion tool can be combined with conflict mapping (page 42), also called the ABC-triangle. The subgroup might have identified a crucial relationship, perhaps the core element of the conflict. The onion tool can then help those concerned to look more deeply into this relationship.

The exercise begins by asking for the different positions and then continues to the interest and needs level. It is recommended to draw a table either on a flip chart or on pin board paper containing the two opposing parties at the top and visualizing the named issues.

Aim of the exercise

The aim is to explore common ground behind the expressed positions of the parties, possibly on the level of their interests or underlying needs. For example, a government wishes to dam the water of a river for economic development. Some people look forward to a secure water supply, but other people downstream worry that there will be water shortages which will threaten their livelihoods.

Those downstream say that there should not be a dam. Others say there must be a dam. Positions harden around the idea of the dam. However, all people share a common interest in a secure supply of water. By communicating this common interest and exploring different needs, they could settle their dispute, perhaps by agreeing to build a dam or a series of dams that ensure a sustainable supply of some water for all. However, often it is not easy to identify the underlying needs, and they may prove to be ultimately incompatible; for example, where the upstream livelihood requires a lot of water for a mining enterprise, while the downstream party requires a lot of water for cash crop production.

Often, it is also difficult to distinguish between position and interest. In a heated dispute, the parties may forget what motivated their position in the first place; for example, the argument focuses solely on the proposed intervention: Dam! No dam! The tool can be used by the conflicting parties to clarify different perceptions and perhaps to rethink their positions.



Figure 2.7: The Onion Tool

Description

The onion tool is a way of analysing what different parties in a conflict want.

Purpose

To move beyond the positions of each party and understand underlying interests and needs, while exploring common ground between parties as a basis for further discussions.

How to use this tool

Each party in a conflict should explore their positions, interests and needs, as well as what they perceive to be the positions, interests and needs of the other party/parties to the conflict.

The facilitator should begin by explaining, in particular, the difference between positions and interests: The outer layer contains the positions that we take publicly (positions are what we have decided on, for example, to build a dam). Underlying these are our interests, what we want to achieve from a particular situation (interests are what cause us to take a particular position, for example, economic development through the use of a multipurpose dam). At the core of the onion are the needs we require to be satisfied (for example, a secure supply of water for multiple needs, job creation or human security).

The exercise should proceed as if you are peeling an onion: from the outside working in. Start with the positions, and move on to interests and needs. This opens the possibility of peeling away as many layers as possible in order to reveal the underlying needs of the different parties.

Comments

The difference between positions and interests should be thoroughly explored because parties in a conflict often start to equate their position with their interests. Over involvement often results in forgetting what interests and needs motivated a position in the first place.

The tool can be used to understand the dynamics of a conflict situation in preparation for facilitating dialogue, or as part of a mediation process. It is also useful for parties who are involved in negotiations to clarify their own needs, interests and positions.

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Module 3

Negotiating for Conflict Resolution

Learning objectives

- To describe different methods of negotiation with an emphasis on principled negotiation.
- To highlight the role of the facilitator/mediator in negotiation for conflict resolution.
- To emphasize the role of communication skills.
- To underline the practical process of distinguishing between one's needs, interests and positions.

Outcomes

- Knowledge of the complexity of the negotiation setting.
- Awareness of the difficulty of arriving at negotiated agreements and ways forward.

Skills

- As a mediator/facilitator, the participant will have a clear understanding of the ways of using principled negotiation to help actors move towards a mutually beneficial negotiated arrangement.
- As a negotiator, the participant will have a clear understanding of how to determine his/her Best Alternative to Negotiated Agreement (BATNA) and how a facilitator/mediator may help in the process.

3.1 Negotiation

Whether you like it or not, you are a negotiator. Negotiation is a fact of life. Everyone negotiates something every day. More and more occasions require negotiation. Everyone wants to participate in decisions that affect them. Fewer people will accept decisions dictated by someone else. People differ, and they use negotiation to handle their differences. Whether in business, government or the family, people reach most decisions through negotiation.

People find themselves in a dilemma. They see two ways to negotiate: soft or hard. The soft negotiator wants to avoid personal conflict and therefore makes concessions readily in order to reach agreement. He/she wants an amicable resolution; yet he often ends up feeling exploited and bitter. The hard negotiator sees any situation as a contest of wills in which the side that takes the more extreme positions and holds out longer fares better. He/she wants to win; yet he often ends up producing an equally hard response, which exhausts him and his resources and harms his relationship with the other side. Other standard negotiating strategies fall between hard and soft, but each involves an attempted trade-off between getting what you want and getting along with people.

There is a third way to negotiate, which is neither hard nor soft, but rather both hard and soft. The method of principled negotiation developed at the Harvard Negotiation Project (Fisher et al., 1991) is to decide issues on their merits rather than through a haggling process focused on what each side says it will and won't do. (Refer to table 3.1.)

Problem Positional bargaining: Which game should you play?		Solution Change the game; negotiate on the merits
Soft	Hard	Principled
Participants are friends	Participants are adversaries	Participants are problem solvers
The goal is agreement	The goal is victory	The goal is a wise outcome reached efficiently and amicably
Make concessions to cultivate the relationship	Demand concessions as a condition of the relationship	Separate the people from the problem
Be soft on the people and the problem	Be hard on the problem and the people	Be soft on the people, hard on the problem
Trust others	Distrust others	Proceed independent of trust
Change your position easily	Dig in to your position	Focus on interests, not positions
Make offers	Make threats	Explore interests
Disclose your bottom line	Mislead as to your bottom line	Avoid having a bottom line
Accept one-sided losses to reach agreement	Demand one-sided gains as the price of agreement	Invent options for mutual gain
Search for the single answer: the one they will accept	Search for the single answer: the one you will accept	Develop multiple options to choose from: decide later
Insist on agreement	Insist on your position	Insist on using objective criteria
Try to avoid a contest of wills	Try to win a contest of wills	Try to reach a result based on standards independent of will
Yield to pressure	Apply pressure	Reason and be open to reason: yield to principle, not pressure

Table 3.1: Illustrations of ways of negotiation

Source: Barnett and Monay (1995)

Principled negotiation

Every negotiation is different, but the basic elements do not change. Principled negotiation can be used whether there is one issue or several; two parties or many; whether there is a prescribed ritual, as in collective bargaining, or an impromptu free-for-all, as in talking with hijackers. The method applies whether the other side is more experienced or less, a hard bargainer or a friendly one. Principled negotiation is an all-purpose strategy. Unlike almost all other strategies, if the other side learns this one, it does not become more difficult to use, it becomes easier.

Any method of negotiation may be fairly judged by three criteria:

1. It should produce a wise agreement (if agreement is possible);
2. It should be efficient; and
3. It should improve or at least not damage the relationship between the parties.

A wise agreement meets the legitimate interests of each side to the extent possible, resolves conflicting interests fairly, is durable, and takes community interests into account (Fisher et al., 1991).

This method, called principled negotiation or negotiation on the merits, can be condensed into four basic points. These four points define a straightforward method of negotiation that can be used in almost any circumstances.

Each point deals with a basic element of negotiation, and suggests what you should do about it.

1. People: Separate the people from the problem.
2. Interests: Focus on interests, not positions.
3. Options: Generate a variety of possibilities before deciding what to do.
4. Criteria: Insist that the result is based on some objective standard.

Figuratively, if not literally, the participants should come to see themselves as working side by side, attacking the problem, not each other. Hence the first proposition: Separate the people from the problem.

A negotiating position often obscures what you really want. Compromising between positions is not likely to produce an agreement which will effectively take care of the human needs that led people to adopt their positions.

You can offset these constraints by setting aside a designated amount of time to think up a wide range of possible solutions that advance shared interests and creatively reconcile differing interests. Hence the third basic point: Before trying to reach agreement, invent options for mutual gain.

You can counter a negotiator by insisting that his/her single stance is not enough, and that the agreement must reflect some fair standard independent of the naked will of either side. This does not mean insisting that the terms be based on the standard you select, but only that some fair standard such as market value, expert opinion, custom, or law determine the outcome.

Stages of negotiation

The four propositions of principled negotiation are relevant from the time you begin to think about negotiating until the time an agreement is reached or when you decide to break off the effort.

That period can be divided into three stages: analysis, planning and discussion.

- During the analysis stage you are simply trying to diagnose the situation – to gather information, organize it and think about it. You will want to consider the problems of partisan perceptions, hostile emotions and unclear communication, as well as to identify your interests and those of the other side. You will want to note options that are already on the table and identify any criteria already suggested as a basis for agreement.
- During the planning stage you deal with the same four elements a second time, both generating ideas and deciding what to do. How do you propose to handle the people problems? Which of your interests are the most important? And what are some realistic objectives? You will want to generate additional options and additional criteria for deciding among them.
- Again during the discussion stage, when the parties communicate back and forth, looking towards agreement, the same four elements are the best subjects to discuss. Differences in perception, feelings of frustration and anger, and difficulties in communication can be acknowledged and addressed. Each side should come to understand the interests of the other.
- They can then generate options that are mutually advantageous and seek agreement on objective standards for resolving opposed interests.

To sum up, in contrast to positional bargaining, the principled negotiation method of focusing on basic interests, mutually satisfactory options and fair standards typically results in a wise agreement. The method permits you to reach a gradual consensus on a joint decision efficiently without all the transactional costs of becoming entrenched in positions that you then have to extricate yourself from. And separating the people from the problem allows you to deal directly and empathetically with the other negotiator as a human being, thus making an amicable agreement possible.

Box 3.1: Principled negotiation tools and procedural elements: a checklist

Stage 1: Analysis

I. Pre-negotiation

- Problem: symptoms/current situation
- Goals/ preferred situation
- Diagnoses: possible causes; internal & external barriers

Stage 2: Planning

II. Pre-Negotiation

- Strategize: Generate broad ideas about what may be done; brainstorm these approaches; prioritize them
- Develop your BATNA
- Hypothesize their alternatives and ways to empirically test their impact
- Identify and evaluate relationships: Current? Preferred?
- Establish who are the parties involved
- Identify issues to be dealt with

Box 3.1: Principled negotiation tools and procedural elements: a checklist (continued)**Stage 2: Planning (continued)****II. Pre-Negotiation**

- Articulate interests: Ours? Theirs? Others?
- Identify options
- Establish criteria for acceptable and legitimate agreement

III. Negotiation

- Plan the meeting (purpose, product, process, people, etc.)
- Plan the dialogue (employ communication skills)
- Engage in negotiation

Stage 4: Implementation**IV. Implementation/Evaluation**

- Conclude agreements
- Evaluate and monitor effect of joint decisions

When are the conditions ripe for negotiation?

In an ideal world, a situation is ripe for negotiation when all of the following conditions are present. In fact, in most cases only some of these conditions will be met – hence the difficulties with achieving amicable solutions.

- Willingness to negotiate between/among identifiable parties
- Interdependence
- Readiness to negotiate
- Parties have means of influence or leverage
- Parties have agreed on something in the past
- Will to settle
- Unpredictability of consequences of non-negotiation
- Sense of urgency
- No major psychological barriers
- The issues must be negotiable
- People involved must have authority to decide
- The agreement must be reasonable and implementable
- External factors are favourable to settlement
- There are adequate resources to negotiate

3.2 Approach and Methods of Negotiation

The approach of negotiation related to the IWRM context inevitably involves numerous stakeholders: direct, indirect, powerful, powerless, marginalized, acknowledged, etc. Therefore in such a setting of unequal capacities and power arrangements, principled negotiation is a key mechanism towards a sustainable solution. Employing strategies of principled negotiation may be difficult or next to impossible where power disparities are pronounced. In this case, it is more likely that facilitation or mediation may be fruitfully employed.

A good mediator/facilitator must first remember to do no harm. He/she should also be sensitive to the possibility of a spoiler in the setting. That is, one or more actors determined to obstruct any progress towards a negotiated outcome. At the same time, the

mediator/facilitator should look for connectors – those people and issues that may draw parties to a grievance towards each other and towards a successfully negotiated outcome.

A skilled facilitator:

- Assists in meeting design;
- Helps keep meeting on track;
- Clarifies and accepts communication from parties to the negotiation;
- Accepts and acknowledges feelings;
- Frames a problem in a constructive way;
- Suggests procedures for achieving agreement;
- Summarizes and clarifies direction; and
- Engages in consensus testing at appropriate points.

Additionally, a good facilitator will not judge or criticize; push his/her own ideas; make significant procedural decisions without consultation; or take up the group's time with lengthy comments.

Mediation

Mediation is flexible, informal, confidential and non-binding. The mediator has no direct interest in the conflict and its outcome. The mediator has no power to render decisions. The mediator looks for alternatives based on the facts and merits of the case.

An effective mediator will have most of the following characteristics:

- Ability to create trust;
- Ability to define issues at the heart of the dispute;
- Patience, endurance, perseverance;
- Thoughtfulness, empathy, flexibility;
- Common sense, rationality;
- Often a likeable personality;
- Accurately perceived as having experience; and
- Neutrality, impartiality, problem-solving skills, creativity, reflexivity.

Mediation/facilitation styles can vary from active and intervening to rather passive. In any event, to be effective a mediator must:

- Be willing and able to call on expert knowledge and/or use decision support tools;
- Meet with aggrieved parties jointly and separately; and
- Elicit ideas from both sides.

The effective mediator/facilitator focuses on the future without forgetting the past.

Effective communication

Without communication there is no negotiation. Negotiation is a process of communicating back and forth for the purpose of reaching a joint decision. There are three typical problems with achieving effective communication.

First, parties to a dispute may not be talking to each other, and are unwilling to do so. Second, even if they are talking to each other, they may not be hearing what they are trying to communicate to each other, possibly because they have already made up their minds

about each other and their intentions. Third, even where there is relative harmony between parties, a dispute may arise and be difficult to resolve because there is a general misunderstanding, for example, about one party's motives for an action.

A useful example comes from international politics: the arms race. State A purchases weapons purely for defensive purposes. Its neighbour, State B, views these weapons as an aggressive act towards them, and also purchases weapons to counter the new weapons of its neighbour. State A misinterprets this act, and buys yet more weapons. If there are no open lines of communication between the two states, the arms race may continue until they are both heavily armed and involved in a public shouting match about their 'real' intentions. It is therefore imperative to get parties to a conflict talking, if not directly then through a mediator.

There are specific traits and techniques associated with effective communication. An effective communicator is an active listener. She/he is not simply 'waiting to talk', but is engaged with what the other party is saying. In some cultures this is difficult to demonstrate – for example where eye contact is regarded as aggressive and/or impolite; or where speaking frankly and/or contradicting the other party to the dispute is regarded as rude behaviour. Nevertheless, an effective communicator speaks clearly and precisely. S/he also demonstrates understanding and strives for clarity of perception.

An effective communicator constantly reframes his/her and the other party's positions in an effort to maximize the options for arriving at win-win outcomes. She/he also uses open-ended questions that provide space for elaboration and digression. But he/she will use direct questions such as 'Why is this important to you?' when trying to uncover the interests and needs that underlie a stated position. It is important that the effective communicator separates the person from the problem.

Among other things, the mediator/facilitator is looking to discover interests among the parties that may in fact be compatible. Interests, once revealed, can be mixed (the parties share some interests, but differ fundamentally elsewhere), mutually exclusive or compatible. It is the latter type of interest that we wish to reveal and build upon. For instance, where actors may be caught up in a 'dam/no dam' positional argument, the underlying shared interest may be having a predictable water supply for food production.

Roles and responsibilities

Effective communicators are also conscious of the various roles and responsibilities that are attached to the parties involved in a dispute. For instance, an actor may be entrusted to act in pursuit of the best interests of the group; or he/she may be tasked to pursue specific group goals. An effective communicator will also not confuse cordiality with 'getting your way'. Actors may not be personally invested in the result, so they are unwilling to work towards a mutually beneficial outcome. Cordiality may simply reflect the fact that a party to the dispute is wedded to his or her position. Where village/local authorities are concerned, cooperation with the mediator may obscure the fact that often the local authority is both a referee and a player in a resource use dispute. Research from the Danish Institute for International Studies (see www.diis.dk/water), shows how chiefs and headmen use their

social power to determine where a new borehole intended for the entire community is to be located; too often this borehole is located near to or in the headman's compound.

Unstated variables

In any negotiation there are a number of unspoken variables that communicate certain information that, unbeknownst to the parties, may be affecting the outcome of negotiations. For example, parties to a dispute may be entrusted with the same responsibilities from their organization (e.g., as Ministers of Water Affairs) but in an inter-group setting, there may be subjective, interpersonal factors that serve to give one actor power over another (one is an older, white man in an expensive business suit; the other is a younger male of colour in an 'off-the-rack' suit). These factors include age, sex, gender, race, ethnicity, and even the style of dress and the location of the meeting. Depending on the setting, some or all of these factors may combine to communicate the social power of one actor over another. Such factors are especially prevalent in river basins – or along watercourses characterized by wide social and economic inequalities. It is up to the mediator/facilitator to be aware of the possibility of these factors and to work toward neutralizing them.

3.3 The Mediator Approaching the Dispute

Once parties to a dispute have approached a facilitator/mediator, the neutral third party should ask several key questions:

Regarding the conflict:

- Is it persistent? (e.g., regarding resource use access)
- Is it intermittent? (e.g., seasonal; once every 5-8 years)
- Is it unexpected? (e.g., by one party or all parties)
- Is it hypothetical? (what someone might do)

Regarding channels for dispute resolution:

- What are the channels of communication?
- Do parties to the dispute have access to each other?
- Is there an identifiable contact point? (In many cases the dispute is a spontaneous reaction to a changed condition and there is no identifiable 'leader', or contact point for those holding a grievance.)
- What is the institutional framework?
- Does the government have an ombudsperson who may handle this instead?
- Is there a Water Tribunal or local water authority and, if so, do parties to the dispute know about these entities?

