Conflict Resolution and Negotiation Skills for Integrated Water Resources Management

Cap-Net UNDP

International Network for Capacity Building in Integrated Water Resources Management

Training Manual

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Main material sources used and adapted include:

- Conflict Prevention and Cooperation in International Water Resources by WaterNet, UNESCO and UNESCO-IHE, (http://www.unesco.org/water/wwap/pccp/sadc.shtml)
- Negotiation and mediation techniques for natural resource management manual developed by the Food and Agricultural Organisation (FAO), (http://www.fao.org/docrep/008/a0032e/a0032e00.HTM)

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Overview - Why this Manual?

> Conflict is the gadfly of thought. It stirs us to observation and memory. It instigates to invention. It shocks us out of sheep-like passivity, and sets us at noting and contriving … Conflict is the sine qua non of reflection and ingenuity.
>
> - John Dewey (1922; quoted in NOSR, 2007)

> Regardless of its origins, the omnipresence of (latent) conflict requires people to manage conflict and to reach agreement. In a way, it can even be argued that most, if not all institutions are systems to manage political, governmental, or judicial opposition and contradiction, that is, are systems to manage conflict.
> - Netherlands Organisation for Social Research (NOSR, 2007)

Conflict is an unavoidable aspect of human social systems. Indeed, and as framed by Dewey in the epigram above, many argue that conflict is a necessary fact of life, for it is only through struggle that lasting and meaningful change can be brought about. The 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.

Given the central importance of water resources to all human communities, it is natural that conflicts arise with regard to access, allocation, development and management of the resource. It is equally clear, however, that necessity is not only the mother of invention, but also the basis for extensive cooperative activities concerning the management of water resources. Thus both conflictual and cooperative behaviours – across time and space and at all levels of human social organization – constitute the norm where water resources are concerned.

It is generally acknowledged that water resources of all types are under increasing pressures from a number of actors, forces and factors manifest in the early 21st Century world (WWDR, 2006). Of particular concern is the way in which sovereign states will deal with increasing (seasonal, absolute, natural, human-made) scarcities in shared river basins. 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. Global warming 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 popping up 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.

Given the diversity of needs and interests that surround water, disputes and conflicts over the resource are normal. That is to say, they are to be expected. Not all disputes

lead to conflict, however; and not all conflicts turn violent. Some fester perpetually beneath the surface and, as with limited access to potable water in many parts of urban areas, are part of settled social relations. However, a change in the setting – such as an unexpected drought or flood, or a change in government policy – 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 head-off impending disputes in a way 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) now regarded as an important framework for sustainable resource use and management. Within the IWRM framework, Cap-Net, among other institutions, groups and networks, has facilitated a number of 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 national (e.g. Ethiopia Country Water Partnership), regional (e.g., SADC, Nile-IWRMnet and global (combining regions and countries) levels. We have distilled our experiences down into this training manual that will act as a handy resource in the field of conflict resolution and negotiation for IWRM.

References

1. NOSR (Netherlands Organisation for Scientific Research), 2007. Conflict and Security - Final Version. NOSR: The Hague
2. United Nations, 2006. Water: A shared responsibility, World Water Development Report 2. New York and Geneva: UNESCO and Berghan Books.

Contents

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 (GNI) and Human Development Index (HDI) values. Water is both a common and precious commodity. It exists in abundance but is not always located where or when we 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 such that we face the greatest challenge yet to human civilisation in the form of global warming. Where water 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 time, to strife. (Svendsen, Wester and Molle, 2004: 1)

Box 1.1: Water Crisis - Facts

- Only 0.4% of total of 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 per day of human waste are deposited in water courses.
- Half the population of the developing world are 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

Thus, today 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 being an exhaustible supply and the approach was mostly sectoral and non-integrated, causing many pressures on the limited resource. The results of this approach, together 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 is resulting in many disasters such as pollution, overexploitation of aquifers, drying-up of springs, floods, and funds wasted on many 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 permitting 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.

Box 2: 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

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% 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 or more of national territory in an international basin' (Conca, 2006). Given that sovereign states arrogate to themselves the right to develop resources located within their territory, and given that water is fugitive – so 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 affects of physical and human-induced resource scarcity 'will require institutional innovations that allow focusing simultaneously on the goals and tradeoffs in food security, poverty reduction, and environmental sustainability' (Molden, 2007: 62). Such a perspective has now crystallized in the concept Integrated Water Resources Management (IWRM), within which conflict resolution is regarded as an important tool.

References

1. Conca, K., 2006, Governing Water: Contentious Transnational Politics and Global Institution Building. Cambridge, Mass: MIT Press.
2. Milich, L. and R.G. Varady, 1999. 'Openness, Sustainability and Public Participation: new designs for transboundary river basin institutions', Journal of Environment and Development, 8:3, 258-306.
3. Molden, D., et al, 2004, 'Phases of River Basin Development: the Need for Adaptive Institutions', in M. Svendsen, ed., Irrigation and River Basin Management: options for governance and institutions, (Cambridge, Mass: CABI).
4. Rogers, P. and A.W. Hall, 2003. Effective Water Governance. TEC Background Papers 7. Stockholm: Global Water Partnership.
5. Svendsen, M., P. Wester and F. Molle, 2004, 'Managing River Basins: an Institutional Perspective', in M. Svendsen, ed., Irrigation and River Basin Management: options for governance and institutions, (Cambridge, Mass: CABI)
6. United Nations, 2006, Water: A Shared Responsibility. World Water Development Report 2. New York and Geneva: UNESCO and Berghahn Books.

Module 1: Introduction to 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; and
- The relevance of conflict management skills.

Skills

The participant will be able to:

- Identify possible entry points to systematically analyse his or her own 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)?

The basis for integrated water resources management is simply the fact that many different uses of water resources are interdependent. That is evident to us all. High irrigation demands and polluted drainage flows from agriculture mean less freshwater for drinking or industrial use; contaminated municipal and industrial wastewater pollutes rivers and threatens ecosystems; if water has to be left in a river to protect fisheries and ecosystems, less can be diverted to grow crops.

"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)

Box 1.1: Integrated

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 rest with different agencies, the lack of cross-sectoral linkages leads to uncoordinated water resource development and management, resulting in conflict, waste and unsustainable systems.

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 each use on the others, and take account of overall social, economic and environmental goals.

Box 1.2: Meaning of Management

Management is used in its broadest sense. It emphasises 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.

That means IWRM recognises the following aspects:

Linkages of landscape to hydrologic 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 reservoir) 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 that brings changes in the infiltration and groundwater recharge processes and surface runoff and sediment transport processes that cause increased flood flow and decreased dry season flow in the river and alteration of the river regime.

Water resources system functions:
The water resources system performs a wide variety of functions that deliver goods and services for 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:* supply of water for domestic use, agriculture, industry and power generation, providing conditions for navigation, recreation & tourism, etc.

IWRM takes into account not only 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.

Interdependence of land, water and ecosystems:
Many land uses are dependent on water availability and influenced by water related hazards while land uses bring modification in the water regime. Availability and quality

of water and 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.

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 would be difficult. The competing water needs causes 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, to satisfy ecological requirements. IWRM considers 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 affected and interested groups in resolving conflict and promoting general sustainability to bring more resource efficient and socially responsible water management that benefits all sections of society will involve new institutional arrangements; and
- A systems approach that recognises the individual components as well as the linkages between them, and that a disturbance at one point in the system will be translated to other parts of the system.

In summary, water resource management need 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 recognised principles are:

1. ***Freshwater is a finite and vulnerable resource, essential to sustain life, development and the environment.***
   Only 3% of the global water is fresh water while 97% is sea water (salty). Of the 3% freshwater 87% is not accessible as it is ice/glacier mostly in the Polar Regions. That means the accessible freshwater resources for use is only 0.4% of the global totality.

2. ***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 be affected too by the nature of the political environment in which such decisions take place. A participatory approach is the best means for achieving long-lasting consensus and common agreement.

3. ***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 decision-making and implementation, in ways defined by them.

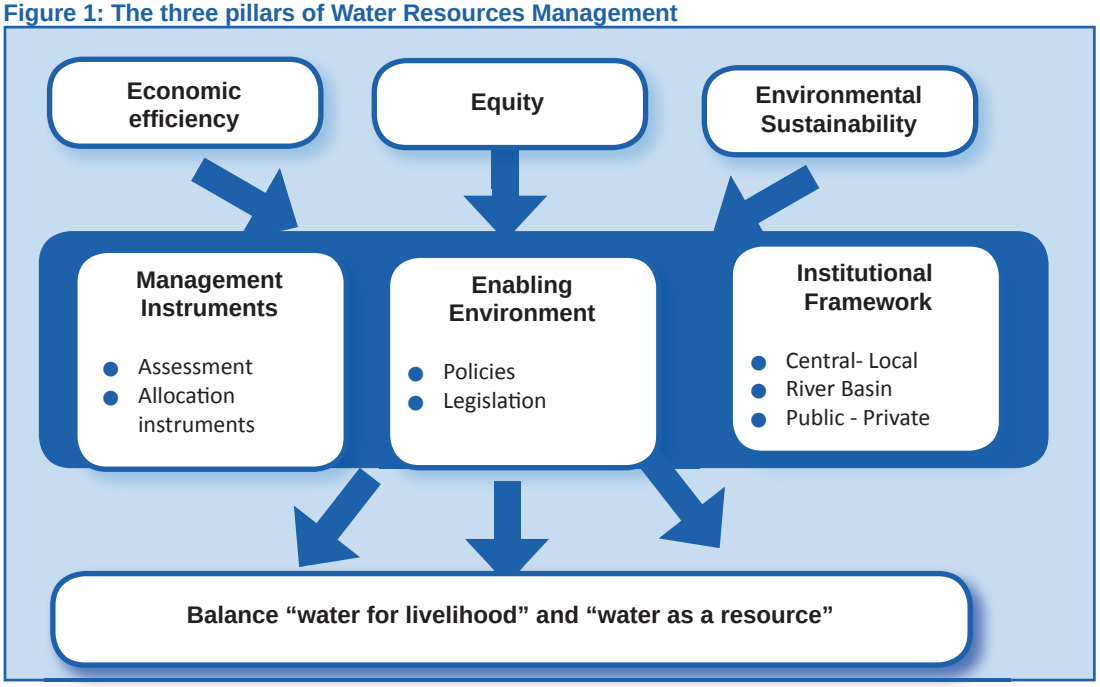
4. ***Water has an economic value in all its competing uses and should be recognised as an economic good.***
   Water must be managed in a way that reflects the economic value for all its uses by moving towards pricing water services to reflect the cost of its provision. Within this principle, it is vital to recognise first 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 of encouraging conservation and protection of water resources.