Generating options: Facilitating parties to develop their Best Alternative to Negotiated Agreement (BATNA)

Parties to a conflict will only cease hostilities if the options available satisfy their mutual interests. Returning to the process map described in Module 2 above, parties will only reach milestone B when they are willing to negotiate with each other. To reach this stage, satisfactory options must be generated. For the mediator/facilitator this is step 5: assisting the parties to determine their Best Alternative to Negotiated Agreement (BATNA).

The BATNA is the standard against which any proposed agreement should be measured. That is the only standard which can protect a party from accepting terms that are too unfavourable and from rejecting terms it would be in their interests to accept.

The BATNA is not only a better measure but also has the advantage of being flexible enough to permit the exploration of imaginative solutions. Instead of ruling out any solution which does not meet a party's bottom line, they can compare a proposal with their BATNA to see whether it better satisfies their interests.

If both/all sides have attractive BATNAs, the best outcome of the negotiation – for all parties – may well be to not reach agreement. In such cases a successful negotiation is one in which the parties amicably and efficiently discover that the best way to advance their respective interests is for each to look elsewhere and not to try further to reach agreement.

Having a good BATNA can help you negotiate on the merits. You can convert the resources you have into effective negotiating power by developing and improving your BATNA. Apply knowledge, time, money, people, connections and wits into devising the best solution for you, independent of the other side's assent. The more easily and happily you can walk away from a negotiation, the greater your capacity to affect its outcome.

Box 3.2: Best Alternative to Negotiated Agreement (BATNA)

The purpose of negotiating is to produce a better outcome than would have been obtained without negotiation. An outcome that has been achieved without negotiation, or after negotiation has failed, is called the best alternative to negotiated agreement.

Developing a BATNA involves, among other things:

1. Listing all the possible alternatives that could be pursued if no agreement is reached;
2. Considering the practical implications of the more promising alternatives; and
3. Selecting the alternative that seems to be the most satisfactory BATNA.

Source: Engel and Korf, 2005)

Box 3.3 Determining your BATNA

Review the conflict

- What are the central issues in this conflict?
- Who is involved?
- What kind of outcome do I hope to achieve?
- Which actions would best help me reach that objective?
- What would be:
 - The best outcome?
 - The minimal outcome?
 - The worst outcome?

Assess the alternatives

Are there any issues that I am unwilling to negotiate?

What alternatives do I have for satisfying my interests if we do not reach an agreement?

What would be the best alternative?

Strengthen the BATNA

What can I do to achieve my interests?

Are there additional resources that may be required?

Will I need extra time or financial support?

Box 3.3 Determining your BATNA (continued)**Consider the other parties' BATNAs**

What do I think their key interests might be?

What might they do if we do not reach an agreement?

Source: Engel and Korf, 2005

Having generated a range of options culminating in the articulation of the BATNAs of all parties to the dispute, the mediator/facilitator will have achieved milestone B on the process map: stakeholders are now prepared to participate in a negotiation.

Step 6 requires adequate preparation for negotiation by all parties, including the facilitator/mediator. Parties hoping to achieve win-win outcomes for lasting solutions through the negotiation should adhere to particular procedural guidelines in the pre-negotiation and negotiation phases:

- Identify substantive, procedural and psychological interests that you expect to be satisfied through negotiation;
- Ask why and how questions regarding needs that are important to you;
- Speculate on the motives of other negotiators;
- Begin negotiations by educating each other on interests;
- Frame the problem as solvable through win-win approaches;
- Identify the general criteria that must be present in any acceptable settlement;
- Generate multiple options;
- Utilize integrative option generating techniques;
- Separate option generation from evaluation process; and
- Work towards agreement – identify areas of agreement, restate them, write them down.

The task of the mediator/facilitator is to assist the parties to build trust and to learn about each other's needs and interests. Facilitation (step 7) is the most challenging of the ten steps, particularly as the mediator/facilitator will be dealing with people with a strong emotional focus. To facilitate the principled negotiation process, the mediator/facilitator should set participatory ground rules so that all voices may be heard; that options put forward are realistic, meaning primarily that any agreement reached must be implementable. Repetitive brainstorming and visioning exercises may be useful, just as they were useful when helping each party develop its BATNA. Some mediators/facilitators find the drafting of model agreements – separately and together – to be a useful exercise in moving towards a sustainable negotiated agreement.

Reaching agreement

Assisting parties to design an agreement acceptable to all is the primary task of the mediator/facilitator during step 8. Agreements come in different forms: some are very weak and ask very little of the parties to the conflict. Others are very strict and require elaborate monitoring arrangements. In all cases, a satisfactory agreement should be durable. Durability, therefore, does not mean that it should be a strong agreement. Indeed, as shown in Module 4 below, the most durable water agreements reached by multiple actors with

multiple interests, all viewing the resource itself differently, are agreements that are framed in very general terms, leaving space for further negotiation and agreement, and the amicable resolution of disputes. It is up to the parties themselves to decide whether they want hard and fast terms of agreement, or terms that are partial, provisional and contingent. Milestone C will have been reached when the agreement has been formally developed and accepted by all parties.

Box 3.4: Characteristics of a durable agreement

Is it honest?

Based on the best available and jointly developed information?

Built on realistic considerations of capacity and costs?

Having the assurance of all stakeholders that they will implement their parts?

Developed with the full involvement of all key stakeholders?

Is it acceptable?

Resolving the grievances that gave rise to the dispute?

Acknowledging past problems and addressing them?

Meeting the underlying interests and needs of the primary stakeholders?

Arrived at by a process that was perceived as fair by and to all?

Is it workable?

Providing benefits (incentives) for all implementing parties?

Not disadvantaging an excluded party?

Recognizing possible problems or changes in the future, and including mechanisms to deal with these, or acknowledging the needs for renegotiation?

Building working relationships among parties through its implementation?

Source: Godschalk et al., 1994

Leaving the scene a better place

For the facilitator/mediator, steps 9 and 10 on the process map towards successfully managing a conflict involve developing suitable instruments for monitoring the agreement and assisting the concerned parties to explore possibilities for further confidence building. Monitoring of the agreement may be given to a group of stakeholders as decided among themselves, or it may involve the mediator/facilitator. It may also involve government alone (for example through a designated entity such as an ombudsperson, or a Water Apportionment Board). While the task often falls to government, where they themselves were parties to the dispute, there may be lingering mistrust on the part of some stakeholders.

Post-conflict settings are sometimes the breeding grounds for very useful peace-building platforms. In the Okavango Delta, for example, a proposed water off-take by the Government of Namibia initially gave rise to concerted opposition from a loosely organized social movement, whose interests were assisted by an international non-governmental organization. A long-standing government plan became contentious in the face of a persistent drought. While the dispute resolved itself following the return of very good rains, the parties to the dispute used the opportunity to formalize linkages between local users and

government actors. The newly created structure now serves as a base for the amicable settlement of disputes.

Milestone D, the final milestone on the process map, will have been reached when the mediator/facilitator is confident that the agreement will operate to the satisfaction of all parties.

Box 3.5: The process map challenge

Identify a water related conflict in your own country. How was it resolved? Compare its development with the process map, carefully identifying actions taken from step 1 to step 10. Do you think the process map is a useful tool for a mediator or facilitator entering a conflict setting?

EXERCISE

Call and Response

Linked to Session 6 (Instruments for Conflict Resolution and Negotiation)

Following the formal presentation describing the various methods of conflict resolution, the facilitator structures discussion around the six requirements for a successful resolution to conflict, providing ample opportunity for participants to ask for clarifications and to provide relevant examples from their own experiences.

Time: 30 minutes

EXERCISE

You Speak my Language?

Linked to Session 7 (Effective Communication)

If the basis for successful negotiation is that we understand exactly what it is that each other wants, then language constitutes an important element of that process. But very often we use words that mean different things to different people.

In this short exercise, the facilitator asks course members to write their definition of a specific term on post-able cards. In our experience, there are two words that generate the liveliest debate among participants: 'development' and 'gender', but it is entirely up to the facilitator to choose the word or concept.

Immediately below, we provide an ideal definition of gender as the base against which to measure all answers. Give participants 5 to 10 minutes to frame their definition, and then collect all of the cards. There is no need for discussion at this point. Post all of the cards including the ideal definition during a tea break and just let participants read them and discuss them among themselves.

Time: 10 minutes (pre-tea break)

After the tea break it is necessary to debrief course members on the concepts, particularly 'gender', since the majority of participants in our view regard gender as 'a woman thing', which is wholly incorrect. Gender may seem to be a 'woman thing' because it is women who are most disadvantaged by embedded social norms. In the debriefing, in our view, it is good to ask the male participants what are the disadvantages to being 'a man' in your society? For example, because of the gendered notion of man as a 'protector', he is regularly put in harm's way through military and police service. It is important for participants to gain a balanced view of the pluses and minuses attached to their expected social behaviour related to their gender.

If time permits, we highly recommend that one hour be devoted to the Cap-Net tutorial on gender, available at <http://www.cap-net.org/resources/tutorials/>

Box 3.6: What is 'gender'? A definition

Sex is biologically determined. One is either male or female.

Unlike sex, **gender** refers to socially learned behaviour and expectations that distinguish between masculinity and femininity. Whereas biological sex identity is determined by reference to genetic and anatomical characteristics, socially learned gender is an acquired identity. We **learn**, through culturally specific socialization, how to be masculine and feminine and to assume the identities of men and women. It is the society that decides what is masculine and what is feminine, and what values these categories have in a particular place and time. For example, men are not thought to be 'less masculine' in Africa when they are seen walking and holding hands. In North America, for men to hold hands is seen as effeminate and therefore a social taboo. The specific forms of masculinity and femininity and the extent of inequality between men and women vary dramatically over time and across cultures.

While it may be true that femininity tends to reflect some traits common to most women, and masculinity to some men, both men and women can display some of either of these traits at various times and places. Men can care and nurture; women can fight.

Feminism argues that women should not be reduced to a set of stereotypes – soft, weak, vulnerable, nurturing, caring – that predetermine their place in the social order. Similarly, feminism argues that men should not be subjected to such 'biological determinism'. It is a mistake to conclude that because women alone have the capacity to give birth that they should remain in the home. Similarly, it is a mistake to say that because men have superior upper body strength they alone should be soldiers who die on the battlefield. The fact that (most) women give birth to a child once or several times over the course of their entire lives is no reason to restrict them to the kitchen. Biology is not destiny.

EXERCISE**Upstream-Downstream**

Linked to Session 7 (Effective Communication)

This exercise involves a scripted skit to be performed by two of the workshop participants. It is a very simple yet extremely effective way of demonstrating the importance of effective communication in negotiation. It should be conducted in the open space between the tables that are set in a rectangular/circular arrangement.

The people chosen should be volunteers, but it is useful to pick them based on specific criteria to help demonstrate the often unstated aspects of negotiation. More specifically, the volunteers should be chosen to emphasize traditional assumptions underpinning age, gender roles, physical size and even manner of dress.

The skit is a very useful way of thinking about the sorts of disparities in power and access to resources that occur in most river basins, along many of the world's watercourses, in offices and across government departments.

One participant will play the elder child (preferably a large, older male).

One participant will play the younger child (preferably a smaller, younger female).

If two men or two women are used, size and age should continue to exhibit assumptions regarding power.

This is a scripted event, with no ad-libbing of dialogue. It also requires the organizing committee to purchase a bag of sweets (big enough to be passed around after the skit).

The setting: The 'children' are facing each other. The older 'child' is sauntering towards the younger 'child'. He clearly has two or three sweets in his mouth.

EXERCISE (continued)

Upstream-Downstream

Linked to Session 7 (Effective Communication)

Girl: What are you eating?
 Boy: (Hiding sweets behind his back) Something.
 Girl: It's not the sweets Mother gave money for you to buy and us to share is it?
 Boy: (Pauses) Maybe.
 Girl: It is isn't it!? How many did you eat already?
 Boy: (Chuckling to himself) Not many.
 Girl: (Clearly agitated) How many are left?
 Boy: Oh ... many. (Smiling)
 Girl: Give me some. (Reaches for the bag behind the boy's back)
 Boy: (Stepping back) OK ... here. (Draws them secretly from the bag and hands her a few)
 Girl: This is only a few! We are supposed to share. How many do you have?
 Boy: (Smiling, but giving no answer)
 Girl: How many! (Clearly agitated and reaching for the bag; the bigger child easily evades her attempts)
 Boy: (Still quiet, he turns and begins to casually walk away)
 Girl: Hey! You come here!
 Boy: (Ignores girl)
 Girl: If you do not give me some more, I will tell Mother!
 Boy: (Turning back to her in a threatening manner) If you tell Mother, I will beat you!

End of skit

The facilitator can signal the end of the skit by initiating applause. The participant playing the 'boy' should then pass the sweets around to the other participants.

The facilitator then debriefs the participants in view of at least the following:

1. What was the conflict about? (the resource)
2. Who had the advantage of knowledge about the resource?
3. What about access to the resource?
4. How open were the communication channels between parties to the dispute?
5. What were the dynamics of power in the dispute?
6. In the initial round of negotiation, was there any incentive for the boy to share the resource?
(appeal to morality, fairness, sense of justice)
7. How did the negotiation resolve itself?
8. What is the likely outcome of this dispute?
9. What might be done to ensure a fair outcome? What might have been done to ensure a fairer initial outcome and perhaps head off the dispute?

At the same time, it is fun. It involves a situation that almost everyone can relate to (older sibling/younger sibling dynamics). And it involves a reward (sweets) for all of the participants.

Note to facilitators: As the bag is passed around after the skit, observe how course members divide the resource among themselves – this usually provides an opportunity to further drive home the point that upstream control of the resource usually results in disproportionate benefit from the resource.

Time: 30 minutes

EXERCISE**River Basin Game**

Linked to Session 8 (Negotiation)

This exercise follows the formal presentation on Negotiating Water Resources where the facilitator has discussed an overview of negotiation; principled negotiation; the stages of negotiation; understanding when the time is ripe for negotiation; and approaches and methods of negotiation.

The backdrop for the simulation is the fact that change can induce conflict. Sometimes the change is sudden and is the result of an external stimulus. Where local conditions are also changing, such a sudden change can trigger conflicts that had been brewing just below the surface of basin actor relations.

The river basin is changing through social dynamics. Suddenly, a government decision brings latent grievances to the surface. The local authority is tasked to manage the outcome. Participants are to be divided into stakeholder groups and will be expected to develop their BATNA in light of proposed government alternatives and participate in extended rounds of negotiation, ultimately leading to agreement (participants should employ the negotiation stage checklist provided below).

The value of the exercise is to place participants in a moderately complicated decision-making context and test the tools they have been given over the last few days. Time allotted for the exercise is 3.5 hours which includes a 30 minute debriefing.

Role play: Negotiation for water**Duration**

Introduction – 15 minutes

Prepare argument – 30 minutes

Present arguments – 30 minutes

Negotiation round – 60 minutes

Presentation of outcomes – 30 minutes

Discussion and reflection – 30 minutes

Objectives

To expose participants to a situation of conflicting interests

To apply negotiation techniques to a case

To apply IWRM concepts

To stimulate team work

The case

The catchment in question is located in the interior. It is a tributary of a larger river that runs to the sea. Developments in the basin have led to dramatic changes in water use patterns and subsequently to overexploitation of water resources.

In the relatively recent past, more than 60 percent of the river basin was covered by primary forest, the remainder being used for extensive farming. Now banned but previously allowed logging has had severe impacts on the ecosystem and hydrological conditions of the area. Upstream mining activities have led to deterioration of the water quality. Extensive tourism developments have put a heavy pressure on water availability, and community water supply agencies are having a difficult time to provide enough water while heavy investments need to be made to assure water of reliable quality for domestic use.

A ban on logging, combined with capital intensive mining and tourism activities have contributed to a high unemployment rate in the area. Poor-quality surface water flow has driven cattle farmers downstream to search for water in another part of the basin. Local authorities are not only concerned about water quality and quantity; they are also concerned about the numbers of unemployed and underemployed people – particularly youth – moving into the urban area.

EXERCISE (continued)

River Basin Game

Linked to Session 8 (Negotiation)

Note to facilitators: It is useful to sketch 'present' and 'recent past' maps of the basin to facilitate visualization of the setting.

The problems

- Water shortages Water supply is not adequate to meet increased demand because of population growth and tourism development.
- Sedimentation because of forest clearance and consequent erosion leads to reduced volumes.

Water quality

- Discharges from upstream mining have deteriorated downstream water quality.
- Cattle farming in combination with permeable soil have led to low groundwater quality.

Conflicting water uses

- Domestic water supply is heavily affected by upstream mining and downstream cattle farming.
- The latter have serious consequences for the ecosystem and therefore for eco-tourism developments.
- Cattle farmers are affected by poor water quality from mining discharges and have to walk their cattle to an adjacent basin for safe water.

The game

Because of reduced availability and increased pollution of water resources, the authorities have decided to either (a) reduce water allocations by 1/3 or (b) double the price to reduce intake and waste of water, and to stimulate efficient water use.

Roles

- Small-scale cattle farmers
- Environmental NGOs
- Community water supply
- Local authorities
- Industries/mining
- Tourism agency

The group is divided into six interest groups as indicated. Each group will be given a short description of issues relevant to their group (use of water, main problems, interaction with other groups, natural allies and competitors) and they will be given the assignment to articulate their needs, interests and position as well as to develop their BATNA. They will then argue their case, whatever suits their BATNA best. They are not to see each other's group descriptions.

The groups prepare their opening argument and response to the government proposal. Groups are given three minutes each to present their case.

In the following negotiation round the groups may form coalitions and strengthen their positions. The negotiations are informal and may be done in public or in private with allies. After the negotiation round, groups or coalitions, report back to the plenary to convince the authorities of the interests of their constituencies. The authorities draw up a consensus statement as the basis for a policy that is acceptable to all.

EXERCISE (continued)

River Basin Game

Linked to Session 8 (Negotiation)

NOTE TO TRAINER: Participants can be exposed to different bargaining styles and socio-structural/cultural aspects by altering the terms of participation among some key participants. For example, the water authority, rather than performing as a principled negotiator, can instead take a hard position and drive the outcome in the direction they desire. Certain groups can refuse to speak with women or with lower caste/poorer groups. The trainer can run the simulation several different ways to help participants see the different possible outcomes depending on sociocultural, socio-economic and power-political variables.

Discussion and reflection – after the game has been played, the group will discuss in the plenary:

- How close is the case to reality?
- What are the main lessons from this game situation?
- Does negotiation and consensus building necessarily lead to the best decision for sustainable use of water resources?
- Would the outcome have been better if there had been an appointed facilitator, acceptable to all, rather than the local authorities whose impartiality is compromised by having to uphold government policy?
- Who should make the decision and how?

Group 1: Small-scale cattle farmers

Use of water:

- Drinking water for cattle
- Domestic use

Main problems faced:

- Open water polluted
- Competition over access to water with tourism industry

Interactions with:

- All groups except for environmental NGO

Natural allies:

- Local authority

Natural competitors:

- Mining company
- Tourism agency
- Community water supply
- Environmental NGO

BATNA:

Group 2: Environmental non-governmental organization (NGO)

Use of water:

- To maintain the functioning of the ecosystem
- To prevent degradation and destruction of ecosystems, it is important to have enough water of the right quality and with the right seasonal variability

Main problems faced:

- Forest clearance
- Groundwater pollution
- Water quality deterioration by discharges

Interactions with:

- All groups

Natural allies:

- Tourism agency
- Community water supply
- Local authority

Natural competitors:

- Mining company
- Small-scale farmers

BATNA:

EXERCISE (continued)

River Basin Game

Linked to Session 8 (Negotiation)

Group 3: Community water supply

Use of water:

- Extraction of water for domestic water supply

Main problems faced:

- Polluted water from upstream discharges
- Polluted groundwater

Interactions with:

- Small-scale farmers
- Local authority
- Tourism agency

Natural allies:

- Environmental NGO
- Tourism agency
- Local authority

Natural competitors:

- Small-scale cattle farmers
- Mining company

BATNA: _____

Group 4: Local authorities

Use of water:

- The local authority in this game is not a water user as such but the *de facto* mediating player who is responsible for developing sound water policies and ensuring their proper implementation.

Main problems faced:

- Mediation between competitive water users
- Migrating rural youth due to unemployment
- Slow economic growth

Interactions with:

- All groups

Natural allies:

- Potentially all groups

Natural competitors:

- Potentially all groups

BATNA: _____

Group 5: Mining company

Use of water:

- Extensive use for company operations

Main problems faced:

- Environmental lobby
- Tourism develops faster than industries

Interactions with:

- Local authority
- Environmental NGO

Natural allies:

- Local authority

Natural competitors:

- Environmental NGO
- Community water supply
- Tourism agency

BATNA: _____

Group 6: Tourism enterprise

Use of water:

- Casino/hotel
- Water related recreation activities
- Drinking water
- Golf course

Main problems faced:

- Water scarcity threatens all functions of the tourist enterprise
- Water quality limits use for recreation and drinking water
- Golf course and gardens can use partially treated grey water

Interactions with:

- Community water supply
- Environmental NGO
- Local authority

Natural allies:

- Environmental NGO
- Community water supply
- Local authority

Natural competitors:

- Industries/mining
- Small-scale farmers

BATNA: _____

Box 3.7: Stages of negotiation

A checklist to be used as a guide for participants in the River Basin Game

- Evaluate and select a strategy to guide problem solving
- Make contact
- Collect and analyse background information
- Design a detailed plan for negotiation
- Build trust and cooperation
- Open negotiations
- Define issues and set agenda
- Uncover hidden interests
- Generate options for settlement

EXERCISE

So What's the Problem?

Link to Session 9 (Field Excursion – Local Case Study) and
Session 10 (Following the Process Map)

The purpose of the field excursion is to bring all of this to life: a real issue requiring a real response in real time. Given the endless array of water related disputes, the organizers should arrange the excursion around a case that is not too complicated (e.g., the user profile is limited), in a manageable physical setting (e.g., along a small tributary; or in a nearby urban or shanty town settings), where the organizers feel that with the help of facilitation or mediation the situation might be improved.

A field brochure should be prepared with adequate maps and photos. Seven hours in the field (from 0800 to 1500 hours) marks the outer limit if you are to still have time for a debriefing and exercise in the classroom at the end. Whatever transpires, the organizers should aim to be back in the classroom by 1600 hours for a 60-90 minute exercise.

Over the course of the day, course members should be instructed to use the onion tool and the conflict map in an effort to come to grips with the case study. What are the positions taken? By whom? What are their interests? Needs? What are the relationships between and among the actors? Answers to these questions can be gleaned by question-and-answer sessions with the various stakeholders in the field. By now, participants know that successful conflict resolution depends on sound conflict analysis.

They should also be aware of the fact that mediators or facilitators can sometimes unintentionally:

- (i) 1. reinforce tensions;
- (ii) 2. give legitimacy to people who can spoil the process;
- (iii) undermine peaceful values;
- (iv) promote intolerance; and/or
- (v) add to the influence of more powerful actors.

They should then be encouraged to be sensitive to the setting, to ask open-ended questions, and to refrain from making judgements or suggestions. A mediator/facilitator is both impartial and neutral: s/he manages the process, but is not involved in the content of the negotiations. What they must do is engage as active listeners. Back in the classroom, the facilitator should lead a debriefing around these questions.

Time: 60-90 minutes.

EXERCISE

Session 10: Following the Process Map

Linked to Session 9 (Field excursion – Local case study)

During the field trip and its debriefing, participants will have been sensitized to the key issues, and they have followed the process map from step 1 (preparing entry) to step 2 (entering the conflict scene), stopping at step 3: (analysing conflict). They will have many ideas regarding how to resolve the key conflicts in the case study and are perhaps a bit disappointed that they did not get a chance to go further. In this exercise they can do just that: follow the process map all the way to Exit.

The facilitator should arrange the group according to the stakeholders identified in the case study. Participants must behave according to the roles they have been given. Two or three people should also be appointed as facilitators/mediators to the conflict. Each stakeholder group should prepare its BATNA with the help of the facilitators (step 4). Options should be assessed (step 5). Preparations for negotiation (step 6) should then be taken, followed by a facilitated negotiation among all stakeholders (step 7). An agreement should be designed (step 8) to the satisfaction of all stakeholders, and monitoring arrangements should be articulated (step 9). The final step 10 is preparing to exit: Are all parties satisfied? Will this agreement last? How can we be sure that all actors will live up to the agreement?

Time: 2 hours

References

1. Engel, A. and B. Korf, 2005, Negotiation and mediation techniques for natural resource management, Rome, Food and Agriculture Organization of the United Nations (FAO).
2. Fisher, R.W. Ury, B. Patton, 1991, Getting to Yes: negotiating an agreement without giving in, Toronto, Penguin Books.
3. Godschalk, D.R. et al., 1994, Pulling together: a planning and development consensus-building manual, Washington, DC, Urban Land Institute.

Module 4

Water Agreements and Management Arrangements

Learning objectives

- To describe trends in global, regional, national and local level water agreements and management arrangements.
- To highlight differential outcomes and identify progress toward cooperative and sustainable management arrangements.

Outcomes

- The participant will gain knowledge of the general trends in water agreements and management arrangements around the world.

Skills

- To have the ability to find entry points for cooperation.
- To show the results of negotiation on key water issues on different spatial scales.
- To accurately identify policy implementation bottlenecks.
- To have the ability to translate trends across cases so as to pursue best practice at home.

4.1 Introduction

'In many river basins use of water for human purposes through investments in water infrastructure for urban, industrial, and agricultural growth is approaching or exceeding the amount of renewable water available' (Molle et al., 2006:585). IWRM places great emphasis on the creation of an enabling environment to address these issues. In particular, there is significant emphasis on legal, institutional and policy frameworks at the basin scale for sustainable resource use and management. This is not to say that sustainability is dependent on basin-level institutions and processes alone. Indeed, many of the problems as well as the solutions to key water issues lie beyond, below and above the basin scale.

4.2 International Rivers

According to Conca (2006), 'One of the entry points for institution-building in defence of the world's watersheds is the fact that nearly all of the world's largest rivers cross national borders. It is estimated that there are at least 263 international river basins, with some estimates going as high as more than 300'.

The territory covered by these basins is estimated at 45 percent of the earth's surface including 145 countries of which about one-half have 80 percent or more of their territory and two-thirds have more than 50 percent of their territory in international river basins. Shared waters have induced many states to sign agreements with each other.

The FAO 'identified more than 2000 agreements that deal with some aspect of transboundary water issues (most of them bilateral agreements focused on navigation)' (Conca, 2006). Wolf and colleagues identify 145 international treaties since 1814 that deal with non-navigational aspects of international waters.

There is increasing recognition around the water world of the importance of effective structures for managing competing interests on river basins, particularly transboundary basins. Climate change is likely to destabilize many practices, such as rainfed agriculture, that have hitherto lasted 'sustainably' for millennia. It is therefore imperative to ensure the presence of what Pohl et al. (2014) call 'effective facilitating agencies' at all scales.

IWRM has provided the general framework for thinking about the evolution of these institutions. Conca (2006) shows how through time the management and governance of water resources has been the purview of the sovereign state, acting in the spatially bound sovereign state's perceived national interests, resulting in actions restricted by the parameters of expert knowledge (in particular, engineers). These actions have caused various problems, namely uneconomic, unsustainable and inequitable development, hence the need for IWRM.

IWRM reframes water resource governance and management by arguing that the river basin (not the sovereign state) is the appropriate geographical management space; that stakeholders (including state authorities as one of many) are the appropriate authoritative decision takers; and that inclusive forms of knowledge (including indigenous knowledge) rather than exclusive, 'expert' forms should determine the appropriate actions to be taken.

Region	Number of international rivers	% of land area in IRB	Number of states with territory in one or more IRB
Africa	59	62	47
Asia	57	39	34
Europe	69	54	42
North America	40	35	12
South America	38	60	13
World Total	263	45	145

Table 4.1: International river basins of the world

Source: www.transboundarywaters.orst.edu/publications/register/tables/IRB_table_4.html

% of national territory within IRB	Number of countries
90-100%	39
80-90	11
70-80	14
60-70	11
50-60	17
40-50	10
30-40	10
20-30	13
10-20	9
Less than 10%	11
Total	154

Table 4.2: Percentage of national territory within international river basins

Source: Wolf et al., 1999

But states are powerful actors, and water is a very valuable resource, so the shift towards IWRM has been difficult to say the least. One important means of moving beyond the way things have always been (the 'is') towards the way we would like things to be (the 'ought'), is by drawing states into formal arrangements for resource sharing. Pohl et al. (2014) argue that for effective 'hydro-diplomacy' to take place in an era of uncertainty driven by climate change, at least three things are necessary:

- The development of a facilitating agency:
Effective international structures that are able and willing to systematically address present and future challenges and opportunities of transboundary waters.
- Improved coordination of activity:
A more coordinated and strategic approach within and among donor countries, recognizing the influence that financial institutions, regional organizations and powerful non-riparian state/non-state actors have on state planning for socio-economic development.
- The presence of enabling actors:
National, regional and global actors must be committed to strengthening institutions, building capacity and providing funding.

Below we describe some of the overarching institutional and organizational arrangements that influence better water governance and management at all scales. In the case studies that follow, we show how what Mirumachi (2015) describes as 'path dependency' – i.e. inter-state and intra-state commitment to traditional forms of water resource development – somewhat paradoxically deepen trust and cooperation among powerful actors, but also limit

the 'geographic imagination' of what might be done if the 'Triple E' underpinning IWRM is to be realized.

Agreements and management arrangements in international rivers

Several different approaches to using shared watercourses have evolved over time, for example:

1. Absolute territorial sovereignty (the Harmon Doctrine):
A state has the right to full utilization of all water within its legal boundaries (favours upstream riparian).
2. Absolute territorial integrity (or riparian rights theory):
A state has the right to the unfettered, natural flow of a river (favours the downstream riparian).
3. Limited territorial sovereignty/integrity:
A state has the right to the utilization of the waters of a shared river as long as its use does not compromise a co-riparian's ability to also use the water.
4. Community of interests:
States' boundaries should be ignored and the drainage basin should be considered the economic and physical unit. Where an intervention is planned, it should be done in consultation with all basin members.
5. Equitable utilization:
Each basin state has the right to use the waters of a river basin, and as such is entitled to a reasonable and equitable share (Finger, Tamiotti, Allouche, 2006).

As pressure increases on a finite resource, states are gradually shifting away from either of the first two positions, and now mostly follow (formally or informally) the doctrine of limited territorial sovereignty/integrity. In the meantime, there continues to be considerable discussion about the community of interests and equitable utilization positions.

In 1997 the United Nations General Assembly adopted the United Nations Convention on Non-Navigational Uses of Internationally Shared Watercourses. The Treaty has been ratified by the required minimum of 35 states and came into force on 17 August 2014. This convention lays out general principles for the content of basin-specific agreements, some of which are as follows:

- Article 2: Defines a watercourse as 'a system of surface and groundwater constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus'.
- Article 4: All watercourse states have the right to participate in negotiations that cover an entire watercourse, and to consult on any lesser agreements affecting that state.
- Article 5: Calls for states to adhere to the principle of 'equitable and reasonable use' of international watercourses within their territories.
- Article 7: Obligates states to 'do no significant harm' to other watercourse states.
- Article 8: Obligates states to cooperate on the basis of 'sovereign equality, territorial integrity, mutual benefits and good faith'.
- Article 9: Calls for the regular exchange of information and data.
- Article 11: Requires states to exchange information and consult with other states on any planned activity.

- Article 12: Requires prior notification of any planned measure ‘which may have a significant adverse effect’ on other watercourse states.
- Articles 20-23: Deal with environmental concerns such as ecosystem preservation, pollution control, control of alien species, and protection and preservation of the marine environment.
- Article 33: Lays out dispute resolution procedures, including an obligation to ‘peacefully’ resolve disputes; endorse the use of arbitration and mediation; and develop procedures for the creation of fact-finding missions.

The 1997 UN Convention was based on two significant documents:

1. The 1961 Salzburg Resolution that focused on the ‘use of international maritime waters’; and
2. The 1966 Helsinki Rules that most notably established the principle of a state’s right to a ‘reasonable and equitable share in the beneficial use of the waters of an international drainage basin’.

In defining a watercourse in terms of ‘hydrological reality’ – as opposed to simply surface waters – and by including the principle of ‘do no significant harm’, this UN Convention moved a step closer towards managing water within its natural, holistic setting (although it continued to focus on the right of states to determine activities, and on the watercourse itself rather than the wider basin).

The UN Convention has generated a great deal of discussion in the water world and, in some cases, has even had a significant impact (for example, in informing the content of the revised Southern African Development Community [SADC] Protocol on Shared Watercourses).

Basin specific accords

Data shows that between 1874 and 1996, 150 accords were reached concerning 52 rivers. There have been 111 agreements since 1980 alone, with 33 occurring in the period between the 1992 Earth Summit held at Rio de Janeiro and the 2002 World Summit on Sustainable Development (WSSD) at Johannesburg. Of these agreements, 88 percent are bilateral.

The substantive issues mostly involve hydropower (39 percent) and water supply (37 percent) with pollution issues accounting for only four percent of agreements. Forty-three percent entail non-water issues (but two-thirds of this is about money); only 4 percent mention land. With regard to monitoring, enforcement and dispute resolution, 66 percent mention information sharing; 54 percent monitoring; 80 percent have no enforcement mechanisms at all; and 54 percent have no conflict resolution mechanism. As shown in the pie charts in Module 2 (page 13), states cooperate and conflict on similar issues: water supply and water supply infrastructural projects.

Below, we present a case study of water cooperation and conflict in transboundary settings. We derive the bulk of the information from Naho Mirumachi’s important study of Transboundary Water Politics in Developing Countries (Mirumachi, 2015). Mirumachi introduces an important new approach to understanding conflict and cooperation in transboundary waters: i.e. their simultaneous presence. Mirumachi’s TWINS framework – Transboundary Water Interactions Nexus – developed with colleagues, Mark Zeitoun, Tony

Allan, and Jeroen Warner, to name but three – assists the conflict manager in preparing for entry into a conflict situation. Mapping the trajectory of interstate relations over time is crucial to understanding the current impasse, as well as past practice which may inform potential pathways toward future cooperation and sharing of benefits.

CASE STUDY: INDIA-NEPAL WITHIN THE GANGES-BRAMHAPUTRA-MEGHNA (GBM) RIVER BASIN

The GBM is accurately described by Mirumachi as a ‘mega river system’. According to the FAO, the GBM is a transboundary system of approximately 1.7 million km², shared by India (64 percent), China (18 percent), Nepal (9 percent), Bangladesh (7 percent) and Bhutan (3 percent). While the Ganges, Brahmaputra and Meghna are three massive rivers, each with many (transboundary) tributaries of their own, the system is considered a single basin.

The entire population of Nepal (some 30 million people) resides within the Ganges sub-basin, 83 percent of whom dwell in rural areas. Some 476 million (about one-third of the total population) residents of India are located in the GBM, the majority of whom are also rural.