Box 1.3: Value and charges are two different things 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, affect behaviour towards conservation and efficient water usage, provide incentives for demand management, ensure cost recovery and signal consumers' willingness to pay for additional investments in water services.

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 recognised.
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.

Figure 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 in no doubt touch political, economic and social nerves. While particular practices may be leading 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 of the key tipping points are highlighted below.

- **Achieving Good Water Governance**
  In 2004 the Global Water Partnership (GWP) identified 13 (thirteen) key change areas within the overall water governance framework, grouping 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 ex-

change). 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 enters this environment – 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 is without access to safe drinking water and half 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. Doing so will require a substantial re-orientation of investment priorities.

- **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% of all water withdrawals (more than 90% of all consumptive use of water). Even with an estimated need for an additional 15-20% 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 from an environmentally sensitive way is not always possible. Trade-offs will be necessary, but how and who to 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. That 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. Women therefore 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 'mainstreaming gender' mean?

- **Managing Risks**
  Drought, flood, point-source and diffuse pollution, upstream actions with downstream impacts – these are all common events with often 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 all the more important in the face of the anticipated negative effects on 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 – prove the point at while rain falls freely, pipes cost money. How water is priced must also reflect issues of equity, and 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: surely 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, difficult decisions need to be made regarding best use. Should irrigated agriculture continue to have 70 per cent of all withdrawals when the sector contributes only 4 per cent to 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 questions of 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 that much 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). 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 11 shows that most often states argue about the quantity of water and the type of infrastructure in place that affect the amount and timing of flows.
  The same charts also show that states cooperate on the same issues – thus form-

ing 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 benefit sharing across a number of shared interests:

- Equitable sharing of rivers during lean period;
- Sharing of data and expertise for flood forecasting;
- Watershed management;
- Hydro-power generation;
- Augmentation of flow of the lean period;
- Cooperation in flood management;
- Cooperation in navigation system;
- Seepage, sedimentation and other losses control;
- Cross-border pollution management; and
- Cooperation in river training works.

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 decade or so, 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 a development dispute, and an object of control.

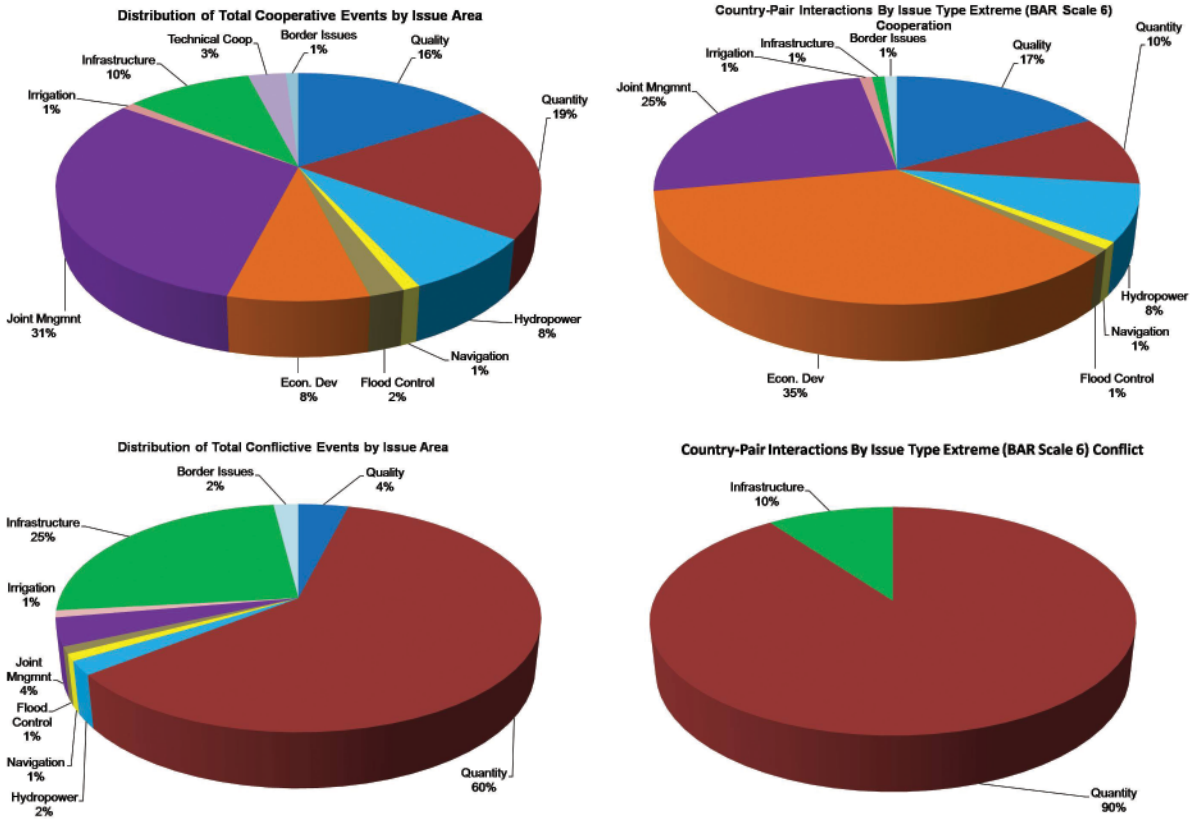
However, according to Wolf et al (2005: 84), '[N]o states have gone to war specifically over water resources since the city-states of Lagash and Umma fought each other in the Tigris-Euphrates basin in 2500 B.C. Instead, according to the UN Food and Agricultural Organisation, more than 3,600 water treaties were signed from AD 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 often prove to be resilient, even when relations are strained' (Wolf *et al* 2005: 85).

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) emphasise the importance of **'green water**' (i.e. water transpired by plants) and 'soil moisture' (water contained in the root zones of plants) to food production. A.J. Allan's notion of **'virtual water'** – i.e. the amount of water used to make a product – is another such innovation that allows policymakers to make more informed decisions about how water is allocated in a basin.

Figure 1.2: Cooperation and Conflict in International River Basins



Source: Wolf, Stahl and Macomber, 2003

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 with challenge come threats as well as 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 very different stakeholders, often with apparently irreconcilable differences to somehow work together.

As the Global Water Partnership (GWP) 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 benefits 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 turn the inevitable conflicts that will arise into productive, win-win, mutually beneficial outcomes that will lead to long-term gains.

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 there an urgency to manage water resources in an integrated manner and how is this best done? What will be the benefits for the different sectors?
- How are men and women affected differently by changes in water resources management in your country?

EXERCISE 3
In My Country

Linked to Session 2: Integrated Water Resources Management (IWRM) and Water Conflict and Cooperation

Participants should be organised into 4-6 groups (depending on numbers of participants with the optimum number of participants per group being about 5). The easiest way to organise the groups and to avoid self-organising 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 on page 15 attaches to the formal presentation by the facilitators in this Module

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 kind of 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 power point 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	Van der Zaag, P., 2005. Integrated Water Resources Management: irrelevant buzzword or key concept? Physics and Chemistry of the Earth 30, Elsevier, 867-871 Global Water Partnership-Technical Advisory Committee, 2000. Integrated Water Resources Management, Technical Paper No.4, GWP, Gland 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). 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.		

References

1. Cap-Net (2005), Tutorial on Basic Principles of Integrated Water Resources Management-Version 2.
2. Cap Net tutorial: http://www.cap-net.org/iwrm_tutorial/mainmenu.htm
3. Cap-Net and GWP (2006). CD containing Cap-Net E-library Water resources management, GWP Toolbox, and Cap-Net IWRM Tutorial.
4. Chowdhury, J.U., 2005. Basic Principles and Concept of Integrated Water Resources Management. Training Material from Cap-Net on Conflict Resolution and Negotiation Skills for IWRM. 1-5 August, 2005. Dhaka, Bangladesh.
5. Falkenmark, M. and J. Rockstrom, 2004. Water for Nature Water for People. London: Earthscan.
6. Gleditsch, N.P., T. Owen, K. Furlong and Bethany Lacina, 2004. 'Conflict over Shared Rivers: resources wars or fuzzy boundaries', 2004, available at: http://www.prio.no/files/file45233_isa_proceeding_14244.pdf
7. Gleick, P., 2000. 'Environment and Security: Water Conflict Chronology – Version 2000', in P. Gleick, The World's Water 2000-1, (California: Island Press).
8. Global Water Partnership (GWP) Technical papers: available at: http://www.gwpforum.org/servlet/PSP?iNodeID=231&iFromNodeID=102olbox:. http://gwpforum.netmasters05.netmasters.nl/en/
9. Global Water Partnership-Technical Advisory Committee, 2000. Integrated Water Resources Management, Technical Paper No.4, GWP, Gland.
10. Homer-Dixon, T., 1994. 'Environmental Scarcities and Violent Conflict: evidence from cases', International Security, 19:1 available at: http://www.library.utoronto.ca/pcs/evidence/evid1.htm
11. 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)
12. United Nations, 2006, Water: A Shared Responsibility. World Water Development Report 2. New York and Geneva: UNESCO and Berghahn Books.
13. Wolf, A., A. Kramer, A. Carius and G.D. Dabelko, 2005. 'Managing water conflict and cooperation', World Watch Institute, State of the World.
14. 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.

Suggested Reading

Integrated Water Resources Management and the domestic water and sanitation subsector Thematic Overview Paper, By: Patrick Moriarty (IRC) and John Butterworth (NRI) and Charles Bachelor available at: http://www.irc.nl/content/download/11479/168383/file/IWRM Final.pdf

Module 2: Approaches to Conflict Management

Learning Objectives

- To highlight different methods for conflict management.
- To emphasise 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 Alternative Dispute Resolution (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 process for the reason that it may arise out of such an array of objective and subjective conditions that demand resolution on sustainable basis.

Within the IWRM context:

- 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 style;
- Distortions in communications; and
- Unmet expectations are some of the areas that generate conflicts.

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

There are two aspects of conflict handling. The ***first*** is "Conflict Management" which has emerged with 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 pro-active 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 for undertaking 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 possible 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 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 induce the parties to open up, identify the real issues behind the publicly pronounced positions and find out “win-win” solutions that leave both the 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 would be necessary. Even then, in some cases, if a party is convinced that the collaborative efforts will not yield anything better than what it can gain through unilateral action, it will not go for 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 approaches are to be avoided. In place of formal legal approaches, there is what is called Alternative Dispute Resolution (ADR) mechanisms. These are based on principled negotiation – i.e. the desire to bargain in good faith toward 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 to change and holds the potential for change. On the face of it, conflict may be highly deceptive. When unfolded, some situations may bring about the anomalies and contradictions that are hampering the progress in some sectors of the society. That may trigger the setting up 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 patching up may lead to the suspicion that some vested quarters are trying to hide something from the public view in order to advance their own self interest.