Blue water (surface and groundwater) availability is significant. ‘Over 138,700 m³/s of water flows into the Bay of Bengal during floods through a single outlet of the GBM river in Bangladesh. This is the largest in the world for a single outlet to the sea and exceeds even that [which] the Amazon discharge[s] into the sea by about 1.5 times’ (www.fao.org). Groundwater potential is high but largely confined to the piedmont area of India. Again, according to the FAO, ‘total water withdrawal in the GBM river basin is estimated at 373.928 km³, of which 68 percent is groundwater and 32 percent is surface water. Irrigation withdrawal accounts for ... 90 percent of total withdrawal.’ It is significant to note that India’s total withdrawal is 86 percent of overall withdrawal, 90.4 percent of which is for irrigated agriculture. It is also significant to note that India controls the flow of the Ganges River via the Farraka barrage (operationalized in 1974). The FAO (www.fao.org) describes more than a dozen bilateral agreements negotiated on the GBM between India and several of its neighbours (Bhutan, Nepal and Bangladesh).

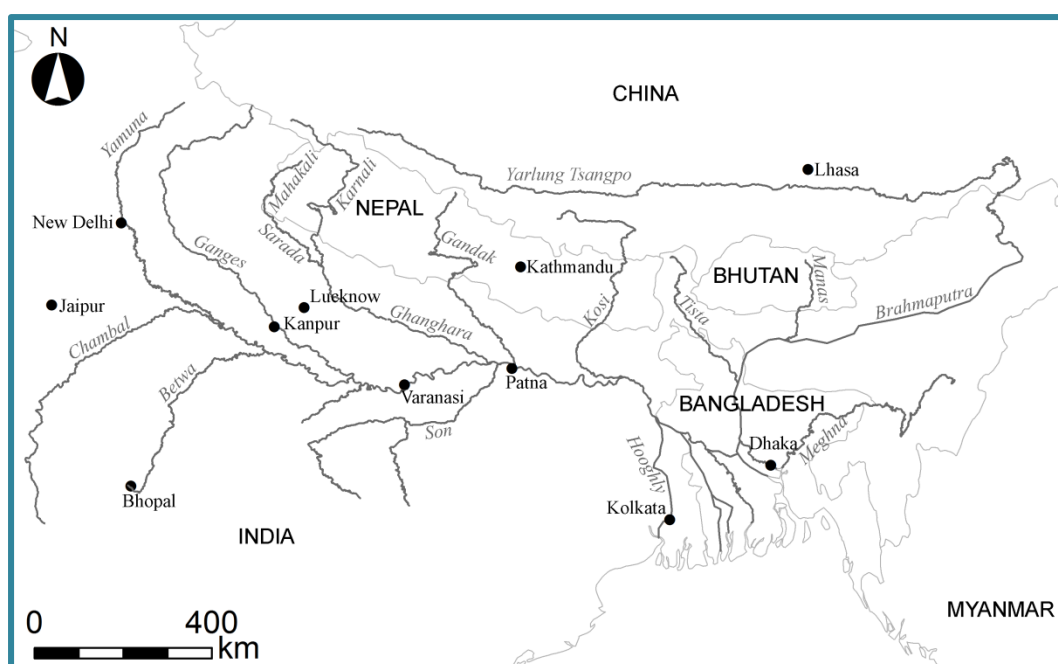


Figure 4.1: Ganges–Brahmaputra–Meghna (GBM) river system

(source: Mirumachi, 2015)

As illustrated in the figure below, the GBM river basin is home to 700 million people. According to De Stefano et al. (2010), it remains a 'basin at risk', meaning that the potential for increased inter-State conflict brought about by changes in population, resource development, economic growth or decline, or larger forces such as climate change are significant. There is widespread poverty across the basin but, according to Pohl et al. (2014), a great deal of untapped potential in terms of the shared benefits to be realized by hydropower, irrigation, flood control, navigation and so on.

While there is no overarching institutional set up for the GBM, several of the five basin states (China, Bhutan, Nepal, India and Bangladesh) have been actively exploiting the resource through bilateral agreements.

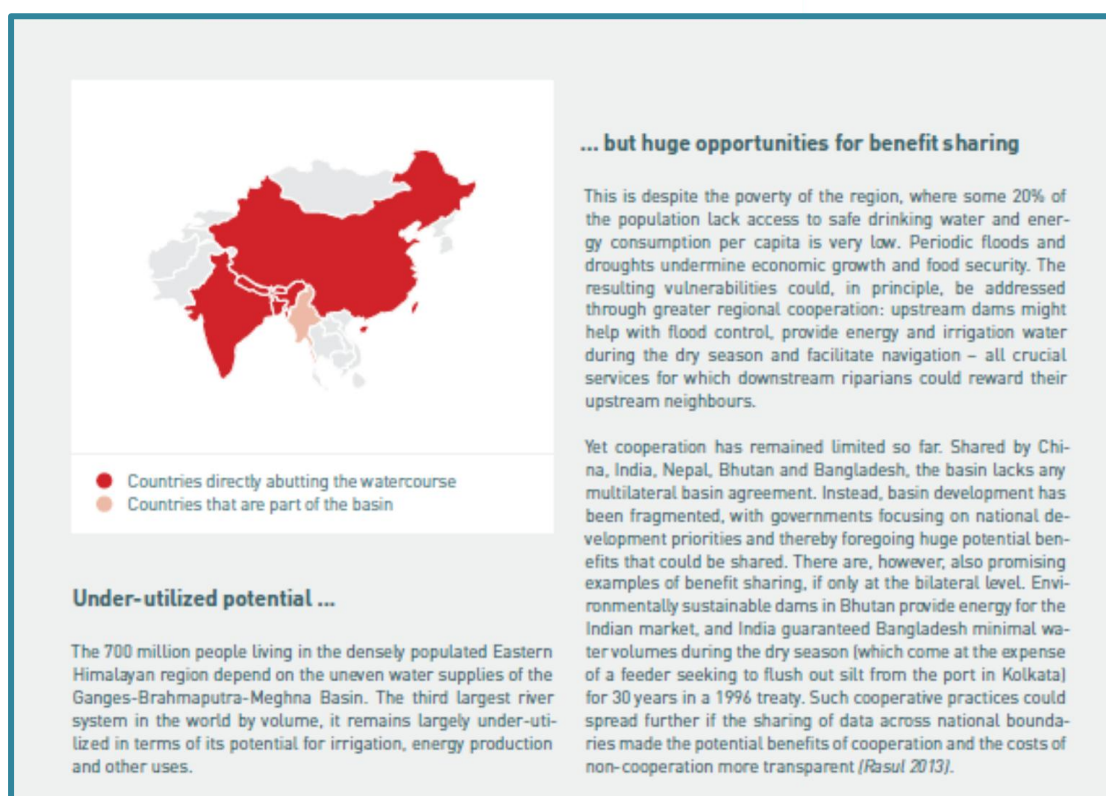


Figure 4.2 : Ganges–Brahmaputra–Meghna

Source: Pohl et al., 2014

India-Nepal

India and Nepal share a significant number of rivers (see figure 4.3 below). India has shown particular interest most recently in the western rivers flowing from Nepal. There are bilateral agreements on each of the three main tributaries flowing from Nepal: the Kosi, Gandak and Mahakali rivers.

A history of water cooperation and conflict:

Mirumachi (2015) maps India-Nepal water resources relations over approximately 60 years, dividing events into roughly six sequences. Table 4.3 presents the highlights of inter-State cooperation. As shown in the Table, it can be seen that bilateral cooperation has emphasized 'hydraulic mission' style development, i.e. large engineering projects to control rivers for specific economic benefits. Beginning with the 1954 Kosi River agreement, the emphasis has been on a standard set of activities: flood management, soil erosion control,

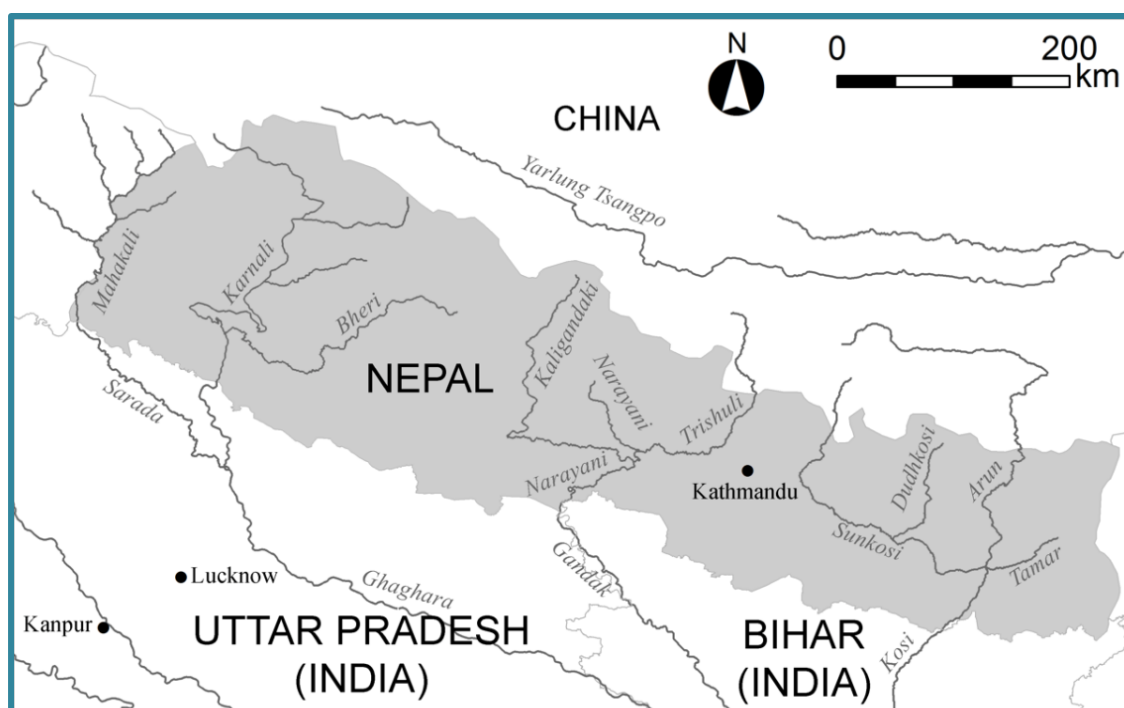


Figure 4.3: Rivers shared by India and Nepal within the GBM river basin

(source: Mirumachi, 2015)

hydropower development, and water supply for large-scale irrigation. While these events were initiated in an ad hoc way – that is, as and when India perceived the need for intervention in its ‘national interest’ – there has been an increasing tendency to institutionalize the process through committee and commission creation: the Kosi coordinating committee; the Gandak coordinating committee; the Nepal-India Joint Commission on Water Resources. Hidden behind these agreements are the heated debates between Nepali and Indian policy makers regarding ‘benefit sharing’, and the simple fact that India is by far the most powerful state within the GBM basin, generally wielding a determining influence in resource access, development, use and management decisions.

Time period	Event	Remark
1954	Kosi River agreement	Flood management, soil erosion control, hydropower and irrigation Maximize economic benefits; minimize environmental threats Some benefit sharing but Indian control Creation of ‘path dependency’, i.e. bilateral cooperation for hydraulic mission
1959	Gandak River agreement	Irrigation and hydropower; system of canals built
1966	Amendment of Kosi agreement	More equitable benefits negotiated
1978	Chandra canal	

1996	Mahakali River treaty	2000 MW power Irrigation Flood control
2000	Nepal-India Joint Commission on Water Resources (JCWR)	High point of inter-State cooperation; moving toward 'shared norms'
2008	3 rd meeting of the JCWR	Identify the Pechashwar multipurpose project as a priority

Table 4.3: Timeline of cooperative events between Nepal and India on GBM river system

Source: www.fao.org and Mirumachi (2015)

The TWINS framework, in our view, is a very useful tool in helping conflict managers see the ebb and flow of formal inter-State bargaining events over time. Its focus on inter-State relations lacks the important subnational dimension. However, as pointed out above, in the transboundary setting, governments as representatives of the sovereign state are the primary actors and can neither be belittled nor ignored. The TWINS framework seeks to map cooperation using a scale of low intensity (where a particular issue may be confronted but action is unlikely) to high intensity (where two states share a common identity regarding a particular water resource), and conflict from low intensity (where issues are non-politicized) to high intensity (leading to overt violent conflict). What the TWINS matrix shows in the Nepal-India case is a relatively constant ebb and flow of positive relations where the discourse around shared water resources is highly politicized, reflecting its importance to each state's sense of economic and social well-being (Sequences 1-3).

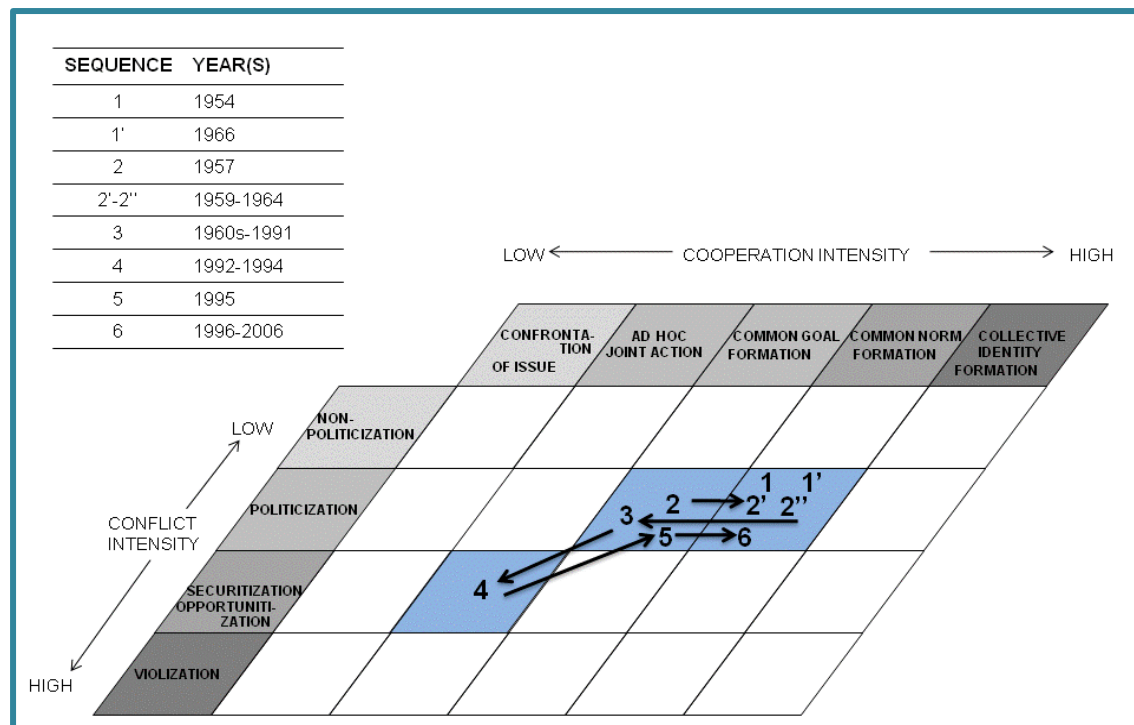


Figure 4.4: Nepal-India TWINS sequencing over time

(source: Mirumachi, 2015)

Mirumachi also shows how relatively ad hoc cooperation was driven towards firmer institutional forms due to India's increased need for water resources development

(Sequences 3-6). During the mid-1990s, India intensified the language being used regarding the importance of the exploitation of water resources on the Mahakali River for ‘food and livelihood security’ (Sequence 4). In arguing that the Mahakali River was a priority for Indian security, Indian policy makers pushed their Nepali counterparts to consider the repercussions of inaction, or non-cooperation. The outcome was the Mahakali River Treaty, signed in 1996, which agreed to the equitable utilization of the river for multipurpose projects (e.g., hydropower, flood control and irrigation water for both countries) (Sequences 5 and 6). In Mirumachi’s view, ad hoc arrangements, largely driven by Indian needs for irrigation and flood control over time, were institutionalized in terms of the treaty’s formation, which articulated joint benefits (an important issue for Nepalis who regarded most ‘cooperation’ with India up to this point in time as heavily favouring India as the dominant economic and military power in the basin).

Lessons learned

The Nepal-India case is fairly typical of transboundary water resources governance and management, where even in the presence of an overarching organization (such as a river basin commission) or institution (such as the UN Convention), sovereign states tend to enter into bilateral arrangements involving very specific and traditional (hydropower, irrigation, flood control) hydraulic interventions perceived to yield real economic (and thus, social) benefits (Conca, 2006). Can these types of agreements ‘add up’ to a greater river basin good? The literature assumes the answer to be yes, and in transboundary basins around the world (e.g., the Nile and the Mekong) donors and other interested actors have been advocating these activities as ‘quick wins’, ‘low hanging fruit’ and ‘shared benefits’. As a water manager, there are two different aspects to be considered here. First, in your opinion, do these sorts of activities really yield longer term, basin-wide benefits? Second, when faced with a powerful actor determined to press their economic interests in a shared river basin, how do you ensure that your collective interests are not compromised? Nepal’s advantage is that it is upstream (as are Lesotho, Tajikistan and Uganda) of a far more powerful downstream state in need of water. But what if the flow is reversed, as is the case with Bangladesh in relation to India? How do you realize your goals of socially equitable, economically efficient and environmentally sustainable development within the specific basin and across the length and breadth of your sovereign state? How do you get your message across? How do you effectively communicate with your neighbour?

4.3 National/Local Level Agreements

At the national level, water is generally managed according to a set of policies and laws determined by a particular level of government. Perhaps, over the last 150 years, water management has been focused on the goals of national economic development.

Multipurpose dams, pipelines, tube wells, irrigation systems, potable water and water-borne sanitation systems have led to countless benefits for many of the world’s people. However, all of these examples of ‘pushing rivers around’ (Conca, 2006) have given rise to countless negative externalities: social, economic, ecological and intergenerational, as all the many and varied uses ‘depend on the same hydrological cycle’ (Molle et al., 2007: 607). Moreover, both the consequences of these actions and recent attempts to overcome them – through

supply augmentation, resource conservation, use reallocation, or a combination of these strategies – have led to numerous conflicts among users.