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 a long term solution 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 is no particular tailored techniques, both formal and informal, to manage conflicts although the techniques are based on intuition, logics & commutation arts. The following are the most commonly known methods of conflict resolution. The comparisons between different methods of conflict resolution techniques 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:

  - Many conflicts involve the use of 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 some right that has been directly infringed;
  - Legal rules may also prevent a party with a grievance from having access to the courts even to have its case heard; and
  - Narrow procedural and legal issues get 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. We shall have a quick review of those techniques.

  - **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

Box 2.2: In Search of a Happy Medium

The United States of America is generally regarded as a highly litigious society, meaning that people would rather let the courts decide the outcomes of specific grievances than try 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 so negatively impacting the livelihoods of people there. The primary tool in the hands of the urban and rural poor is mass action.

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

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 jointly diagnose, create and implement jointly owned solutions. This process is often used in situations involving multiple parties, issues and stakeholders, and 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.

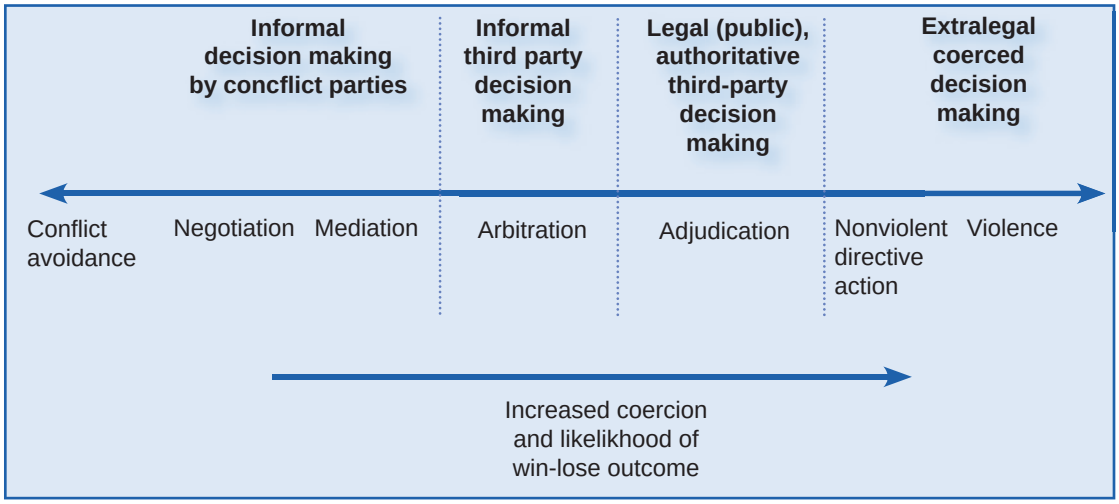
- **Mediation**
  Mediation is a process of settling conflict in which an outside party oversees the negotiation between the two disputing parties. The parties choose an acceptable mediator to guide them in designing a process and reaching an agreement on mutually acceptable solutions. The mediator tries 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 Conflict Begins: Consensus Building /Stakeholder Approach

It is generally recognised 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, the important thing is 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/program.

Box 2.3: 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 and 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 co-operation 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 are two such DSMs. Accurate information is a key to sustainable dispute resolution. Dispelling myths and building trust are key aspects of ADR, each of which may sometimes be helped along with the use of DSMs.

Table 2.2 Conflict Resolution Techniques

Technique	Litigation	Negotiation
Result Sought	Court Judgment	Mutually acceptable agreement
Voluntary/Involuntary	Involuntary	Voluntary
Binding-Non-binding	Binding	Agreement enforceable as contract
Private/Public	Public	Private
Participants	Judge and Parties	Parties only
Third Party Involvement	None	Parties communicate directly
First Steps	One party initiates court proceedings	Flexible
Approach/Methodology	● Formal ● Structured by predetermined rules ● Adversarial	● Usually informal and unstructured ● Non-adversarial
Advantages	Application of legal rules may help to address power imbalances	● 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
Disadvantages	● 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	● This method may not be useful in big and complex cases ● Failure to implement agreement may necessitate enforcement through courts

Source: modified from Barney and Monay, 1995

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 deeply entrenched position or system of values.

Mediation	Arbitration
Mutually acceptable agreement	Arbitration award
Voluntary	Voluntary
Agreement enforceable as contract	Binding
Private	Private
Mediator and parties	Arbitrator and parties
Mediator, selected by parties, facilitates negotiation process	Arbitrator
Parties agree on mediation and appoint mediator	• Parties agree on arbitrator and appoints him
• Flexible • Usually informal and unstructured • Non-adversarial	• Less formal • Procedural rules and substantive laws may be set by parties
• 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 • Agreement more likely to be implemented and future problems solved in non-adversarial way • Can restore communication between alienated parties and break deadlock	• Quicker and cheaper than litigation • Parties can tailor procedure to suit their needs • Parties can choose subject matter experts as arbitrators
• Power imbalances may be enhanced • Agreement may not be reached • Failure to implement agreement may necessitate enforcement through courts	• Parties relinquish control over final decision • Success depends on competence of arbitrators • No appeal against decision

- **Opportunity for Mutual Gain**
  Linked to the above is the requirement of opportunity of 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 for the reason that such 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 utility 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 in 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 on page 20, the Process Map consists of ten steps and four milestones (see Engel and Korf, 2005 for a detailed treatment). 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 if it is 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 turn to **Steps 5-10**.

Box 2.4: 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 determing each parties best alternative to a negotiated agreement (BATNA) to lay out as broad a range of options as is possible

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 Agreement: the agreement is designed and includes appropriate implementation and monitoring mechanisms

Box 2.4: The Process Map *(Continued from page 20)*

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 in possibly 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:

(i) The kind and type of conflict that it is;
(ii) The different handling styles of conflict available both to parties to the conflict and to the mediator/facilitator; and
(iii) 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) that 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:

- Intra-personal (that which occurs within ourselves);
- Inter-personal (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 really prefer? Such a conflict becomes inter-personal when there are limited supplies of water – where water is really a stock, or fixed amount, so my first use reduces the amount you who come after me can use. 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 organisation, water conflicts become interrelated with a variety of other issues such as value differences, relationship problems, the lack of or questionable value of data, 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 other).

Conflicting interests are also a common source of conflict. But interests also vary by type.

- 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 actors believes that they are being treated unfairly for prejudicial reasons; or

Box 2.5: Types of Conflict (see also the Conflict Circle on page 34):

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 distributions of power and resources. Time constraints, destructive patterns of interaction and un-conducive 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.

- That 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 smallholder and large scale farmers' actions create seasonal shortages).

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 worsen 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 problems.

Figure 2.2: Conflict Handling Styles

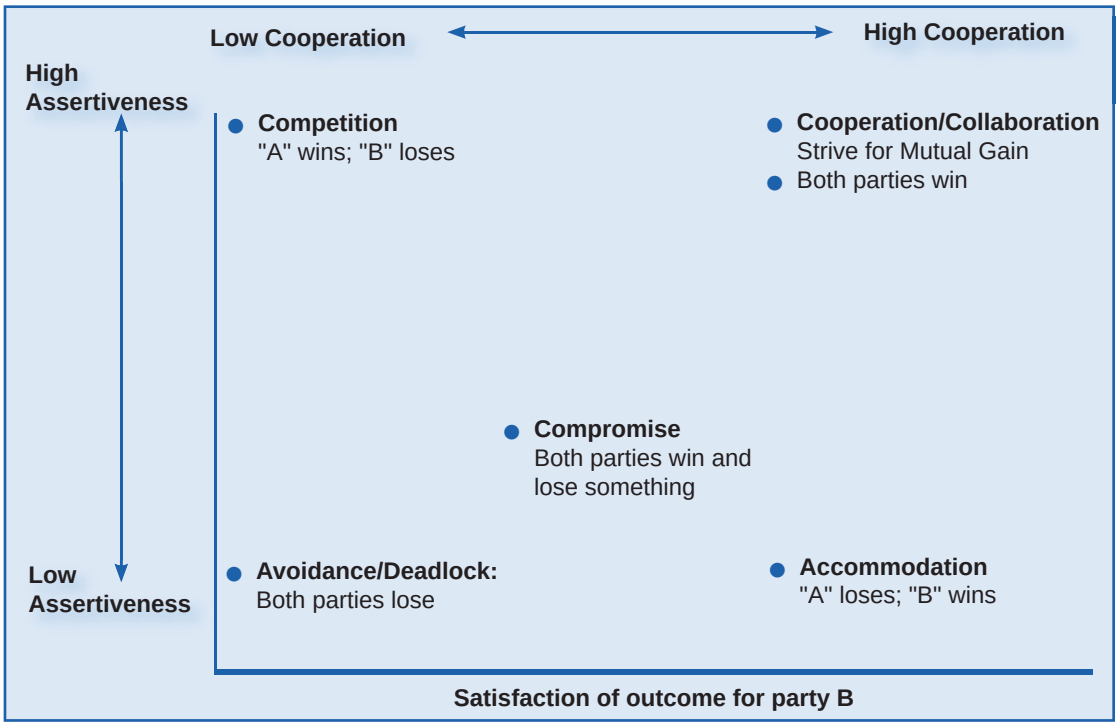


Figure derived from Kilmann and Thomas, "Interpersonal conflict-handling behaviour as reflections of Jungian personality dimensions." (Psychological Reports, No 37, 1975. pp. 971-980").

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 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. Once in a thousand years type of floods constitute such a shock. Most conflicts progress along a typical pathway. They are therefore 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 peri-urban areas, and municipal council decisions to outsource water provision to private companies are two such 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 until now have not thought they had a stake in the issue begin to move toward 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 Organisations (NGO's) 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 of similar views and less with people with whom they disagree, 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 that lead both to the decision and to the hardening of positions.

- *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 talked with each other and exchanged opinions, somewhere along the way, public discussions turned to public debate. People are frustrated by the situation and angry at 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*
  Until now, 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, 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 are ready to commit resources, and to 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 localised 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 carry on a fight, but their goals are absorbed into broader programmes of the national or international organization.

In terms of water privatisation, many urban opposition groups are now aligned to wider, anti-globalisation-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. 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 remains: our side is honest; their side are dishonest. Neutrals are seen as part of the enemy because they are 'not on our side'. As the conflict progresses, people narrow their focus and become less capable of generating new strategies for solving the original problem.