As basins approach ‘closure’ – meaning that all of the blue water available has been allocated – actors engage in what Molle et al. call ‘a race for appropriation’ wherein the biggest ‘losers’ in this zero-sum game are the natural environment and the poor. IWRM is an initiative that seeks, in part, to give institutional structure to these contests so that they become situations where best use results in win-win outcomes. The river basin is argued to be the appropriate unit for management of interrelated land and water resources.

Function*	Definition
Plan	Formulation of medium- to long-term plans for managing and developing water resources in the basin
Construct facilities	Activities executed for the design and construction of hydraulic infrastructure
Maintain facilities	Activities executed to maintain the serviceability of the hydraulic infrastructure in the basin
Allocate water	Mechanisms and criteria by which water is apportioned among different use sectors, including the environment
Distribute water	Activities executed to ensure that allocated water reaches its point of use
Monitor and enforce water quality	Activities executed to monitor water pollution and salinity levels and ensure that they remain at or below accepted standards
Preparedness against water disasters	Flood and drought warning, prevention of floods, and development of emergency work, drought preparedness, and coping mechanisms
Resolve conflicts	Provision of space or mechanisms for negotiation and litigation
Protect ecosystems	Priorities and actions to protect ecosystems, including awareness campaigns
Coordinate	Harmonization of policies and actions undertaken in the basin by state and non-state actors relevant to land and water management
*The functions listed here subsume functions such as data collection and resource mobilization, which are not ends in themselves, but rather facilitate the higher level functions listed.	

Table 4.4 Essential functions for river basin management

Source: Molle et al., 2007: 608

National level water reforms being undertaken across the developing world include primarily:

1. Development of a national water vision;
2. Creation or update of a national water strategy;
3. Creation and or revision of national water law; and
4. Revision of existing and/or creation of new institutional structures with the river basin as the primary unit of management.

Central to these new institutions are the concepts of subsidiarity and stakeholder participation. Examples of successful river basin management institutions are rare around the world, however. In truth, sustainable water management is dependent upon much more than basin-level institutions. In the words of Engel and Korf (2005: 154), ‘the question is whether the policy framework and its institutional setting provide the legal/administrative basis and incentives to create an enabling environment for collaborative management’.

Collaboration is defined as a process that ‘involves people with diverse interests working together to achieve mutually satisfying outcomes ... A destructive outcome results in harm and involves exploitation and coercion. A constructive outcome fosters communication, problem solving and improved relationships’ (Engel and Korf, 2005: 8).

Throughout much of the world, though, the enabling environment for collaborative management, and therefore win-win outcomes, is absent or only partially formed. Particular social groups dominate decision-making frameworks and partake of what Homer-Dixon (1999) calls 'resource capture', while the poor and other weaker groups suffer 'ecological marginalization'. In this setting, resource exploitation and management may be economically efficient for some, but ecologically unsustainable and socially inequitable, creating a climate of hostility, diffuse and persistent violence, and future or latent conflict.

Engel and Korf (2005: 154ff) provide a short but important checklist of some of the preconditions that must be in place for collaborative natural resources management to work.

1. Basic needs: Where people lack the basic conditions for living (e.g., food, shelter, health), the need to satisfy these basic needs will override all other considerations. In much of the world, rural people live with only a small buffer against disastrous outcomes, so any effort to collaborate with them at the point of the resource will be hindered by limited capacity.
2. Political and legal backing from a competent government: Coherent and integrated policies translated into programmes and legislation where rights of access are clear and upheld, and the responsibility of government to pursue widespread economic and social benefits underpins these actions, is both a necessary and scarce political commodity, particularly in the developing world.
3. Markets that provide opportunities and confidence: Economic and financial circumstances can create or encourage competition and reveal new or hidden conflicts over resources. In Sub-Saharan Africa, for example, where customary and modern laws overlap, modern 'water permits' and other tools have been creating difficulties in rural settings where traditional management arrangements are based on customary practices. Given water's intimate relationship with economic development, most decisions regarding use have tended to favour activities likely to generate the most capital, irrespective of their environmental and social impacts.
4. Cultural fit: In many parts of the world, disempowered actors are marginalized for particular cultural reasons. Decision-making structures are heavily gendered, often favour particular classes and ethnic groups, and are hierarchical, limiting citizens' access points to decision makers.

Whether IWRM can address these issues at all, let alone simultaneously, is a question for another day. What is clear, however, is that historical patterns of water access, allocation, use and management have resulted in unsustainable, inequitable and inefficient outcomes. Nevertheless, these outcomes have their beneficiaries. Changing these use and management patterns will inevitably result in disputes and ultimately social conflict. For this reason, building conflict resolution and dispute settlement mechanisms within the water reform process is of the utmost importance.

Practical approaches: Finding appropriate entry points for cooperation and agreement

For national/local/watershed-specific agreements to benefit everyone dependent upon the resource, it is imperative that those actors wielding legitimate authority be on board. Without their support, it is unlikely that any agreement will be enforced or upheld for long. It is certainly vulnerable to being overturned by higher authorities. Having said this, it must also

be recognized that small agreements on particular issues can serve as the necessary building blocks for wider and more substantial decisions and agreements. In terms of water management, something as simple as general agreement to meet and discuss issues of concern to all users of a particular water resource may constitute an important step forward towards broader resource benefit sharing.

However, meeting to air grievances, concerns, needs and interests is merely a first step and, in some instances, can exacerbate relations between actors. It is thus imperative to engage in a small activity where the return is nearly immediate in order to lessen mistrust among actors.

One such activity could be the establishment of a government-supported stream flow committee. This committee could bring together representatives from the stakeholders in the basin to assist in the construction and monitoring of simple gauging stations to measure stream flow. Where rivers are ephemeral, riverbank and riverbed rehabilitation projects jointly undertaken can build trust. Where small and large farmers are dependent upon surface water for irrigation, the collective repair of irrigation canals can serve as an important exercise in trust building and social capital formation.

Where positive and sustainable water management agreements have been made, a number of general principles may be said to underpin them.

1. Actors share a common resource to which there is no ready alternative.
2. Actors' behaviour is interdependent and they live with the consequences of each other's actions.
3. Where a problem arises, individual solutions either do not work, or are short-lived, or lead to win-lose outcomes, sowing grievances and the seeds of latent conflict.
4. Actors face a common problem whose impacts may be unevenly felt but are regarded as problematic by all parties.
5. Actors share a common interest.
6. Actors have needs, both shared and different, and their satisfaction is dependent upon a common resource.
7. Changing (physical, social, economic, political) conditions are generally recognized as presenting a need for a response, the character of which will present both threats and opportunities.
8. Mechanisms in place to deal with variations in the water resource have lost their adaptive capacity and are leading to problematic social behaviour.
9. New challenges have a time and space dimension that provides a window of opportunity for successful adaptation.
10. Where challenges are predictable but overwhelming, third-party help can facilitate successful adaptation.

Historically, resource use management developed at the level of the stream or lakeside and was most sustainable at this level because interventions were limited by rudimentary technology and minimal needs. These social forms existed within the general parameters set by the natural environment. Across the world's rural areas, many of these local level institutions are still active. Civilization complexity, however, gradually displaced many of these traditional forms of governance with centralized mechanisms of authority. Increasing

demands for water from particular users – cities, industries, commercial agriculture – meant an increasing dependence upon technological innovation based on modern science for water resource delivery. Science and technology allow us to live beyond the parameters set by the natural environment.

In some societies, traditional and modern forms of authority coexist, often uneasily, as modern science allows water resources to be tapped in new ways and to be put to new uses, often well outside of the river basin itself. IWRM acknowledges the need to integrate indigenous knowledge systems and traditional practices of water management into modern delivery systems that cater for many complex and often competing needs. While there is as yet no clear and proven path for upscaling stream bank-level structures across an entire basin, or in reconciling their methods with more centralized, modern methods, building in modes of participation is an indispensable means for arriving at sustainable water agreements and management arrangements.

Below, we offer two case studies of local level conflicts with very different outcomes. In each case, progressive legislation is in place, as are the institutional structures meant to facilitate IWRM-oriented outcomes: equitable, efficient and environmentally sustainable outcomes. In your view, what accounts for the difference in outcomes?

CASE STUDY: BERKI RIVER BASIN, ETHIOPIA

Berki catchment (410 km²) is located in Tigray Regional State, Ethiopia within the Tekeze River Basin. It is shared by three weredas (districts): Atsbi is upstream, while Wukro and Enderta are downstream. Atsbi wereda contributes most of the water resources, while Wukro wereda makes a smaller contribution. Enderta wereda shares a very small part in the watershed. Deforestation due to agricultural activities, fuelwood collection and free animal grazing has had severe impacts on the ecosystem and hydrological conditions of the area.

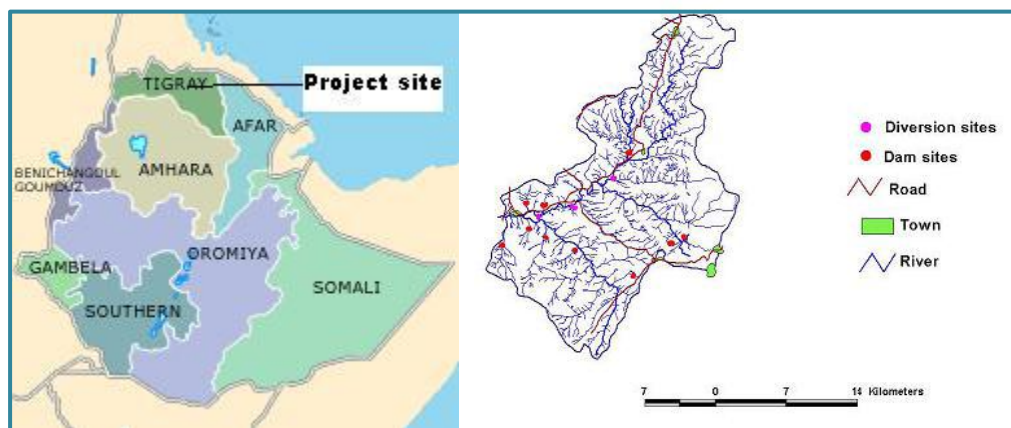


Figure 4.5: The Berki River Basin

Almost all inhabitants of the catchment depend on natural resources for their living. Upstream farmers use pumps to take water from the river and shallow wells, with possible impact on irrigation schemes downstream. Chuhe diversion in Atsbi wereda irrigates around 43 ha. In the same wereda, World Vision is undertaking conservation activities in the upper catchment area.

In Wukro wereda, there are two diversions: Berki diversion with 100 ha, and further downstream Laelay Agula with a 70 ha command area. There is a spring near Berki diversion that is used by the church for spiritual purposes (holy water). However, anticipating that the government would develop the spring to supply water to Agula town, the church capped it. This action created conflict between the church and the Bureau of Water Resources. There has also been conflict between downstream traditional irrigation water users and upstream Laelay Agula diversion water users, which resulted in the destruction of the diversion weir by downstream users. Different government institutions have various mandates/interests in managing water and related resources of Berki catchment such as use of water for drinking and irrigation, and catchment protection. The different sectors were not effectively collaborating to deal with water resources management problems in Berki. There was no plan to use Berki's water resource for multiple and integrated uses. Similarly, NGOs operating in Berki catchment work independently without being considered stakeholders.



Figure 4.6: Mapping the conflict in the Berki river basin, Ethiopia

Water is scarce in Berki catchment, and there are various water resources management problems, including conflicts among upstream and downstream communities, and administrative authorities. The different water use activities have put heavy pressure on water availability for different purposes, especially for those users who are further downstream. Inefficient uses of water, including wasteful technological selections, were also common practices. Communities downstream of Agula town (outside of Berki catchment) suffer from lack of water due to the upstream pumps and diversions. They need to travel long distances to access water, especially during dry seasons. Moreover, upstream water users are polluting water (due to washing and cattle) that is being used by downstream users.



Figure 4.7: Water conflicts in the watershed



Figure 4.8: Weir damage in the watershed

Water resources were being excessively exploited beyond the natural limits of the system and the regulatory offices' ability to control it. There were no land use plans or water regulations which led to the uncontrolled introduction of private pumps, and changes in cropping patterns and land use. In addition, decisions were made concerning water and other natural resources of the catchment without adequate knowledge and information. Poor communication among various users and stakeholders as well as low levels of awareness contributed to this problem. The biggest challenge was the sustainable use and management of Berki's water resources, for all the concerned parties, in an equitable and sustainable manner.

Approaches followed:

Realizing these problems and the potential solutions provided by an IWRM approach, the Ethiopia Country Water Partnership (ECWP as part of the Global Water Partnership [GWP] network) decided to implement a pilot activity in Berki watershed, which could be expanded

at a later date. The process involved multi-stakeholder participatory planning at the watershed level. Specifically, the following approach was followed:

- Identifying policy gaps and constraints in implementing IWRM;
- Identifying stakeholders, sensitizing them on IWRM approaches and launching the Tigray Regional Water Partnership (TRWP);
- Establishing and training a technical team from various disciplines and sectors,
- Assessing water and other natural resources of Berki watershed;
- Studying the socio-economic dynamics of Berki watershed;
- Establishing Wereda Watershed Committees and an Inter-Wereda Watershed Committee; and
- Documenting and sharing experiences on approaches, processes and findings at various levels.

Achievements so far

IWRM policy gaps and implementation constraints identified

ECWP reviewed the existing policies, laws, strategies and programmes with the aim of identifying policy gaps and constraints for implementing IWRM. The process was highly consultative and a range of stakeholders at various levels participated. The gaps identified include lack of integrating water and land resource management; decentralization without building local level capacity; lack of holistic approach; low level of awareness; lack of regulations for managing demands and conflicts; and limited private sector involvement. The findings led to the identification of key IWRM change areas for Ethiopia, such as managing water demands, managing water conflicts, and identifying the best regulatory and institutional arrangements for sustainable water resources management.

IWRM is now widely appreciated among stakeholders

As IWRM was new to the country and to the watershed, creating the necessary awareness and organizing training on IWRM at various levels was an important component of the programme. In this respect, the project has played an important role in promoting and demonstrating the benefits of IWRM to the wider stakeholders. Organizing training, awareness sessions, consultation meetings, public meetings and partnership meetings were some of the mechanisms for raising awareness of stakeholders on IWRM. World Water Days were specifically targeted to promote IWRM to the general public to create an IWRM conscious society in Ethiopia. Use of materials such as documentary films, CDs and published materials assisted the promotional activities. Raising stakeholders' awareness on IWRM facilitated the participatory process as it improved their capacity to actively participate in the process.

Participatory forums established for facilitating the process

IWRM, being a participatory process, requires the establishment of multi-stakeholder platforms that bring stakeholders together at various levels for consultation, experience sharing and coordination/networking. Water partnerships at Tigray regional, Berki watershed and wereda levels were established. Tigray Regional Water Partnership (TRWP) now has more than 30 members representing various stakeholders. It has a regional steering committee and a technical team. The wereda watershed committees were established, including concerned government line offices, NGOs and communities. A joint watershed

committee was also set up in AtsbiWukro that includes members from the two wereda watershed committees. Great care has been taken to ensure balanced representation of all stakeholders in different water partnerships. The forums have laid the foundations for all stakeholders to jointly plan and implement sustainable water resources management, and to manage water related conflicts.

Generation of knowledge and preparation of catchment IWRM plan

Lack of information on the potential of water and other resources, as well as socio-economic activities, was one of the problems faced at the Berki watershed. Water resources assessment is one of the key components of IWRM implementation, and in most cases it is one of the biggest challenges. Water resources assessment (geology/hydrology, water resources potential, environment, water uses) and socio-economic studies were carried out for the Berki watershed. The studies were conducted with multidisciplinary professionals from key stakeholders: concerned government line bureaus at the regional and district levels, and experts from academic institutions and NGOs. The process involved all stakeholders, including local communities. Several consultation and review sessions were also carried out at various levels to enrich the study. The study helped to create an understanding of the issues, such as conflicts among users of natural resources. It also assisted in the prioritization of problems, the identification of possible solutions and to gain greater commitment from stakeholders. These studies were the basis for preparing the Berki catchment IWRM plan, which is widely accepted and owned by all stakeholders. The pilot is also demonstrating knowledge-based sustainable development planning, showing development to be based on available water and other natural resources, and also planning to include both development and management of natural resources.

Outcomes:

Some of the outcomes/impacts are the following:

Change in beliefs and practices of communities and local governments

Communities now have better awareness of water resource ownership and understand its implications on others. People speak about equitable water allocation, conflict resolution and integration of different water uses. For example, before the intervention, local communities used to think that any water that flowed in their fields, was their property. Now that thinking has changed and they see water as a resource that is shared by all in the watershed. One clear indication of the increased awareness is the interest shown by the downstream wereda to contribute to the conservation programme at the upstream wereda. Atsbi wereda's plan to introduce about 100 more water pumps was revisited because of the raised awareness by the local authorities. Moreover, water efficient technologies like drip systems are being introduced and a plan is being prepared for artificial groundwater recharging. The existence of the partnerships so far is also a sign of changing long held ideas, beliefs and practices entrenched in linear planning and single agency responsibility in the region and at the watershed level.

Bringing together key stakeholders

The establishment of multi-stakeholder forums at various levels (Tigray regional, Berki watershed, and wereda) has given the opportunity for interaction among various stakeholders. This is also presenting an occasion to lay a framework for integrating/coordinating activities by various sectors/stakeholders.

Decline in local level conflicts

As a result of establishing multi-stakeholder platforms and various consultations, water related conflicts have been minimized. There is now recognition of the importance of the multi-stakeholder partnerships at the local level, and working together is viewed as a way to resolve water conflicts. For example, two key conflicts in the catchment were resolved without any legal or administrative intervention.

Common vision and joint planning (catchment as a water resources management unit)

In Berki, the catchment is considered a planning/management unit despite the wereda boundaries. An integrated watershed development and management plan is already prepared for Berki, and stakeholders have agreed to implement the plan within the partnership framework.

Practical experience on addressing institutional arrangements for IWRM

There is now a search for ways and means to implement IWRM locally because the establishment of the partnerships in Berki gave ample lessons and an alternative option for addressing institutional arrangements for IWRM. Additionally, the Berki IWRM process is providing knowledge and information for implementing IWRM in bigger river basins.

Key lessons:

Ownership of the change

The IWRM change process needs to support people's livelihoods. Water resources management should not be done for its own sake, but for sustaining the livelihoods of communities. It is only when people understand that their livelihoods depend on sustainable management of water and land resources that they can own and meaningfully participate in the change process. The challenge faced by ECWP in piloting IWRM was a long planning process, which made it difficult for the local communities to understand its linkages to their livelihoods. There was a high level of expectation around a quick fix involving physical infrastructure that would address their practical problems.

Political commitment

Government commitment to the IWRM process is crucial. IWRM requires an enabling environment (policy, legal and institutional framework) at the national level. The existence of an enabling environment and ownership of the process by government and other stakeholders facilitated the IWRM process. The high level of commitment of the Tigray Regional Government and other stakeholders at various levels was very useful.

A consultation meeting with government officials of Tigray region raised the level of awareness about IWRM and the challenges of water resources management in Tigray and Berki watershed. The meeting also increased the interest of key institutions that further strengthened the regional partnership. The Tigray Regional Government reconfirmed its commitment to support the IWRM approach by delegating the Deputy Chief Administrator of the Regional Government as the chair of the Tigray Regional Water Partnership (TRWP) steering committee. Stakeholders in TRWP have designated focal persons and also contributed free expertise by designating their technical staff to the technical team.

Ethiopia operates under a decentralized government and local authorities have decision-making power and authority over resources. They have the power to manage water and

other natural resources within their constituencies. The wereda authorities are responsible for the preparation of development plans and coordination of related activities in their wereda. They are also given a budget to execute their plans. Thus, activities in the wereda must be approved by the wereda government, and the role of weredas in the Berki pilot IWRM watershed was significant. Practically nothing could have been done without their interest, willingness and mobilizing role. The weredas played a key role in mobilizing all stakeholders to participate in the process, in establishing wereda watershed committees, in contributing experts for the IWRM process, and in owning the whole process.

Communication among stakeholders

IWRM requires participation and ownership by all stakeholders, and communication facilitates participation. Individuals further down the chain often do not receive enough accurate information, and direct lines of communication are often not available to them. Relationship building takes time and this was one of the challenges that ECWP had to overcome. Even though it is not an easy task, facilitating communication among all stakeholders at all levels by adapting to local situations is crucial, as is the adaptation of traditional knowledge systems to spread information about IWRM.

Multi-stakeholder partnership building is time consuming

Institution/process building is not immediate, but rather a long and tiring process. Participation, ownership and trust building among stakeholders were challenges but they were achieved through investing effort and energy in establishing the water partnerships.

Capacity building and awareness raising as integral parts of the IWRM change process

IWRM is a participatory process and it requires capacity building of stakeholders for proper participation. ECWP's approach of combining awareness raising/capacity building with piloting was a successful approach. It was mostly done through a training of trainers (TOT) programme, where experts from federal and regional levels were trained outside the country to train other experts at the country level, particularly regional experts. This was followed by training of regional and wereda experts by the trained national/regional experts. The wereda and regional experts, in turn, trained the communities. Capacity building on IWRM cannot be executed by one organization or individual. The approach followed by ECWP was to mobilize various stakeholders by training them to assist with the capacity building process in the country. Academics and the regional water resource bureau professionals played a key role. They participated in training programmes and carried out technical studies (both water and other natural resources assessment and socio-economic studies). They have also contributed by replicating the trainings for different decentralized partnerships. Most of all, the training has been instrumental in the introduction of knowledge-based decision-making.

Piloting and scaling up approach

ECWP is now moving from institution building to implementation on a larger scale. The experiences so far from ECWP's activities are being fed into other national programmes as a way of promoting IWRM, especially at a river basin scale. For example, due to increasing environmental degradation and investment opportunities, the Rift Valley basin is of national importance and it is at the top of the government agenda. The Ministry of Water Resources has appreciated the inputs from other stakeholder groups in river basin master plan development (to broaden the focus from water resources development to more integrated

development and management of water resources), and to establish a Rift Valley Lakes Basin Organization. ECWP also shared its experience during the establishment of the River Basin Organization for the Ethiopian Blue Nile.

Build on existing systems and link with key water resources management problems/issues

ECWP takes advantage of having many stakeholders together to present different issues and initiate dialogue around key issues of national concern such as the challenges of water resources management in the Ethiopian Central Rift Valley Lakes sub-basin, and the Akaki catchment. As a result of these discussions, a multi-stakeholder working group (the Central Rift Valley Lakes Sub-Basin Working Group) was formed which, with ECWP support, plays a key advocacy role within the Ministry of Water Resources towards establishing river basin organization for the Rift Valley Lakes basin and highlighted the importance of multi-stakeholder involvement in water resources management. Similarly, another task force was recently formed to address the water resources management of the Akaki catchment in the Awash river basin which is being compromised by urban and industrial pollution from the city of Addis Ababa and its surroundings.

IWRM as an approach for managing water conflicts

In Berki water resources are scarce and there are actual and potential water conflicts. A clear case was the destruction of an irrigation diversion weir by downstream traditional irrigation water users (Image 1 above). The partnerships played a facilitating role in conflict resolution. Organizing a joint visit (by both downstream and upstream users/stakeholders) helped all those concerned to understand the problems from both sides, and also contributed to managing conflicts. Awareness raising and training also contributed to developing a shared vision for the watershed and to building trust among stakeholders. In this regard, the establishment of the partnerships played a key role in the management of conflicts through vision planning and consensus building.

CASE STUDY: PHONGOLA DAM, SOUTH AFRICA

The Phongola Dam (also known as the Pongolapoort Dam or Jozini Dam), spans the Pongola River, a tributary of the Maputo River Basin system. The Maputo is a transboundary basin shared by Mozambique, Swaziland and South Africa. In 1983, these three states established the Tripartite Permanent Technical Committee in order to jointly discuss intended water resource use. The dam predates the 1983 agreement by ten years; it opened in 1973. It is owned by South Africa's Department of Water Affairs. Although established for irrigation, it has become a prime centre of tourism, in particular sport fishing. Established during the height of 'grand apartheid', the impact on local communities has been dramatic (Tapela, 2012). Recently, a small group of 15 fishers belonging to a local community who have lost access to the water resource have attempted to reclaim what they view as their rights to fish in the waters of the Pongola River, including the dam. Lodge owners located around the dam regard these fishers as poachers and a 'blight' on the tourism industry and have harassed them in very serious ways, destroying their equipment among other things. The absence of an inland fisheries policy in South Africa does not help the matter, but the presence of a new Water Act should offer a means for effectively resolving the conflict.

The Pongola River is a catchment of 7,000 km² rising to the south-west of Swaziland at 2,200 masl, passing through a narrow gorge between the Lembombo and Ubombo

mountains at which point the dam is situated. Beyond the dam, the river descends sharply into an extensive floodplain of some 50 km in length, varying in width between 0.8 and 4.8 km to the confluence of the Pongola and Usutu rivers near the border with Mozambique (Nkhata, Breen, Hay, 2012) (see Figure 4.9).



Figure 4.9: Maputo–Usutu–Pongola river basin system

Today, developments in the river basin are governed by South Africa's Water Act (Act No. 36 of 1998) wherein the national government is the custodian of the nation's water resources, which are regarded as an 'indivisible national asset'. To facilitate sustainable development and management of South Africa's water resources, a new institutional structure was created whereby catchment management agencies will be established (in terms of Section 78(1) of the Water Act), within which a number of Water User Associations (WUAs) will be created (in terms of Section 92(1)(a) of the Water Act) for the specific allocation and management of the resource at user level (Jonker et al., 2010).

There are three significant anomalies regarding this set-up. First, the Pongola River is part of the Maputo River Basin transboundary system. However, at the national level its Catchment Management Agency has been joined together with the Mzimkulu River system creating a number of uncertainties regarding governance arrangements and management structures.

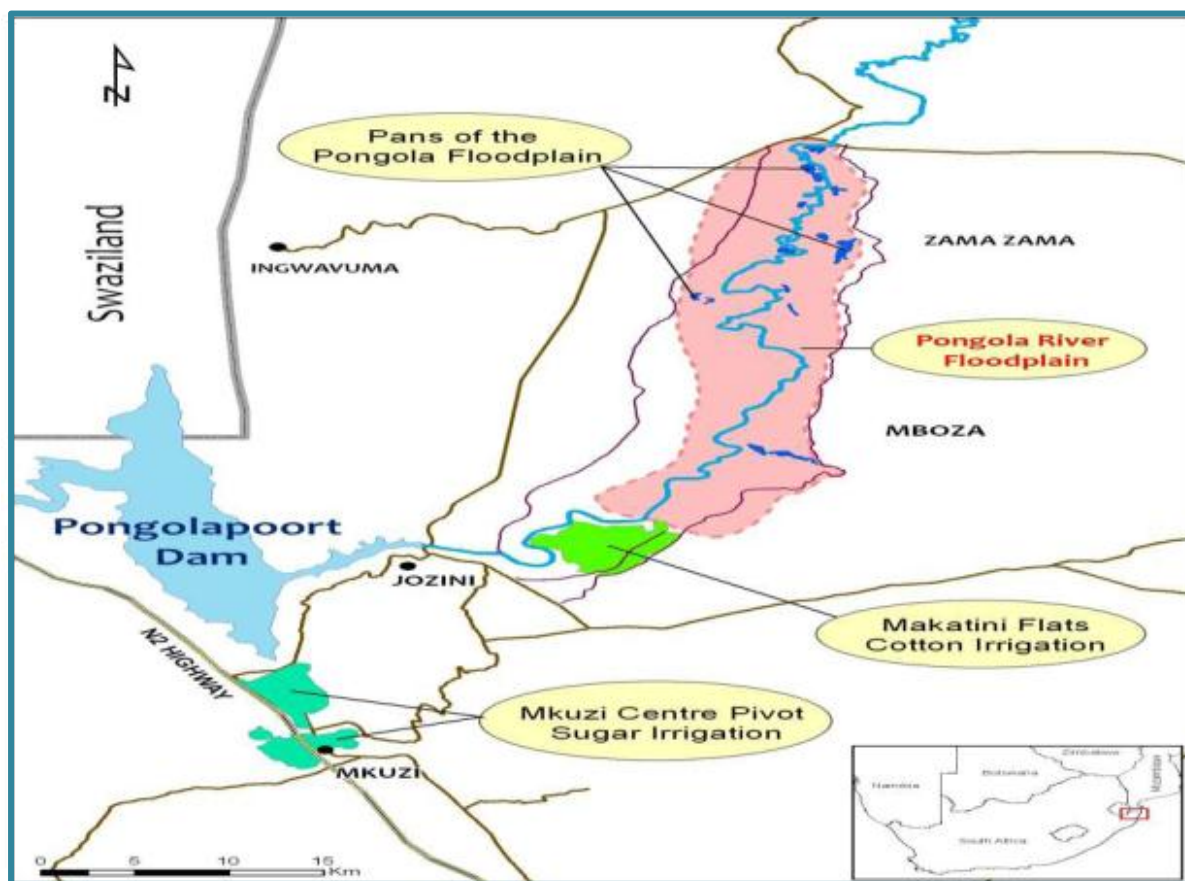


Figure 4.10: Study area from Pongola Dam to floodplain

Second, at the same time, in establishing the WUAs, the government disestablished the apartheid-era Irrigation Boards (IBs), making them the foundation for the WUAs, but this time including all 'relevant stakeholders'. In the case of the Pongola, the upper and lower catchment has been divided into two separate WUAs – the 'Recreational Water Users Association' around the dam, and the Imfunda Yopongola WUA, which is centred on water for use along the floodplain. This lower catchment WUA is understandably obsessed with the timing and size of water releases from the dam. The degazettement of the IBs has not stopped their de facto functioning, as commercial farmers dominate the WUA where necessary and ignore it as and when they can.

This leads to the third anomaly, which sees a number of key 'stakeholders' in the basin not participating in the WUAs at all. For example, there is a huge private and direct water off-take from the dam for a single farmer who made the deal with the then minister of economic affairs. This commercial farmer is not a member of the WUA because he buys his water directly from the Department of Water Affairs, who owns the dam. This commercial farmer also employs several people and has very good relations with the government, so he considers himself exempt from the primary aims of the Water Act itself. Similarly, arrayed around the dam are a number of private game resorts. While the dam is public water held in trust for the nation by the government, these 'users' consider the dam their private property and have been preventing local fishers from using the dam through force.

Whereas the WUA should be engaged in resolving these misperceptions leading to contentious behaviour, it is actually a moribund entity ignored by the powerful actors but

championed by the disempowered who expect the state to support their needs for access to the resource. Where the state is visible, however, it is aligned with the private companies, both the commercial farmers and the game/lodge owners. Through a discourse of 'conservation', the lodge owners and government departments of tourism and wildlife collude to deny fishers access to the dam. Citing 'sustainability', the fishers have been 'criminalized' for poaching and the use of gill nets. According to one key informant, it is simply a case of racism and of neither side reaching out to the other: the mostly white and empowered preferring the imbalanced status quo; the mostly black and marginalized waiting for the state to take action on their behalf. What is to be done?

In an effort to find a way forward, the authors conducted a mock conflict resolution and negotiation exercise with one of the key stakeholders in the Pongola Water User Association. As shown in the figures below, we conducted (i) the stakeholder mapping exercise; (ii) conflict mapping; and (iii) the identification of positions/interests/needs with the onion tool (see Module 2). One of the authors acted as a 'facilitator' invited into the setting by one or more of the parties to the conflict.