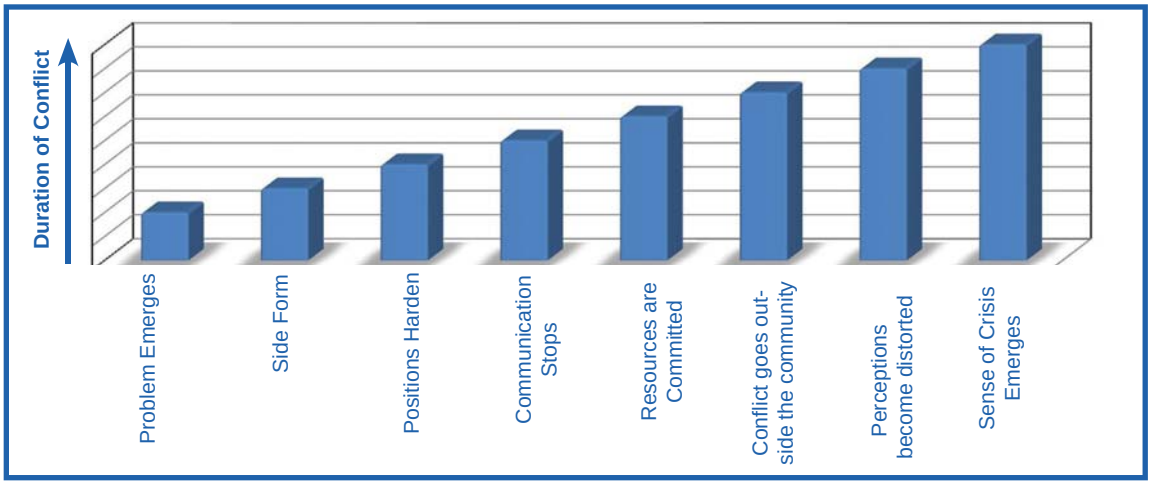
- *Sense of Crisis Emerges*
  The community – perhaps even the wider society – is divided into factions. Normally residents are accustomed to altercations between officials and irate citizen groups and they expect the town to work out its disagreements. But now, it seems, there is little hope of resolving the original dispute. Long-established confidence in the community's ability to handle its problems wavers and gives rise 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, costs that would have seemed unreasonable earlier. Their goal becomes progressively 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 chance for direct negotiations between the parties is gone. Costs continue to mount. Alternatively, 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 realise 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, disruption of the community, among other things. 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 the conflict be mapped out accurately. Such a mapping exercise involves a stakeholder assessment; a physical mapping of the location of the conflict; and an attempt to build a complete picture of the physical, social and psychological layout of the conflict.

Box 2.6: 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?

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

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. The weaker the mediator's/facilitator's analysis, however, the more likely that he or she will contribute to or possibly worsen the conflict.

Box 2.7: 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 all 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 such conflicts?
- When there are such conflicts, who do you turn to resolve them?

Box 2.8: 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 get 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 have the way of resolving different problems;
- For better understanding to apply the right technique / method for resolving problem;
- To find solutions of the conflict;
- To know key partners involved; and
- To value the problem

EXERCISE 4
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 media. As they think about or reflect on this conflict they should jot down some notes about it if they wish.

(An alternative method here would be to pre-select 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 tease out the type of conflict and the handling style. The decision to use one or the other method, 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 them whether the conflict they chose to focus on was:

- Personal (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 it was (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 seek to avoid it at first?
- 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 before them 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 get participants to immerse themselves in the sensory aspects of conflict.

The types of answers that usually emerge involve such things as 'bitter taste', 'loud, crashing sounds'. Participants often choose to focus on the worst case scenarios of conflict, rather than on any of 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 such negative energy toward a positive outcome.

Time: 20-30 minutes

EXERCISE 5
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:
(i) The location of conflict;
(ii) Conflict issue analysis through discussion of the conflict circle; and
(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.

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. These groups should be different in composition than those previously constituted. 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 not too complicated 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 peri-urban areas 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/inter-personal; 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. Visualisation 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 group report-back. During the organisational 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 is 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. Immediately following this should be the report back from groups.

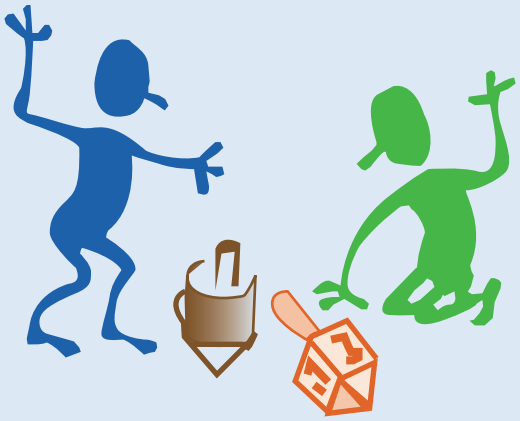
Total time: 2 hours

Figure 2.4: Kinds of Conflict

Conflict can manifest itself in different ways or at different levels. Think of examples of the following kinds of conflict:

Intrapersonal (i.e. inside ourselves)

Interpersonal (i.e. between two or more people)



Intragroup (i.e. within or inside a group)

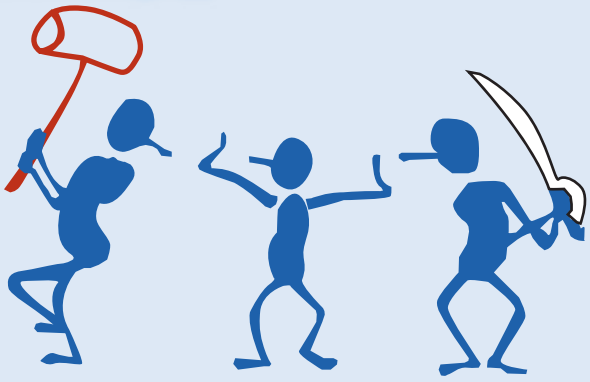
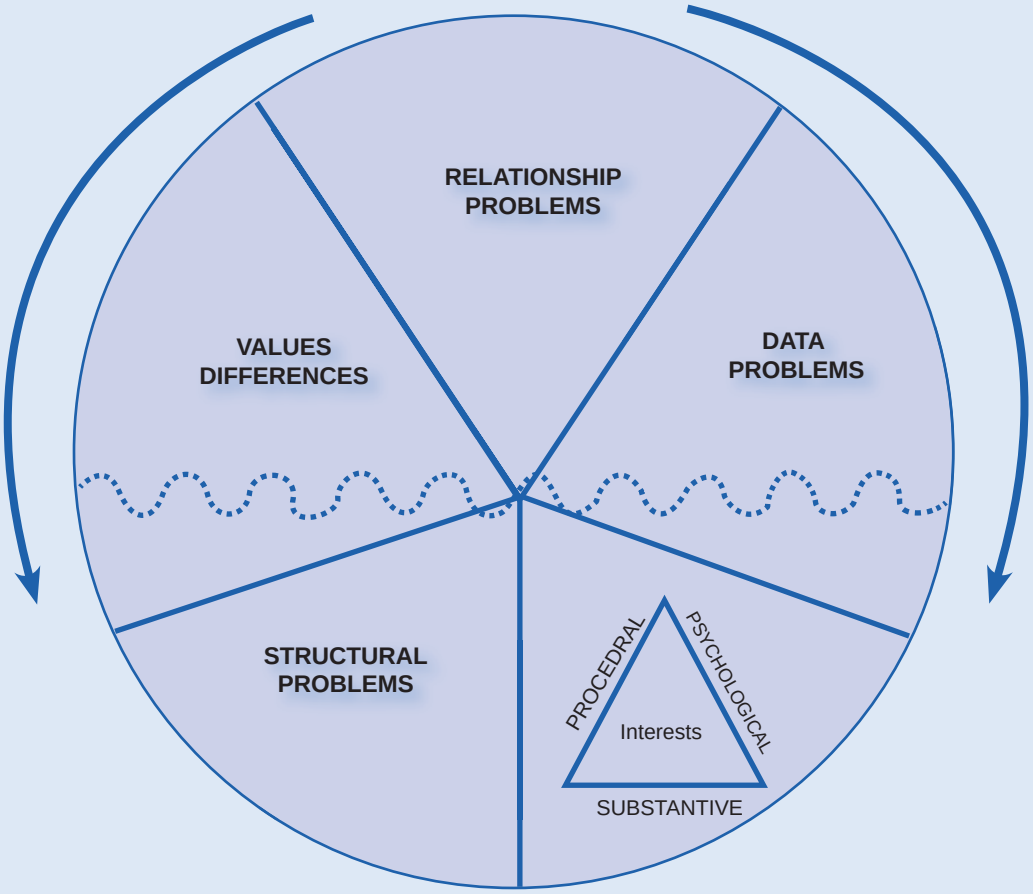


Figure 2.5: The Conflict Circle

The Circle of Conflict is a useful analytical tool for examining disputes and uncovering the root cause of conflict behaviour. By examining a conflict and evaluating it according to the five categories — relationship, data, interest, structure and value — we can begin to determine: what caused the dispute and what keeps it going; identify what sector is primary; and assess whether the cause is a genuine incompatibility of interests or perceptual problems of involved parties. These insights can assist us in designing a resolution strategy that will have a higher probability of success than an approach which is exclusively trial-and-error (Moore, 1986).



Circle of Conflict (Copyright © 1997 CDR Associates, Boulder, Co.)

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 in explaining the tool once the group have chosen a case. The participants have the options of using the case of 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 opposite way.

The tool is quite useful for most inter-personal, intra-group, and inter-group conflicts. If conflicts within an organisation are analysed, one should pay attention that not only the organisational structure is drawn, but also personal relations and the power structures are indicated (who has how much power within the system). Further issues such as family relations can be introduced as a new part of the tool by an additional symbol if necessary for understanding the case. In addition, key issues between the parties need to be indicated in the map.

Often alliances and close relationships are difficult to distinguish. An alliance is a co-operation 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.

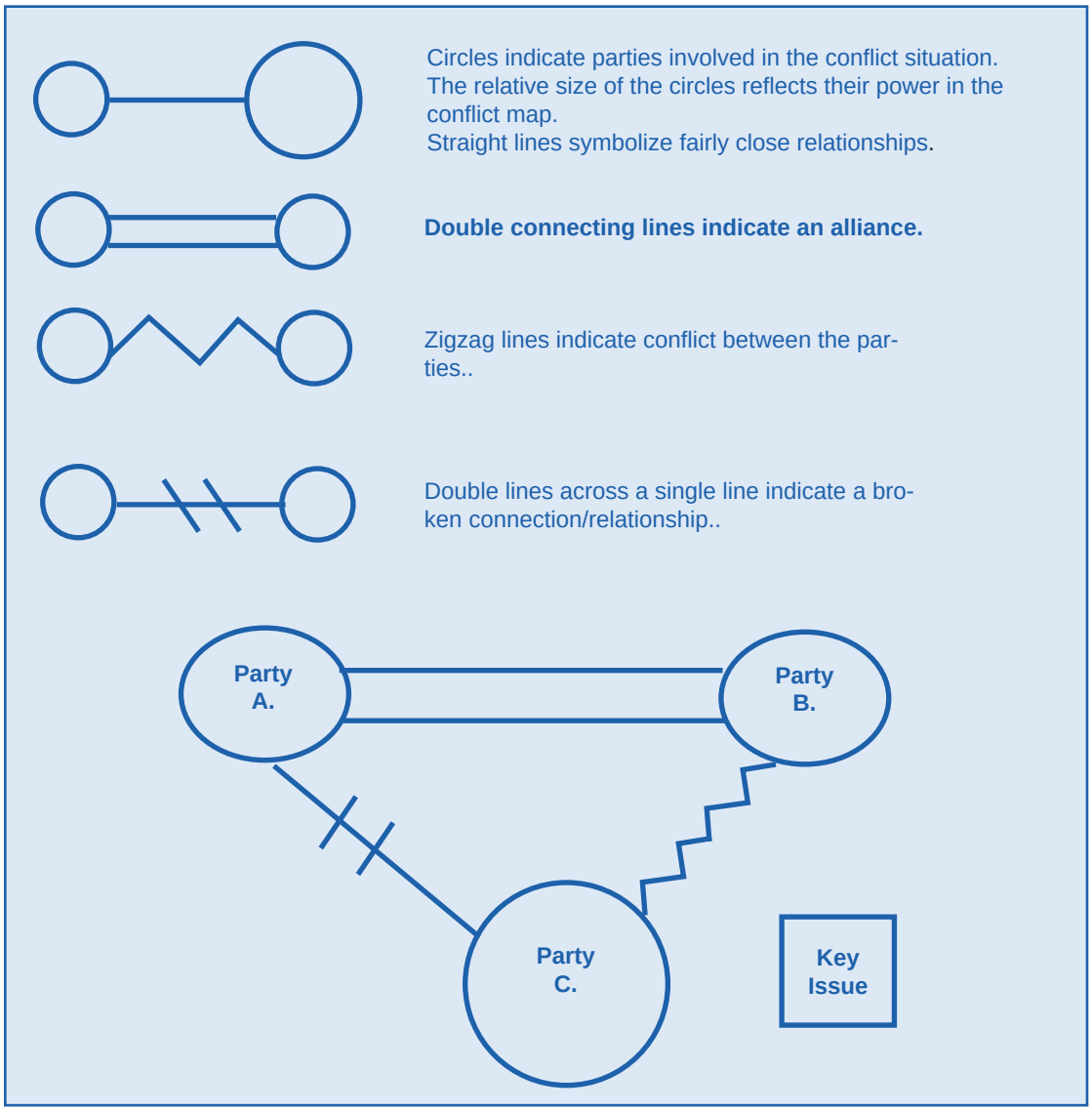
Exploring all the involved parties can be very difficult at times, depending on how complex the situation is. To further the process the facilitator should ask questions, rather than give suggestions. Possible special relationships might offer openings for an entry point.

Entry points here refer to relationships or issues on the map where ‘working’ on the conflict more constructively might start most promisingly. 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 very end of the sub-group session, ask how the case-giver feels about the process and whether the inputs of the group were helpful for better understanding the conflict case.

Figure 2.6: Key (examples)



The Onion Tool

The onion tool can be combined with Conflict Mapping (page 31), 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 to look deeper into this very 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 visualising the named issues.

Aim of Exercise

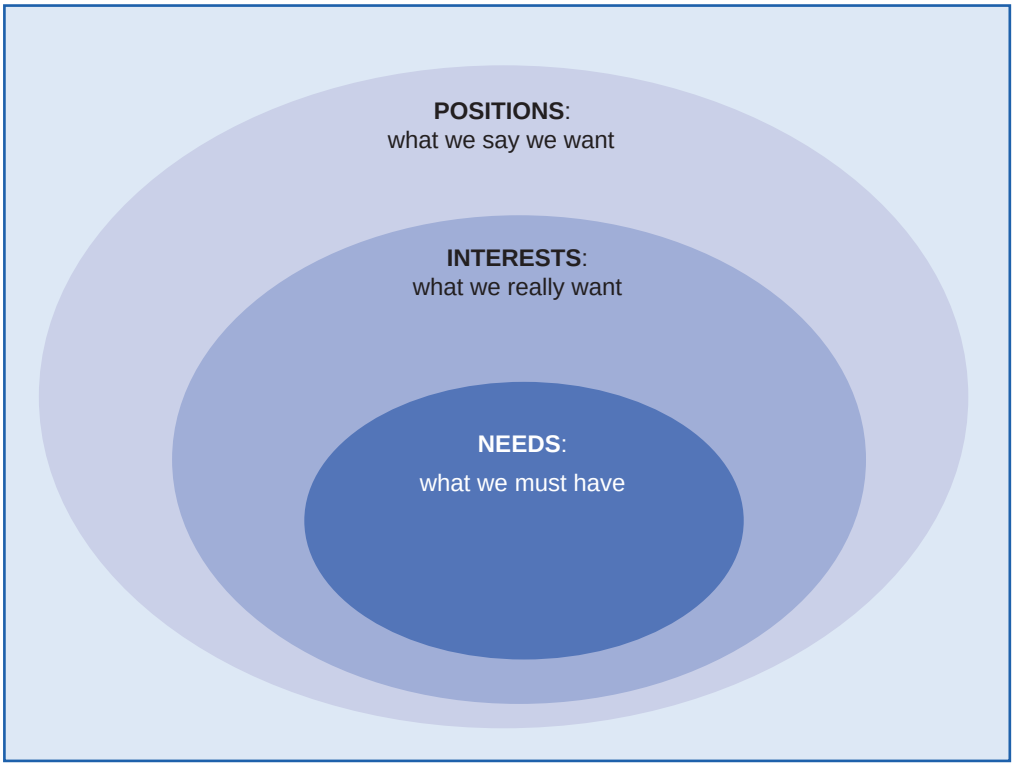
The aim is to explore common ground behind the expressed positions of the parties, possibly on the level of their interests or underlying needs. For example, a government wishes to dam the water of a river for economic development. Some people look forward to a secure water supply, but other people downstream 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 com-

mon interest in a secure supply of water. By communicating this common interest and exploring different needs they could settle their dispute by agreeing perhaps 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 these 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 conflict parties to clarify different perceptions and perhaps to rethink their positions.

Figure 10.7: Onion Tool



Description
A way of analysing what different parties in a conflict wants.

Purpose
To move beyond the position of each party and understand underlying interests and needs and to explore common grounds 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, human security).

The exercise should proceed as if peeling an onion: from the outside working in. Start with the positions, going 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.

References

1. Barnett, T. and J.S..Monay, 1995. 'Enhancing Negotiation Skills and Results'. Working Session. Conflict Management Institute, Washington D.C,
2. Cap-Net and UNDP, 2005 "Integrated Water Resources Management Plans", Training material.
3. Engel, A. and B. Korf, 2005. Negotiation and mediation techniques for natural resource management. Rome: Food and Agriculture Organisation of the United Nations (FAO).
4. Fisher, R. W. Ury, B. Patton. 1991. Getting to Yes: negotiating an agreement without giving in. Toronto: Penguin Books.
5. Kilmann, A., and H. Thomas, 1975. 'Interpersonal conflict-handling behavior as reflections of Jungian personality dimensions'.Psychological Reports. Vol. 37: 971-980
6. Moore, C.W., 2003. The Mediation Process: practical strategies for resolving conflict. San Francisco, Calif.: Jossey Bass Wiley.
7. 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 .
8. Schmid, A. 1998. Thesaurus and glossary of early warning and conflict prevention terms (abridged version), London: Fewer. Available from www.womenwarpeace.org/issues/prevention/docs/thes.pdf.
9. Shamsul Huda, ATM 2005 "understanding water conflicts & conflict management" TOT on conflict Resolution & Negotiation skills, Dhaka.
10. Warner, M. 2001. Complex problems, negotiated solutions: tools to reduce conflict in community development. London: ITDG Publishing.
11. Warner, M. 2000. Conflict management in community based natural resource projects: experiences from Fiji and Papua New Guinea. ODI Working Paper No. 135. London: Overseas Development Institute.

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

3.1 Negotiation

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 and 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 so makes concessions readily in order to reach agreement. He/she wants an amicable resolution; yet he often ends up exploited and feeling 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, 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 illustration.)

Table 3.1: Illustrations of ways of Negotiation

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 will	Try to win a contest of will	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

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 is one that 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 boiled down to four basic points. These four points define a straightforward method of negotiation that can be used under almost any circumstance.

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 be 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 those positions.

You can offset these constraints by setting aside a designated time within which 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 such a negotiator by insisting that his single say-so 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 either an agreement is reached or 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, organise it, and think about it. You will want to consider the people 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 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? Of your interests, which are 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 toward 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. Both can then jointly 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 satisfying 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 digging in to positions only to have to dig yourself out of them. And separating the people from the problem allows you to deal directly and empathetically with other negotiator as a human being, thus making possible an amicable agreement.

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

- Strategise: Generate broad ideas about what may be done; Brainstorm these approaches; Prioritize them
- Develop your BATNA
- Hypothesise 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
- Articulate interests: Ours? Theirs? Others?
- Identify options
- Establish criteria for acceptable and legitimate agreement

Stage 3: Discussion

III. Negotiation

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

IV. Implementation / Evaluation

- Conclude agreements
- Evaluate and Monitor effect of joint decisions

When is the Condition Ripe for Negotiation?

In an ideal world, a situation is ripe for negotiation when all of the following conditions are present. In point of fact, however, in most cases only several 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 and indirect, powerful, powerless, marginalized, acknowledged, etc. Therefore in such a setting of unequal capacities and power arrangements, principled negotiation is a key mechanism towards 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 toward 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 toward each other and toward a successfully negotiated outcome.

- **Facilitation**
  - 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.
  - Engages in consensus-testing at appropriate points.

  A good facilitator also 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 much 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 each is trying to communicate to the other, possibly because they have already made up their minds about each other and each other's 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 toward them, and so also purchases weapons to counter the new weapons of its neighbour. State A misinterprets this act, and so 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 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 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. Importantly, the effective communicator separates the person from the problem.