Figure 4.11: Facilitation of position/interest/need identification

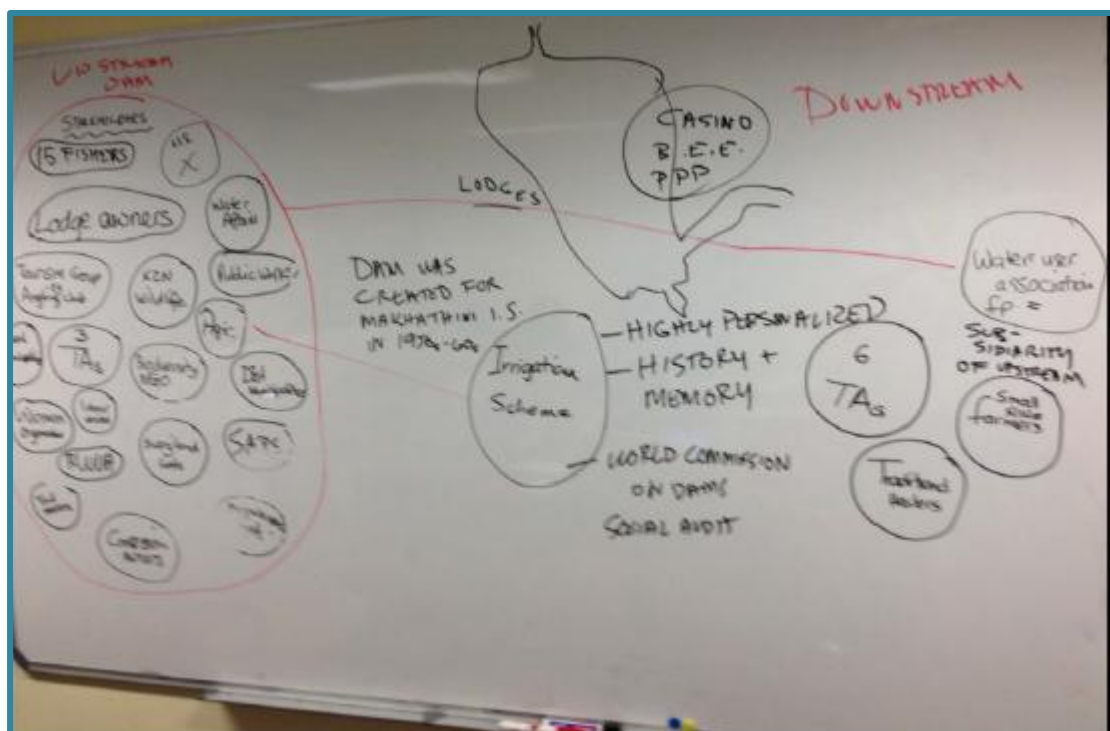


Figure 4.12: Stakeholder mapping

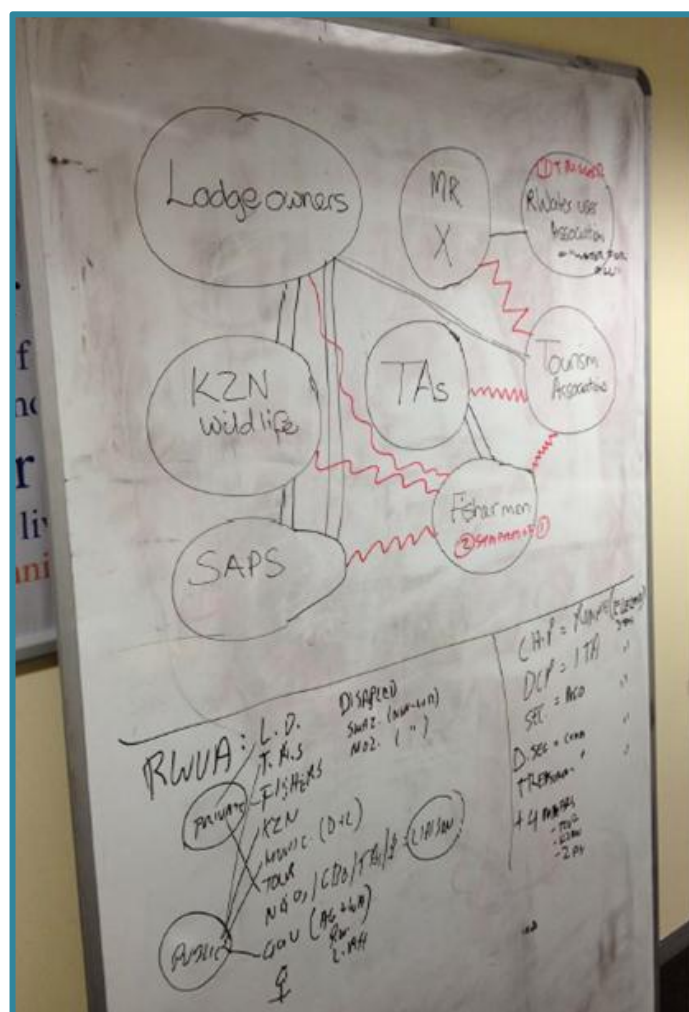


Figure 4.13: Conflict mapping

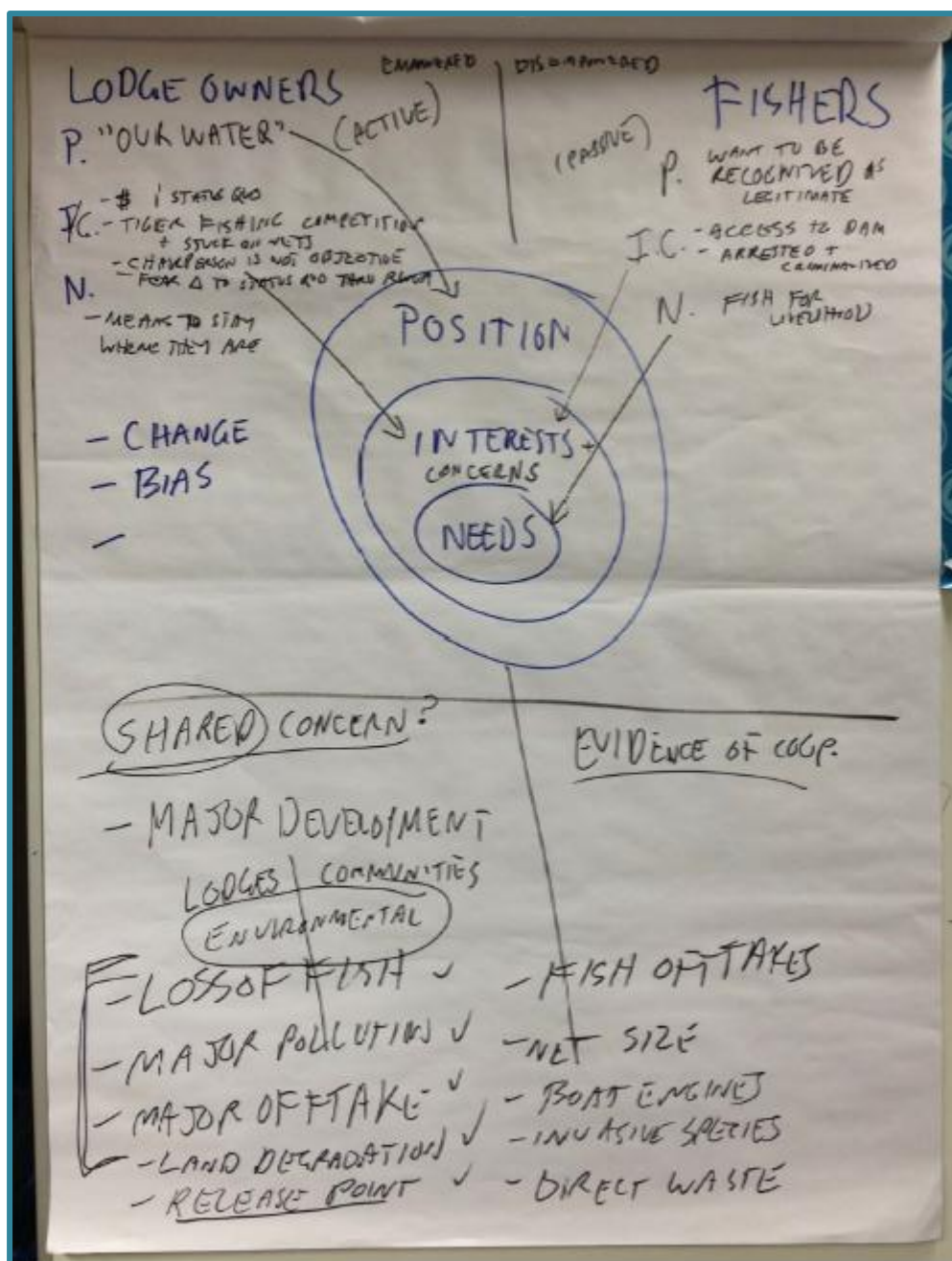


Figure 4.14: Determining positions/interests/needs with the onion tool

What the case study exercise revealed, in addition to what we have highlighted above, is a number of shared interests or concerns: environmental health, decline of fish stocks, major pollution events and major off-takes; the latter two facilitated by the expansion of commercial farming (and possible on-site processing of biofuels) in the area. These interests also revealed shared needs to access the water and related resources of the reservoir for sustainable livelihoods. While these livelihoods are dramatically different (from luxury tourism to fishing 'for the pot'), they nevertheless suggest a common base for negotiation.

The case study also revealed that the conflict between the fishers and the lodge owners (in league with other empowered stakeholders) is but one of numerous disputes that have festered below the surface ever since the dam was first created. For example, villages lost

access to their source of domestic water through the impoundment. This is because the water ‘belongs’ to the state. Women are now forced to walk long distances down very steep inclines in order to access water, which seems nonsensical given that there is a massive body of water on their doorstep. An idea that emerged out of the exercise was the possibility to gather all stakeholders together to develop a shared vision for the dam, something like ‘Pongola 2050’. It was thought that perhaps in this way, the parties to the conflict might be able to see beyond their firm positions towards shared interests and needs. What would you do?

Box 4.1: Questions for reflection:

Can you think of a best practice agreement reached on a river basin that involved your country?

At what geographic scale and political level did this take place? What were the modalities of the arrangement?

EXERCISE

Question and Answer

Linked to Session 11 (Water Agreements and Management Arrangements)

Session 11 involves a series of formal presentations. An initial presentation by the facilitator should give an overview of the issues described in Module 4 where several case studies have been assembled.

The facilitator may either use these cases, or tailor the presentation to suit both his/her needs and the needs of the course participants. 15-20 minutes should be reserved for questions and answers.

Following this session, there will be several presentations made by local resource persons speaking on local issues as well as national, regional and global issues from local perspectives. Each of these one hour sessions should provide ample time for feedback from the participants.

Time: 4 hours

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9. Wolf, A., J. Natharius, J. Danielson, B. Ward and J. Pender, 1999, 'International River Basins of the World', *International Journal of Water Resources Development*, 15:4 (December), pp. 387-427.
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Suggested reading

Mostart, E., n.d. *Conflict and Cooperation in the Management of International Freshwater Resources: a global review*, (UNESCO-IHP #19) available from www.unesco.org/water/wwap/pccp).

Module 5

Implications for Integrated Water Resources Management

Learning objectives

- To identify the necessary preconditions for sustainable conflict resolution and dispute settlement at all levels of water management.
- To link conflict resolution mechanisms to the ways and means of realizing positive change for Integrated Water Resources Management (IWRM).

Outcomes

- The participant will have knowledge of best practices and gain ideas regarding appropriate management practices including entry points for cooperation and dispute settlement.

Skills

- The capacity to successfully analyse the participant's own situation, and to identify alternatives to unsustainable practices.
- To identify the markers of trouble and tipping points for conflict/cooperation and to pursue appropriate policies that lead toward mutual gain and away from persistent conflict.

5.1 Introduction

This module focuses on the link between IWRM and conflict resolution and the particular relevance of Alternative Dispute Resolution (ADR) to issues of water conflict. Water managers are sensitive to the facts of rapidly changing social, economic, political and natural environments. Increasing demands from growing populations in the context of a depleted or degraded resource raise the stakes of resource management.

IWRM strives to work towards the Triple E bottom line. Thirteen change areas have been identified. Many water conflicts are the result of economically inefficient, socially inequitable, and environmentally unsustainable policies and practices – many are the result of undemocratic decision-making structures. How then to move forward? This module highlights a dozen key issues for water managers to consider when dealing both with resource use disputes and resource management plans.

5.2 Key Issues

Conflict

- Ubiquity -- Conflict is everywhere and an unavoidable fact of life.
- Predictability -- Conflicts travel along predictable pathways, providing space for action and preparation.
- Litigation -- Resorting to the law to settle disputes and conflicts is only ever a last resort and is to be resisted at all costs.
- Peace -- The absence of overt conflict is not the same as a peaceful setting. Grievances, disputes and conflicts may be bubbling just below the surface.
- Entry points -- IWRM cannot be realized at once; neither can disputes be resolved in a single attempt. It is therefore imperative that the water manager continually probes for appropriate entry points that are most likely to yield immediate benefits.

Implications for individuals

- De facto facilitation
Managers will often find themselves as the de facto facilitator or mediator in a negotiation either within his/her own organization or among different groups.
- Negotiation
Individuals will often find themselves as a party to a negotiation.
- Flexibility
Dogmatism and stubbornness, often masquerade as 'principle'. A manager must be flexible and adaptable in his/her approach to resource use decisions and management.

Implications for institutional structures

- Early warning systems: Sustainable resource management is often dependent upon heading off a conflict before it begins.
- Capacity: There is an abiding need for sufficiently trained staff.
- Meeting places: Water is a public good. Therefore, successful dispute settlement and conflict resolution require public platforms and structures that provide (i) access

points for stakeholders to decision makers; and (ii) access points for stakeholders to each other.

- **Structure:** Conflicts arise for very different reasons. They may be in response to increased demand for a limited resource; or decreased supply of the same resource; or they may be the result of structural inequalities in access to the resource. These structural issues come in different shapes and sizes, and may reflect inequalities of class, race, ethnicity, gender or geographical location in a basin. Disputes arising from structural issues are not easily resolved and require careful short, medium and long-term plans.
- **Adaptation:** Institutions emerge in response to perceived needs over time and, once established, change very slowly. No matter how flexible and adaptable a manager and his/her team are, if the institutional structure is rigid it will be unable to successfully respond to new situations. It is imperative that new water management institutions and the platforms developed for stakeholder participation be shaped with the need for change in mind.

Box 5.1: Questions regarding key management and dispute resolution issues

- How is water managed and by whom in your country?
- What are their key interests in developing and managing water resources? Are they guided by a good plan?
- Are there conventional/traditional practices of developing and managing water resources in your country? How do they relate to formal, state-led management practices?
- How rigid is the decision-making environment? Could your organization respond effectively to a sudden change? Are there early warning systems in place? Do you have appropriate numbers of sufficiently trained staff to deal with these issues? How might adaptability be in-built into the organizational framework?
- What change areas must water managers address if conflict is to be avoided and IWRM goals achieved?
- Are there latent conflicts bubbling just below the surface in your country? How do they relate to water resources management?
- Are there overt conflicts or long-running disputes over water resources in your country? At what scale are they taking place? Who is involved? Are there structural aspects to these conflicts? What are appropriate entry points for the successful and peaceful resolution of these disputes?
- Are there public platforms available for the airing and addressing of grievances in your country? Do people know about these options?

EXERCISE

Brainstorming Session

Linked to Session 12 (Implications for Integrated Water Resources Management)

The world of water is changing:

- Climate change is altering basic hydrological cycles;
- New technology is creating both threats and opportunities;
- Population growth and movement are creating new demands;
- Past management practices are failing to adapt to the new water context;
- Disputes are arising; conflicts are boiling over; water wars are predicted; and
- More than one billion people remain unserved.

The world's water experts have been meeting regularly to reflect on this new water world order and to brainstorm about positive responses and sustainable ways forward. All agree that many conflicts can be avoided altogether with good planning and management. While dispute settlement, conflict resolution and negotiation are important skills, course members know that most important of all is an enabling environment.

How can the setting be changed so that win-win outcomes are more likely than winner-takes-all? Since we cannot do everything at once, where can progressive interventions be made leading to positive outcomes now?

The purpose of this session is to get course members to brainstorm around the priorities for sustainable, equitable and efficient water resources management. While we all believe in IWRM, what can be done to make it a reality?

The facilitator should structure the session around the 12 points highlighted in Module 5 (page 82) and in terms of the list of questions pertaining to key issues for IWRM and conflict management.

Time: 2 hours

References

1. GWP (2000), Integrated Water Resources Management, Background Paper No. 4, Stockholm, Sweden.
2. GWP Technical papers:
<http://www.gwpforum.org/servlet/PSP?iNodeID=231&iFromNodeID=102olbox:>
<http://gwpforum.netmasters05.netmasters.nl/en/>
3. Cap-Net and GWP (2006), CD containing Cap-Net E-library Water resources management, GWP Toolbox, and Cap-Net IWRM Tutorial.
4. Maria Amakali (2005), Intra-state conflict resolution between local communities and central governments – Namibia Case, Ministry of Agriculture, Water and Rural Development, Department of Water Affairs, Water Windhoek, Namibia.

Suggested reading

Mostart, E., n.d. Conflict and Cooperation in the Management of International Freshwater Resources: a global review, (UNESCO-IHP #19) available from www.unesco.org/water/wwap/pccp).

Annex 1

Sample course programme

Time	Subject	Content/Purpose
DAY 1: 0830 - 1700		
Session 1	Opening and Introduction (1 hour)	In this session it is important to 'break the ice', i.e. to get people interacting with each other. It is also important to let them air their views about why they are there and what they expect from the course. The facilitators need to clearly and succinctly introduce themselves and speak share their own intentions and expectations – establishing confidence in the facilitators among the participants.
0830-0840	Formal Opening (10 minutes)	
0845-0850	Exercise 1 Why I am Here (5 minutes)	Undertake this exercise immediately after the formal introductions. Ensure that permanent markers and/or felt tip pens and small squares of coloured paper are distributed around the table (and are available throughout the five days). Ask each participant to take 5 minutes to write down in two or three sentences what they expect from the course and what they hope to know at the end of the course that they do not know now. Collect the cards and hold on to them.
0850-0920	Exercise 2 Getting to Know You (30 minutes)	Most people will not know each other. Optimum seating for the entire course is a circle. Pair off participants and give them 10 minutes to introduce themselves to each other. Each participant should take brief notes about the person s/he is speaking with. After 10 minutes has passed, have each person introduce the other person – they should not introduce themselves! This can be quick, no more than 2 minutes per pair.
0920-0930	Facilitators' Introduction (10-15 minutes)	

Time	Subject	Content/Purpose
0930-1130: Session 2:	Introduction to Integrated Water Resources Management (IWRM) and Water Conflict and Cooperation (1.5 hours)	<p>During this week, you will not only be providing people with negotiation and conflict resolution skills; you will also be providing them with a useful context within which to understand the many and varied particular cases of conflict over water and related resources they will return to or face in future at home. Are we really facing a world water crisis? What proof can you provide that we are? Is it a crisis everywhere in the world at all times? Does it affect us all equally? What are its causes? What might we do about it? Whatever may be said about its application, the basic principles of IWRM provide a systematic way of thinking about these questions and provide insights into the necessary ways and means of moving beyond crisis towards sustainable water resource use and management.</p> <p>This session, therefore, is important in providing specific information to people regarding why change is necessary, and why decisions regarding change must be taken collectively. It also provides them with a checklist of the likeliest 'tipping points' for both water conflict and cooperation. And, it provides them with the opportunity to exchange examples in a group setting and to begin to explore the differences and similarities of their cases.</p>
0930-1000	Formal Presentation: IWRM and water conflict (30 minutes)	
1000-1030	Exercise 3 In My Country (30 minutes)	
1030-1100	TEA BREAK (30 minutes)	During the tea break, facilitators should review and post all of the comments made in Exercise 1 and encourage participants to look them over.
1100-1130	Report Back from Exercise 3 (30 minutes)	

Time	Subject	Content/Purpose
1130-1230 Session 3	Analysing Conflict (1 hour)	Conflict is a normal fact of life. All of us have experienced conflict: within ourselves; with others; or as part of a group. Most of these conflicts are of minor concern and generally resolve themselves amicably. Sometimes, however, things get out of control, the reasons for which are not always apparent. The central point of this session is to provide course members with a structured understanding of conflict so that they may be better prepared to 'get to the root causes' of such issues if and when they arise in their own personal and professional settings.
1130-1200	Exercise 4 I Smell Conflict (20-30 minutes)	
1200-1230	Formal presentation: On Conflict (by facilitators) (30 minutes)	In this part of the session, the facilitator gives formal structure to the discussion via the use of visual aids as depicted in Part A Section 3 above. Here the facilitator will review: (i) the location of conflict; (ii) conflict issue analysis through discussion of the conflict circle; (iii) discussion of handling styles (from avoidance to cooperation). The presentation should then move on to discuss: (iv) stakeholder analysis; (v) the stages of conflict (through a discussion of conflict progression); and (vi) conflict analysis through the use of conflict mapping and the onion tool.
LUNCH BREAK		
1330-1630 Session 4	Water and Conflict (2.5 hours)	Water conflicts come in many different shapes and sizes. The central focus of this session is to begin to get course members to think about conflicts with which they are familiar (perhaps, but not necessarily, from personal experience) in a systematic way so that some of the tools of the earlier sessions can be deployed in an analytical way to a specific instance of water resources use and management. As with the earlier sessions, the emphasis here is on the sharing of personal experience and deployment of analytical conflict resolution tools in a structured way. At the end of this session, course members will be able to use traditional tools of conflict analysis to constructive ends.
1330-14:00	Formal Presentation: Water and Conflict (30 minutes)	