Among other things, the mediator/facilitator is looking to uncover 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 sort of interest that we wish to reveal and upon which to build. For instance, where actors may be caught up in a 'dam/no dam' positional argument, the underlying shared interest may in fact be having a predictable water supply for food production.

Roles and Responsibilities

Effective communicators are also conscious of the various roles and responsibilities that attach to the parties to 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 outcome, so are unwilling to work toward a mutually beneficial outcome. Cordiality may simply reflect the fact that a party to the dispute is wedded to his or her position.

Unstated Variables

In any negotiation there are a number of unspoken variables that communicate certain information that, unbeknownst to the parties, may in fact be affecting the outcome of negotiations. For example, parties to a dispute may be entrusted with the same responsibilities from their organisation (say, as Ministers of Water Affairs) but in an inter-group setting, there may be subjective, inter-personal 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 characterised 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 neutralising such power.

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 only)
- Is it unexpected? (e.g., by 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 and if so do parties to the dispute know about these entities?

Generating Options: Facilitating parties to develop their BATNA- (Best Alternative to a Negotiated Agreement)

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 reach Milestone B only 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 a 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 both from accepting terms that are too unfavourable and from rejecting terms it would be in their interest to accept.

The BATNA not only is 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 not to 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 such resources as 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 a Negotiated Agreement (BATNA)

The purpose of negotiating is to produce a better 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 a negotiated agreement.

Developing a BATNA involves, amongst other things:
Listing down all the possible alternatives that could be pursued if no agreement is reached;
i) Considering the practical implications of the more promising alternatives; and
ii) 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?

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;
- Utilise integrative option generating techniques;
- Separate option generation from evaluation process; and
- Work toward agreement - Identify areas of agreement, restate them, write them down.

The task of the mediator/facilitator is to assist the parties to build trust, to learn about the needs and interests of each other. Facilitation (Step 7) is the most challenging of all 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 toward 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 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 amongst 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 toward successfully managing a conflict involve developing suitable instruments for monitoring the agreement and assisting the parties to the agreement to explore possibilities for further confidence-building. Monitoring of the agreement may be given to a group of stakeholders as decided amongst 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 midwives of 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 Organisation. 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 home 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 the process with that identified in 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 6
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 7
You Speak my language

Linked to Session 7 - Effective Communication

If the basis for a successful negotiation is that we understand exactly what it is that each other is after, 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 (see below). Give participants 5 or 10 minutes to frame their definition, then collect all of the cards. There is no need for discussion at this point. Post all of the cards including the ideal-type definition during a tea break and just let participants read them and discuss them among themselves

Time: 10 minutes

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 attach to each of these categories 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 not masculine but 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 pre-determine their place in the social order. Similarly, feminism argues that men should not be subject to such 'biological determinism'. It is a mistake therefore 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. Because (most) women give birth to a child one to several times over the course of their entire lives is no reason to restrict them to the kitchen. Biology is not destiny.

EXERCISE 8
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 fashion.

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 emphasise traditional assumptions underpinning age, gender roles, even physical size and manner of dress.

The skit is a very useful way for thinking about the sorts of disparities in power and access to resources that obtain 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, and male).
One participant will play the younger child (preferably a smaller, younger, and 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 organising committee to purchase a bag of sweets (big enough to be passed around following the skit).

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 secretively 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

Process

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 should then debrief 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 to which almost everyone can relate (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 9
Part 1: 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, 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 (see appendix ??) and will be tasked 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 lead to dramatic changes in water use patterns and subsequently to overexploitation of water resources.

In relatively recent past, the river basin was covered for more than 60% 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 deteriorated 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, and capital intensive mining and tourism activities have contributed to a high unemployment rate in the area. Poor quality surface water flow have driven downstream extensive cattle farmers to search for water in another part of the basin. Not only are local authorities concerned about water quality and quantity, they are concerned about the numbers of unemployed and underemployed people – particularly youth – moving into the urban area.

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

Time: 30 minutes

Part 2: Role-play - Negotiation for water

The Problems

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

Water quality
- Discharges from upstream mining have deteriorated downstream water quality.
- Cattle farming in combination with permeable soil have lead 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 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 stimulate efficient water use.

Roles
- Local authorities
- Small scale cattle farmers
- Environmental non governmental organisation
- Community water supply
- Industries/mining
- Tourism agency

The group is divided in 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 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 of groups report back to plenary to convince the authorities of the interests of their constituencies. The authorities draw up a consensus statement as basis for policy acceptable to all.

Discussion and reflection - After the game has been played, the group will discuss in 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 a facilitator appointed and acceptable to all, rather than the local authorities acting whose impartiality is compromised by having to uphold government policy?
- Who should make the decision and how?

Group 1: 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 to ensure their proper implementation.

Main problems faced:
- Mediation between competitive water uses
- 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 2: 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 3: Environmental Non Governmental Organisation

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
- Tourism agency
- Community water supply
- Environmental NGO

BATNA:

Group 4: 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 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
- Small scale cattle farmers

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 agency
- 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 10
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 peri-urban setting), where the organisers 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 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 stake-holders in the field. Participants by now 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) reinforce tensions; (ii) 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 judgments 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 11
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 have followed the process map from step 1 (preparing entry) to step 2 (entering the conflict scene) and 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?

References

1. Engel, A. and B. Korf, 2005. Negotiation and mediation techniques for natural resource management. Rome: Food and Agriculture Organisation 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, D.C.: 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 at different spatial scales.
- To accurately identify policy implementation bottlenecks.
- To have an 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 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% of the earth's surface including 145 countries of which about one-half have 80% or more of their territory and two-thirds have more than 50% of their territory in international river basins. Shared waters have induced many states to sign agreements with each other.

The Food and Agricultural Organisation (FAO) 'identified more than 2000 agreements that deal with some aspect of transboundary water issues (most of them bilateral agreements focused on navigation)' (in Conca, 2006). Wolf and colleagues identify

145 international treaties since 1814 that deal with some non-navigational aspect of international waters.

Table 4.1: International River Basins (IRB) of the World

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

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

Table 4.2: Percentage of National Territory within International River Basins

% 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

Source: Wolf et al, 1999

- **Agreements and Management Arrangements in International Rivers**

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

  (i) Absolute territorial sovereignty (the Harmon Doctrine)
  Absolute Territorial Sovereignty: A state has the right to full utilization of all water within its legal boundaries (favours upstream riparian).

  (ii) Absolute territorial integrity (or riparian rights theory)
  Absolute Territorial Integrity: A state has the right to the unfettered, natural flow of a river (favours the downstream riparian).

  (iii) Limited territorial sovereignty/integrity
  Limited Territorial Sovereignty/Integrity: A state has the right to the utilization of the waters of a shared river so long as its use does not compromise a co-riparian's ability to also use the water.

  (iv) Community of interests
  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.

(v) Equitable utilization (Finger, Tamiotti, Allouche, 2006)
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.

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 much talk of 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. 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 basis of 'sovereign equality, territorial integrity, mutual benefits, 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.
- Article 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:

(i) The 1961 Salzburg Resolution that focused on the 'use of international maritime waters'; and

(ii) 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 further toward 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). However, in the world of states, and in terms of actually becoming international law, it has fared poorly. It passed the General Assembly by a vote of 103 for, 3 opposed, and 27 abstentions.

Important upstream riparian states (China on the Mekong; Turkey on the Tigris-Euphrates; Burundi on the Nile) voted 'no'. Among the 27 abstentions are such key states as Egypt, Ethiopia and Rwanda (which share the waters of the Nile), France, and India and Pakistan (which share a number of rivers including the Indus). Whereas the modest requirement for entry into force was that 35 signatories deposit instruments of ratification with the UN Secretary General by 20 May 2000, by the closure date only six states had ratified and an additional seven had signed the Convention. As of January 2008, the UN Convention continues to hang in legal limbo, with only 16 ratifications.

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 coming in the period between the 1992 Earth Summit at Rio and the 2002 World Summit on Sustainable Development (WSSD) at Johannesburg. Of these agreements, 88% are bilateral.

The substantive issues mostly involve hydropower (39%) and water supply (37%) with pollution issues accounting for only four per cent of agreements. Forty-three percent entail non-water issues (but 2/3 of this is about money); only 4% mention land. With regard to monitoring, enforcement and dispute resolution, 66% mention information sharing; 54% monitoring; 80% have no enforcement mechanisms at all; and 54% have no conflict resolution mechanism. As shown in the pie charts in Module 2 (page 9), states co-operate and conflict on similar issues: water supply and water supply infrastructural projects.

Case Study: The Nile Basin Initiative

The Nile River, at 6,700 km, is the longest river in the world. With a basin area of 3 million km2, it drains ten percent of Africa; include ten countries and about 160 million people. Without doubt, the Nile constitutes a rich natural and environmental asset, whose natural capital formed the basis for a rich cultural heritage. Today, however, management of the waters of the Nile face significant challenges:

- Wide spread poverty: Many Nile Basin countries are among the world's poorest
- History of instability
- Rapid population growth: expected to double in 25 years
- Environmental degradation; and
- Climatic variability increasing physical, temporal and social water scarcity

However, with challenges also come opportunities. For example:

- Food production;
- Energy availability;
- Environmental conservation;
- Transportation;

- Industrial development;
- Trade; and
- Peace and Regional Integration.

Water resource use in the Nile is dominated by two agreements made by colonial powers in 1929 and 1959 that awarded the lion's share to Egypt, a lesser share to Sudan and prohibited other basin states from significant use.

The Nile Basin Initiative (NBI) was launched in 1999 by riparian states with assistance from the international donor community in an effort to offset the negative trends in resource use and the conflict potential of Egyptian hydro-hegemony. It is governed by the Council of Ministers of Water Affairs of the Nile Basin and has its secretariat at Entebbe, Uganda. The NBI is pursuing a multi-track strategy with a development focus.

In addition to developing a shared vision for the basin, four thematic projects are being undertaken:
- Transboundary environmental action;
- Regional power trade;
- Efficient water use for agricultural production;
- And water resources planning and management.

Extra-basin actors are also facilitating a number of confidence and capacity building activities. In the Eastern Nile, countries are engaged in a number of fast-track projects in order to realize mutual benefits. It focuses on:
- Flood preparedness;
- Ethiopia-Sudan power transmission interconnection;
- Irrigation and drainage; sub-basin planning; and
- Watershed management.

Case Study: SADC Protocol on Shared Watercourses

In Southern Africa, there are numerous agreements among the region's states all of which are members of the regional integration-focused Southern African Development Community (SADC). Regarding the region's shared waters, some agreements stretch back as far as the 1891 treaty between the colonial governments of Great Britain and Portugal on the use of Zambezi River waters. Others are the results of intra-colonial policy (e.g. between Northern and Southern Rhodesia), or between colonial states and South Africa's apartheid government (e.g. between Portugal and South Africa on the construction of the Cahora Bassa hydropower scheme).

Most of these agreements concern a specific project involving development and management of hydraulic infrastructure (e.g. the Lesotho Highlands Water Project, the Zambezi River Authority).
Across the region there are numerous Joint Permanent Technical Commissions regarding transboundary waters. There are also a number of Watercourse Commissions focused on a particular river (e.g. the Okavango River Basin Commission, the Orange-Senqu Watercourse Commission).

A number of joint permanent technical water commissions also exist, among which the South Africa-Swaziland Joint Water Commission alone includes de-

tailed conflict resolution mechanisms. While many of the historical agreements are not 'satisfactory' by today's needs and standards, they nevertheless form the basis for discussion about how to move forward for mutual benefit sharing.

Underpinning these activities is the revised (SADC) Protocol on Shared Watercourses. Given that much of the region's land falls within an international river basin, and given the centrality of water in economic development, the SADC agreement on shared watercourses is a seminal document in international water cooperation. Included in the Protocol are such key aspects such as:

- SADC Tribunal: 'A Tribunal shall be constituted to ensure adherence to and to ensure the proper interpretation of the provisions of this Treaty and subsidiary instruments and to adjudicate upon such disputes as may be referred to it. Decisions of this Tribunal shall be final and binding.'
- Article 2b: Advance the sustainable, equitable and reasonable utilisation of the shared watercourses
- Promote coordinated and integrated environmentally sound development and management of shared waters.

Article 4 outlines a number of Specific Provisions:

- 4.1a and b focus on the need to provide information and notification of any planned measures.
- 4.1g.(ii) The consultations and negotiations shall be conducted on the basis that each State must in good faith pay reasonable regard to the rights and legitimate interests of other States.
- 4.2. concerns environmental protection and preservation and highlights ecosystems, pollution, alien species, and aquatic environments, to name several.
- 3. discusses management in terms of such things as flow, construction of regulation works4.4. describes the need for prevention and mitigation of harmful conditions due to natural or human causes. It also describes the need for coordinated waste management.

Admittedly, the agreement is not perfect. For example, Article 6.1 makes special note that prior activities are not subject to the agreement, so removing any controversial hydraulic works from the purview of the SADC Water Division. Importantly, the Protocol provides a firm base for regional actors to treat water as a regional public good whose management should be to the benefit of all.

Inevitably, disputes will arise. Article 7 deals with Settlement of Disputes and states that SADC states shall strive to resolve disputes amicably (7.1). Any disputes not settled amicably shall be referred to Tribunal (7.2); and where SADC decides to take action against a member State, that state can ask for 'an advisory opinion' (7.3).

Moreover, water management is embedded within wider SADC processes of regional economic development, as highlighted in the 2005 documents the SADC Regional Indicative Strategic Development Programme and the SADC Regional Strategy for Water Resources Development and Management. (SADC, 2005) Lastly, all of these activities are informed by global water agreements, policy statements and aid practices.

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 has been turned to 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 one or a combination of supply augmentation, resource conservation, or use reallocation – have fostered numerous conflicts among users.

As basins approach closure, for example, 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 proper unit for management of interrelated land and water resources.

Table 4.3 Essential Functions for River Basin Management

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 works, 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	Harmonisation of policies and actions undertaken in the basin by state and nonstate actors relevant to land and water management
*The functions listed here subsume functions such as data collection and resource mobilisation, which are not ends in themselves, but rather facilitate the higher level functions listed	

Source: Molle et al, 2007: 608

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

(i) Development of a national water vision;
(ii) Creation or update of a national water strategy;
(iii) Creation and or revision of national water law;
(iv) 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 simply basin-level institutions. In the words of the 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 such a setting, resource exploitation and management may be economically efficient for some, but ecologically unsustainable and socially inequitable so 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.

(i) 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 at collaboration with them at the point of the resource will be hindered by limited capacity.

(ii) 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.

(iii) 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, such things as modern 'water permits' 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.

(iv) 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 so 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 do have their beneficiaries. Changing these use and management patterns will inevitably result in disputes and ultimately social conflict. For this reason, in 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 function to the benefit of 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 certainly stands vulnerable to being overturned by higher authorities. Having said this, it must also be recognised 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 toward broader resource benefit sharing.

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

One such activity could be establishment of a government-supported stream flow committee. This committee could draw 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.

(i) Actors share a common resource to which there is no ready alternative.
(ii) Actors' behaviour is interdependent and they live with the consequences of each other's actions.
(iii) Where a problem arises, individual solutions either do not work, or are short-lived, or lead to win-lose outcomes so sowing grievances and the seeds of latent conflict.
(iv) Actors face a common problem whose impacts may be unevenly felt but are regarded as problematic by all parties.
(v) Actors share a common interest.

(vi) Actors have needs both shared and different but whose satisfaction is dependent upon a common resource.
(vii) Changing (physical, social, economic, political) conditions are generally recognised as presenting a need for a response, the character of which will present both threats and opportunities.
(viii) Mechanisms in place to deal with variations in the water resource have lost their adaptive capacity and are leading to problematic social behaviours.
(xi) New challenges have a time and space dimension that provides a window of opportunity for successful adaptation.
(x) 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. Civilisation complexity, however, gradually displaced many of these traditional forms of governance with centralised 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 up scaling stream bank-level structures across an entire basin, or in reconciling their methods with more centralized, modern methods, in-building modes of participation is an indispensable means for arriving at sustainable water agreements and management arrangements.

Case Study: Best Practice – Basin Management in Namibia

Namibia is an arid African country with a growing population dependent on spatially and seasonally limited water resources. The country's only perennial rivers are shared with neighbouring countries. Its wholly national rivers are ephemeral and flow for only a few days or weeks following intense seasonal rains. Following independence in 1990, the country embarked on a comprehensive water reform programme including, among other things, a new water law and formal acceptance of the river basin as the unit of management. Within Namibia, the Kuiseb River flows from the eastern highlands to the sea in the west.

A limited variety of actors are dependent on the Kuiseb's flow, especially in terms of its accessible groundwater. Upstream, highland farmers have captured some of the flow through a network of dams. Downstream, the port city of Walvis Bay taps groundwater flow for urban uses. Midstream users are a limited number of indigenous people whose demands are limited but whose needs are easily compromised by variations in the hydrological cycle. Within the basin there are also a national park and a small research station that belongs to the Desert Research

Foundation of Namibia. During a particularly dry spell, midstream users accused upstream users of diverting run-off.

To avoid potential conflict, the DRFN volunteered to engage in a fact finding exercise to sensitize users to each other needs and conditions. What eventually transpired was a process to facilitate a basin-wide management structure run by users themselves. Today that structure – the Kuiseb River Basin Management Committee – is functioning. Namibia has since tried to replicate this process in other national river basins to varying degrees of success. What made the Kuiseb a success story? First, there was firm government support behind the process. Not only was the law conducive to reaching a basin level management agreement, but government also provided necessary hydrological information and other types of technical backstopping. Second, a highly respected actor from within the basin – the DRFN – acted as an agreed-upon facilitator, initially in the fact-finding exchanges and latterly in establishment of a river basin forum and ultimately a management committee. Third, among the users there were a number of shared facts: the resource was essential to the well-being of all actors and there was no alternative to it. The basin is small enough that any unilateral interventions upstream to ensure water security would negatively affect stakeholders in the lower reaches and ultimately give rise to grievances and perhaps hostile action. Individual solutions, therefore, were not sustainable.

The challenge – water scarcity – was both predictable and not yet overwhelming. Thus there was a large window of opportunity to explore mechanisms for win-win outcomes. While the actors' specific needs differ, all are dependent on the resource and all faced a common problem, albeit to different degrees. Fourth, the number of stakeholders and uses to which the water was put was limited so minimizing complexity and facilitating social capital formation. Fifth, the hydrological setting – distinct wet and dry seasons with intense but short-lived seasonal flow and substantial groundwater recharge – limits the range of activities possible in the basin. So, in some ways the basin was already 'closed' and this fact is recognized by all stakeholders.

Case Study: De facto management with no trust building – the Chalimbana Catchment, Zambia

The Chalimbana River lies east/southeast of the city of Lusaka. A small catchment of only 520 km^2, the main tributary runs for 37 km before draining into the Chongwe River. This part of Zambia is characterized by distinct wet-dry seasons, with annual rainfall that can vary from 0-900 mm. Drought in the lower reaches of the river can be persistent. The river itself can run dry shortly after the rainy season ends. Stakeholders in the catchment include primarily upstream and midstream large scale commercial farmers, and downstream small scale farmers and poor communities. There are a number of other actors in the sub-basin: e.g., quarry operations in the upstream, pristine forest, cattle ranching.

There are also a number of planned activities in the catchment such as a golf course to cater for the interests of nearby residents of Lusaka. Downstream communities also engage in environmentally destructive charcoal making and streambank cultivation practices. The Chalimbana River is under increasing pressure from increasing demands. Downstream users are particularly vulnerable and have focused their complaints on the nearest modern farm dam upstream. Government is undertaking water reform programmes including moving to river basin management.

Laws, policies and institutions are at various developmental stages, however. Water management processes are also limited by human, financial and technical constraints. Although there is a Water Development Board charged with water allocation, there are no dispute settlement mechanisms in place to deal with looming and recurrent conflicts. Several stakeholders in the catchment have been drawn together in mutual opposition to the proposed golf course to be built on part of the natural forest site, in particular its likely negative environmental impacts. There have been attempts to link their concerns with the concerns and needs of the smallholder communities downstream. In the absence of functioning dispute settlement mechanisms, downstream stakeholders have developed their own 'management' structure with the dam owner immediately upstream: in the presence of prolonged water shortage, villagers gather together at the farmer's house and threaten violence until he acquiesces and releases water from his impoundment to those downstream. Villagers stand watch over the process until they are satisfied with the outcome and then return home. After they have left, the farmer closes the sluice gates. This is an iterative process that operates to the satisfaction of all parties. However, such a process never succeeds in building the trust among stakeholders that is necessary for long term investment in and development of social capital which is, after all, the basis for sustainable, equitable and efficient resource management. What might change this situation from win-lose to win-win outcomes?

Case Study: Developing conflict case in an Urban setting- Pollution in Akaki catchment-Ethiopia

Little Akaki River starts around Gullele in the North-West side of Addis Ababa (the capital of Ethiopia) from small tributaries coming down the slopes of Wechacha mountain flowing through the western part of the City of Addis Ababa and through the city of Akaki to Lake Aba Samuel.