Time	Subject	Content/Purpose
1400-1500	Exercise 5 Not in my Backyard! (2 hours with a break in between)	
1500-1530	Tea Break (30 minutes)	
1530-1630	Conclusion of Exercise 5 and Report Back from Groups(30 minutes)	
1630-1700 Session 5	Wrap-Up of Day 1 (30 minutes)	
1900-onward: GROUP DINNER		

Time	Subject	Content/Purpose
DAY 2		
0830-0930 Session 6	Instruments for conflict resolution and negotiation (1 hour)	Much of Day 1 is devoted to the analysis of conflict. In Day 2 we switch over to methods for resolving such conflicts, focusing especially on Alternative Dispute Resolution (ADR) techniques based on principled negotiation.
0830-0900	Formal Presentation: Methods of Conflict Resolution and requirements for successful negotiation (30 minutes)	
0900-0930 Exercise 6	Call and Response (30 minutes)	
0930-1030: Session 7	Effective Communication (1 hour)	Without effective communication there can be no lasting agreements; neither can there be fruitful revisions to agreements whose usefulness has become problematic. There are several common problems with communication, particularly between perceived adversaries. This session uses two simple exercises and a formal presentation to illustrate the many ways we can misunderstand each other, and to discuss what we might do to overcome these problems.
1030-1040	Exercise 7 You Speak my Language? (10 minutes)	
TEA BREAK		
1100-1130	Formal Presentation (30 minutes)	
1130-1200	Exercise 8 Upstream-Downstream (30 minutes)	
LUNCH BREAK		
1300-1730 Session 8	Negotiation (4.5 hours)	Most people know that banging your shoe on a desk is unlikely to get you what you want in a negotiation. However, some styles of negotiation are tantamount to

Time	Subject	Content/Purpose
		shoe-banging strategies. This session introduces principled negotiation in detail. It contrasts different styles of negotiation and highlights the central role of the facilitator (most useful where there are multiple actors with unequal power) and the mediator (most useful where there are multiple actors of relatively equal power) in ADR. It identifies the steps to be taken in negotiation and useful negotiating strategies to be pursued by parties, including preparation of the BATNA – Best Alternative To a Negotiated Agreement. Participants will then get a chance to put these negotiating styles to the test in a simulated negotiation.
1300-1400	Formal Presentation: Negotiating Water Resources (1 hour)	
1400-1730	Exercise 9 River Basin Game: (3.5 hours)	
1730-1800	Debriefing and preparation for field excursion (30-60 minutes)	
1900-onward: FREE EVENING		

Time	Subject	Content/Purpose
DAY 3		
0800-1500 Session 9	Field Excursion: Local Case Study	Alternative Dispute Resolution (ADR) based on principled negotiation argues against the rush to litigation. It also argues that the process of negotiation is as important as the goals. If water use is to move towards more sustainable, equitable and efficient practices, it must also strive for similar processes. This means reutilizing stakeholder-centred, consensus-seeking, adaptive management approaches to decision-making. Over the first two days of the course, participants have been handed tools for ADR; have been given examples of how, where, when, and why they may be used; and have undertaken mock negotiations themselves. The purpose of the field excursion is to bring all of this to life: a real issue requiring a real response in real time. Given the endless array of water related disputes, the organizers should arrange the excursion around a case that is relatively straightforward (e.g., the user profile is limited), in a manageable physical setting (e.g., along a small tributary; or in a nearby urban or peri-urban setting), where the organizers feel that with the help of facilitation or mediation the situation might be improved. A field brochure should be prepared with adequate maps and photos.
TEA BREAK		
1530-1700	Exercise 10 So what's the problem? (60-90 minutes)	
1900-onward: GROUP DINNER		

Time	Subject	Content/Purpose
DAY 4		
0830-1030 Session 10	Following the Process Map (2 or more hours)	Over the course of the field trip, participants will have been sensitized to the key issues and have followed the process map from step 1 (preparing entry) to step 2 (entering the conflict scene), stopping at step 3 (analysing conflict). They will have many ideas regarding how to resolve the key conflicts in the case study and are perhaps a bit disappointed that they did not get a chance

Time	Subject	Content/Purpose
		to go further. In this exercise they can do just that: follow the process map all the way to Exit.
TEA BREAK		
1100-1600 Session 11	Water Agreements and Management Arrangements (4 hours)	<p>Sustainable water resources management requires a firm base of established and widely accepted rules and procedures, including functioning avenues for dispute settlement and negotiation. Rights and responsibilities should be clearly articulated and have legal backing – be it customary or modern law – and these laws should be enforced. Where there is uncertainty, there will be conflict, the resolution of which is not predictable. Throughout history, water agreements and management arrangements have been arrived at among a wide variety of actors for a wide variety of purposes on a wide variety of water resources.</p> <p>The purpose of this session is to introduce course members to basic data on where, why, when and how water agreements and management arrangements have been made around the world at different scales: global, regional, national and local. The purpose of this session is also to provide an opportunity for course members to learn from and interact with local water experts.</p>
1100-1200	Formal Presentation Sharing Water (1 hour)	
LUNCH BREAK		
1300-1400	Formal Presentation: International Water Law (1 hour)	A local resource person should be engaged to speak on this topic, leaving ample time for interaction with course members.
1400-1500	Formal Presentation: Regional Cooperation (1 hour)	A local resource person should be engaged to speak on this topic, leaving ample time for interaction with course members.
TEA BREAK		
1530-1630	Formal Presentation: National/Local Cooperation	A local resource person should be engaged to speak on this topic, leaving ample time for interaction with course members.

Time	Subject	Content/Purpose
	(1 hour)	
1630-1700	Formal Debriefing (30 minutes)	
1900-onward: GROUP DINNER AND CULTURAL EVENING		

Time	Subject	Content/Purpose
DAY 5		
0800-1200	FREE MORNING	
LUNCH BREAK		
1300-1500 Session 12	Implications for Integrated Water Resources Management (2 hours)	The world of water is changing. Demands are rising. Supply is being degraded. Conflicts must be managed. The point of this session is to brainstorm around the key questions regarding the ways and means of realizing IWRM and successfully managing water and related resource use conflicts.
TEA BREAK		
1530-1730 Session 13	The Way Forward (2 hours)	The point of this session is to bring the meeting to a fruitful conclusion by making space for presentations by local organizers, discussing ways to go forward with this and other training exercises, to evaluate the course and to celebrate a week of hard work.
1530-1550	Presentation by Organizing Committees and Others (20 minutes)	
1550-1620	Discussion on the way forward (30 minutes)	
1620-1650	Evaluation (30 minutes)	

Time	Subject	Content/Purpose
1650-1730	Awarding of Certificates and Formal Closure (40 minutes)	
1730-onward: RECEPTION		

Annex 2

Tips for trainers

Getting Off to a Flying Start

It should be remembered that in your own course management, you are also employing some of the negotiation and conflict resolution skills dealt with in the programme. For example, in bringing 25-35 people together from a variety of professions, from different government departments, and from different countries, you are faced with the challenge of building trust and securing commitment to a successful course among all participants – facilitators and course members alike. To do this, people must be actively engaged from the very beginning.

General Workshop Process

- **Participation**
The participants are adults with wide life experience. They should not be made to just sit and listen. After all, even the most fascinating speaker begins to sound a bit boring over the course of an intense five-day period.
- **Two-way traffic**
The information flow should not be one-way, from facilitators to course participants. The practice of too many speakers using PowerPoint presentations is a sure way to lose your audience.
- **Avoid cliques**
In settings where several people from the same place may be attending an otherwise diverse meeting, it is important to break up the natural tendency for people who know each other, or are familiar with each other, to band together. Diversity of experience enriches the workshop experience.
- **Time management**
Facilitators must not be slaves to the clock; neither can they ignore the clock altogether by, for example, allowing people to go 'on and on' simply because it seems polite to let them do so. It is, however, extremely important to be on time throughout the field excursion and during any off-site planned events.
- **Local flavour**
Local case studies, invited experts, guests, food and off-site events are an important way of making learning fun and enriching everyone's experience at the workshop.

- **Adequate and appropriate resources**

Be sure you have enough flip chart paper, several flip charts, glue sticks, 4 x 6 coloured cards, permanent and whiteboard markers, felt tip pens, writing pads, pens and pencils. Check that all your audio-visual aids are in working order, are on hand in time, and that there are technical staff close by in case something goes wrong.

- **Pomp and ceremony**

While unavoidable, these sorts of activities should be kept to a minimum and reserved in particular for the end, when it is useful to hand out certificates of participation complemented with CD-Roms developed over the course of the meeting.

- **The opening session**

People's interest must be engaged from the very beginning. While remaining sensitive to cultural specificities, the formal speeches must be limited in number and very brief. You have only a very short time to get important information across in a useful way – do not waste time on ceremonies.

- **Introduction – course and participants**

Preferably by means of PowerPoint, you should concisely and clearly articulate your intentions for the course. Briefly outline how the entire programme will proceed, and how day 1 in particular will proceed. Emphasize that this is a joint-learning exercise, as the people attending the course bring a wealth of experience to the table from which everyone – including the facilitators and organizers – can learn a great deal. This is your chance to make a good first impression and set the course on the right track.

- **Regarding the initial tea break**

In our experience, people will be excited about the previous exercise and will continue to discuss these issues during the break. Facilitators should marshal the rapporteurs and ensure they have succinct summaries of the key issues that arose out of their individual groups. These may be uploaded onto the laptop for presentation, but we recommend that this is avoided.

The obsession with technology is misplaced at this point. The point of the session was to exchange information and facilitate participation. As we wish to encourage active listening among all participants, PowerPoint should be regarded as a potential distraction in group work. Having said that, the organizing committee should have someone on hand throughout the course to transfer written notes to a central computer file, this will constitute part of the CD-Rom that participants will take away with them from the meeting.

TIP

The organizers should take lots of photos and appoint someone to upload these into a picture file for later distribution to all participants. It is also a good idea to run these photos as a slide show during breaks. Also, facilitators should collect all written work from each group and post this in a central place where people can gather to discuss what they have written.

- **Lunch on the first day and time management**

By now, if everything is going as smoothly as possible you are likely to be between thirty minutes to one hour behind your schedule. But not to worry – you have in-built time for such an eventuality.

Time management is crucial to a successful meeting and this includes recognizing and preparing for the loss of minutes here and there. Organizational elements (putting participants into groups; getting them to write down their thoughts in a succinct manner; bringing group work elements to a halt) will take time, so rather than becoming slaves to the schedule, it can be used as a constant reminder to keep everyone roughly on time.

It is also important not to over-schedule and try to do too much, especially on the first day when everyone is fully energized. Much of this material will be new, and there is a lot for course members to digest so proceeding at a measured pace is best.

Lunches and tea breaks can be used to take back 5 or 10 minutes here and there if need be. It is also likely, however, that the organizers will need the full tea and lunch breaks to stay up to speed with documentation of what just transpired and preparation for what comes next.

- **Daily wrap-up sessions**

Each day should conclude with a similar ‘catch-all’ session where the facilitators draw together into a set of coherent and concise observations a summary of the day’s activities and a reminder of what follows next. Time should also be given for various housekeeping announcements.

- **Prep-session for the field trip**

If the field trip is to successfully contribute to the aims of the programme, the organizers must appropriately set the stage for the day-long field excursion. It is preferable to have a brochure compiled for the field trip. This brochure should include text, maps and photographs. It should briefly describe the setting and highlight key issues and briefly describe the stakeholders involved in the case study. It should include both the onion tool and blank space for the elaboration of a conflict map.

- **Managing your field trip successfully**

Time management is important in the field excursion. As (up to) 30-40 people will be moving around collectively for an entire day, it is important to arrange suitable and comfortable transport (this will also help to avoid a revolt from disgruntled participants forced to share cramped spaces).

Packed lunches and snacks should also be arranged – making sure there are enough drinks and fruit for an entire day. Don’t forget to build in sufficient appropriately located bathroom breaks. A long, hot day in the field that may include some participants with physical limitations is a recipe for conflict that can be partially headed off through good planning and execution. Unless you wish to use the field excursion as a lesson in conflict resolution and negotiation (not a bad idea really), then you must ensure that at least the above points are attended to. Seven hours in

the field (from 0800 to 1500 hours) marks the outer limit if you are to have time for a debriefing and exercise in the classroom at the end. Whatever transpires, the organizers should aim to be back in the classroom by 1600 hours for a 60-90 minute exercise.

- **The wisdom of a free evening**

By the end of day 2, some people will be feeling exhausted and perhaps overwhelmed with too much information. They may wish to retreat from the group, perhaps into smaller groups. Others may wish to retire early to their rooms to do other work or simply relax. In short, a free evening is important mental medicine.

TIP

If you build in a free evening it is advised that you consider how participants choose to have dinner, where it will be held and who will pay for it. Some government employees participating may have per diem and will be able to cover this expense. Others, especially junior civil servants and others who are participating in their first workshop/short course, will have anticipated that the organizers will pay for everything. Organizers should then take a decision on the best way to proceed. One way to resolve the matter is to make an announcement with the following choice. If you choose to take your meal at the venue where the training is offered (conference centre/hotel) the organizers can cover the cost (if this was the procedure). Should participants choose to take their meal elsewhere, it will be at their own expense.

- **Time managing your group dinner out**

Whatever activity is chosen, be sure to lay out ground rules regarding what the organizing committee will pay for, and what each participant must pay for (if anything). Punctuality here is also important. Establish fixed times for leaving from and returning to the hotel. No variations or exceptions. Common rules must apply.

- **About rapporteurs**

Some workshops and short course trainings like to designate one or two participants to act as rapporteurs throughout the day and then report back the following morning. Avoid this practice at all costs! Unless you wish to put your participants to sleep and/or risk losing time unnecessarily, you should abandon this time wasting practice. The facilitators should be able to do a summary – if necessary – in no more than 3-5 minutes.

- **Concise report backs from group work**

Facilitators provide each group with sufficient but clearly defined time to summarize their discussions. Facilitator input should be kept to a minimum, but note taking is encouraged as what people have discussed will form the basis for debriefings later on in the meeting.

- **The wisdom of a free Friday morning**

In our experience, many people may want a tour of the local sights and to do some shopping. If critical mass is achieved (people can be canvassed about a group activity earlier in the week), and if funds are available, then a hired bus with

designated stops (adhering to careful time management) is a good variation on the idea of a 'free morning'.

- **Observations on the closing session**

The purpose of this session is to bring the meeting to a fruitful close. This is best achieved by providing space for a limited number of relevant groups (e.g., Global Water Partnership) to self-promote and for any participant involved in a relevant group to also say a few words. There should be some time given over to 'steps forward' and ample time for a formal evaluation of the meeting by the participants. This will provide valuable feedback for further fine-tuning of this and related programmes. There should also be space following the evaluation for one or more speeches by relevant local officials and for the presentation of certificates and resource materials to participants. Time and budget permitting, this session could be combined with a closing reception.

TIP

Over the course of a five-day meeting there should be space for people to get out of the hotel and explore the local sights. Space should also be made for a formal dinner embellished with a cultural activity, providing 'local flavour' to the meeting.

In our experience, a group dinner out of the hotel on the second night, a free evening on the third night (following the long field excursion), and a free morning on the last day seems to work best. These of course are interspersed with group meals at the meeting place. Variety embeds the workshop experience in the memory of participants and somehow indirectly works to also embed (some of) the information exchanged during the whole week.

Acronyms

ACM	Alternative Conflict Management
ACR	Alternative Conflict Resolution
ADR	Alternative Dispute Resolution
ArgCapNet	Argentine Capacity Building Network
BATNA	Best Alternative to Negotiated Agreement
BOD	Biological Oxygen Demand
DRFN	Desert Research Foundation of Namibia
DSMs	Decision Support Mechanisms
EPA	Federal Environmental Protection Authority (Ethiopia)
FAO	Food and Agriculture Organization of the United Nations
GNI	Gross National Income
GWP	Global Water Partnership
GOs	Government Organizations
HDI	Human Development Index
IWRM	Integrated Water Resources Management
LA-WETnet	Latin America Water and Education Capacity Building Network
MDGs	Millennium Development Goals
NBI	Nile Basin Initiative
NGO	Non-governmental organization
Nile IWRM-net	Nile Basin Capacity Building Network for IWRM
REDICA	Central America Capacity Building Network
NOSR	Netherlands Organization for Social Research
SADC	Southern Africa Development Community
UN	United Nations
UNESCO	United Nations Educational Scientific and Cultural Organization
UNESCO-IHE	UNESCO-IHE Institute for Water Education
WSSD	World Summit for Sustainable Development
WA-Net	West Africa Capacity Building Network
WWDR	World Water Development Report

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- Negotiation and mediation techniques for natural resource management manual developed by the Food and Agricultural Organization of the United Nations (FAO), (<http://www.fao.org/docrep/008/a0032e/a0032e00.htm>)

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These materials are freely available for use, adaptation and translation as desired and can be downloaded from the Cap-Net website (www.cap-net.org) or requested on CD together with all of the resource materials and PowerPoint presentations. Please give appropriate acknowledgement to the source when using the materials.



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