The main Great Akaki river starts from Entoto mountain-North of Addis Abeba, flows through the eastern part of the city and meets other tributaries along the way and becomes Great Akaki around Bole Bridge (near the Airport) and continues to flow to to Aba Samuel where it meets Little Akaki. The case of the pollution of the Akaki Rivers and their tributaries is a very infamous issue around Addis Ababa. Despite this awareness and all the media coverage it receives, the issue remains a problem especially for those poor communities at the downstream of these rivers as the river meets the Aba Samuel reservoir and as it continues to join the Awash River.

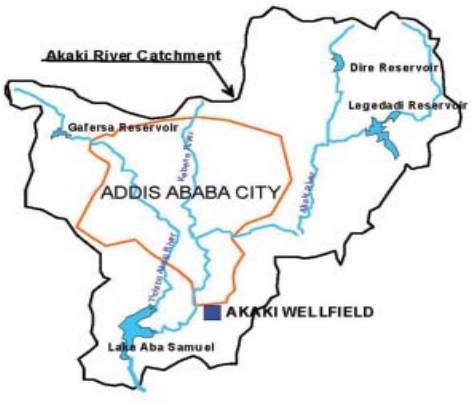


Figure 1. Location of Akaki Wellfield

There are many users/interests: the river waters are being used for:

- Waste disposal by industry, communities
- Household uses (drinking, animal watering, washing, cleaning, etc)
- Vegetable growers
- Ecosystem-wetland

The cause and effect of the increasing pollution level of the Akaki Rivers is a major concern in and around the city of Addis Ababa and Akaki. This problem also extends to downstream Aba Samuel and the Awash basin communities.

Pollution Causes

- **Untreated Liquid Waste** from industries (hazardous chemical waste), municipalities (domestic waste water, overflowing pit latrines, septic tanks, open space defecation and urination), clinics (infectious, pathological and sharp objects and medicines), fuel stations/garages (used batteries, car wash effluents and used oil), etc… flows directly into the Akaki Rivers.

  In a city that currently is said to provide a home for 4 million people, 30% of the population has no access to sanitation facilities. About 12% are said to be connected to the sewerage system with direct connection or via septic tank (where only less than 3,000 people in the city of Addis Ababa are said to be directly connected to the existing sewer system). About 57% of the population uses pit latrines both communal and private, of which 40% are said to be in bad physical condition and are overflowing (no access to these facilities for vacuuming trucks or having to wait too long to have the pits vacuumed on time) which contributes to the open land sewage disposal.

  Industries are one of the worst polluters in terms of chemical/hazardous waste in their liquid waste disposal. More than half of the industries in Ethiopia are in and around Addis Ababa, most distributed along the Little Akaki River. It is estimated that 4.88 million m^3/yr of waste water is discharged from industries in Addis Ababa, of which more than 95% is untreated. Industries are governed by weak enforcement mechanism and therefore they don't see the need to clean up their acts. The most common type of polluting industries are Food and beverage, Textile, Tanneries, Chemical, rubber and Plastic, paper and paper products, metal and non metal mineral products, and wood processing. Agricultural waste from pesticides use is a major player in the infestation of weed, algae and high Biological Oxygen demand (BOD) at Aba Samuel.

  Health Centers are also discharging wastes such as infectious, pathological and sharp objects and medicines. Of the 24 Hospitals in Addis, most are located along the Great Akaki river. Moreover, agrochemicals (pesticides and fertilizers from agricultural fields) and fuel stations/garages (used batteries, car wash effluents and used oil) are also discharging wastes into the rivers of Akaki.

- **Unmanaged solid waste** from all sectors which finds its way into streams due to direct dumping and via runoff are the major culprits for the problem. It is estimated 765 tones/day of solid waste is produced in the city (estimated at a population of 3.035 million) where more than ¾ of the waste comes from households. Of this solid waste generated in the city, 25% is dumped in open space, channels and rivers. 54 - 65% of the solid waste is said to be

collected but it is very common for storage bins to overflow leading the waste to end up in streams before a timely pickup. The city of Addis Ababa lacks adequate solid waste disposal/pickup service even with the recent trend of privatizing the service. One form of solid waste singled out as having a significant damage in downstream communities is plastic bag. Since it doesnot easily degrade, it poses damages such as ingestion by animals and causing blockage of their digestive tracts. It also causes blockage of pipeline infrastructures, hinders rain water infiltration and soil aeration affecting mainly horticultural growers.

Conflicting issues in Akaki catchment

- Competing water uses by many.
  - ✔ Drinking, bathing, laundering and horticulture by downstream communities.
  - ✔ Waste disposal by upstream industries, City residents, other establishments.
- Water quality problems/pollution.
  - ✔ Untreated industrial waste.
  - ✔ Untreated waste from hospital and other establishments .
  - ✔ Solid waste dumping from the city.
  - ✔ Impact of upstream users on downstream users.
- Vegetable growers and consumers due to high level of heavy metal concentration.
- Pollution impact on the environment.
  - ✔ Soil contaminated with chemicals.
  - ✔ Shallow groundwater sources pollution.
  - ✔ Organic waste damping into Aba Samuel lake causing disturbance to aquatic life.
- Sectoral and uncoordinated management of the resources of the catchment.
  - ✔ Institutional conflicts between EPA and Municipality; between Addis Ababa and Oromia regional governments; regulatory bodies for industrial development and environment.
- Absence of stakeholders' dialogue forum for stakeholders participation.
- Lack of adequate information on the resources of the catchment and their quality.
- Hesitation to accept the environmental principles like polluter pays principle.
- Lack of enforcement of formulated laws, standards, regulations etc.
- Social Impacts due to human and animal health problems, impacts on education and labour participation.
- Economic impacts related to human and animal health effects.
- Environmental impacts, especially to Lake Aba Samuel and shallow groundwater.

The extent of poverty, increased rural to urban migration, and city population growth is unmatched with the available infrastructure that provides water and

sanitation services. Poor urban and downstream rural communities are the main targets of the shortcomings and are directly affected from the use of the polluted water for drinking, bathing, laundering and using the water for horticultural developments.

The rivers' water used for irrigation to grow vegetation within Addis Ababa and downstream communities affect both rural and urban communities from heavy metal concentration in vegetables sold in cities. The soil is also contaminated with chemicals and shallow groundwater sources in and around Addis Ababa is not fit for drinking.

Socio-economic losses (labour loss due to illness, loss of income due to cattle death/reproductive problem and diseases, health expenses) and loss of vegetation due to water toxicity are among the major effects.

Environmental degradation affects the **ecosystem** due to organic and inorganic pollution, leading to change in biodiversity. A highly visible evidence of one of these phenomena is the infestation by Water Hyacinth at Aba Samuel. The pond is filled with decomposing weed and other waste material that the wastewater flows through the pond without any retention time for treatment and leaching the top decomposed matter as well, undermining the pond's capacity as an oxidation pond.

The causes of the problem and the conflicts could be summarized as:

- Poor infrastructure (sewerage system);
- Absence of treatment facilities;
- Low level of awareness on waste management;
- Weak enforcement mechanism on pollution prevention and control;
- Uses of obsolete technology; and
- Low level of income of the city dwellers

There are some initiatives and existing enabling environment in the country to manage water resources of the Akaki catchment and also to deal with resolving conflicts.

Recent Initiatives

(a) Shared vision for the resources of the Akaki catchment
   - Stakeholders appreciate the problem and expressed willingness to collaborate.
   - Holistic approach of managing the natural resources of the cacthment based on an IWRM approach.
   - Stakeholders consultations held and stakeholders agreed to establish Akaki Watershed Committee.

(b) Participatory approaches
   - Key government regulatory bodies (Federal Environmental Protection Authority (EPA), the Addis Ababa EPA and the Oromia EPA) took primary responsibilities.
   - Stakeholders identified and analysis made.

Box 4.1: The Stakeholders

Polluters:
- Industrial establishments
- Households
- Institutions (like Hospitals, Garages, Hotels and Restaurants, Abattoirs, etc).

Affected communities:
- Local residents (particularly downstream residents)
- Horticultural growers (along the river catchments)
- Others

Regulatory bodies:
- Federal Environmental Protection Authority
- Addis Ababa Environmental Protection Authority
- Oromia Environmental Protection Office
- Ministry of Water Resources
- Ministry of Health
- Ministry of Trade and Industry
- Ethiopian Investment Commission

Others:
- Government Organisations (GOs), NGOs, Un-agencies, etc

Existing Enabling Environments also include:

(a) Supportive Policies and Strategies:
- The Environmental policy of Ethiopia;
- The Health policy of Ethiopia;
- Ethiopian Water resource management policy;
- The Conservation Strategy of Ethiopia; and
- The Regional states Conservation strategies.

(b) Supportive Proclamations and regulations
- Environnemental Impact Assesment proclamation (No 299/2002)
- Environnemental Pollution Control Proclamation (No 300/2002)
- Public Heath Proclamation (200/2000)
- Water Resources Management Proclamation No 197/2000,
- Solid Waste Management Policy of the Addis Ababa City Administration
- The Sanitation and Environmental Hygiene (Regulation No.1)
- Solid waste collection, Transportation and disposal Regulation

Some aspects being considered for sustainable management of water resources and resolving conflicts by stakeholders include:
- Basin wide approach of managing the resource;
- Establishing multistakeholders' forum for participation;
- Enforcing laws;
  - ✔ Industrial development based on the City Master plan.
  - ✔ Cleaner production systems by industries to reduce waste generation.
  - ✔ Waste treatment facilities by industries.
- Expanding basic services;
  - ✔ Supplying downstream communities with safe drinking water and sanitation facilities.
  - ✔ Improving the wastewater treatment facility of the city.
  - ✔ Improving solid waste management of the city.

- Establishing Water quality monitoring system and creation of the Akaki rivers water database system;
- Promoting environmental education and public participation; and
- Strengthen research on water pollution and its effect.

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 12
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 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 question and answer.

Following this session, there will be several presentations made by local resource persons speaking to both local issues and to 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

References

1. Conca, K., 2006, Governing Water: Contentious Transnational Politics and Global Institution Building. Cambridge, Mass: MIT Press.
2. Engel, A. and B. Korf, 2005. Negotiation and mediation techniques for natural resource management. Rome: FAO.
3. Finger, M., L. Tamiotti, and J. Allouche, eds, 2006, The Multi-Governance of Water: four case studies, New York: SUNY Press.
4. Homer-Dixon, T., 1999. The Environment, Scarcity and Violence. Princeton: Princeton University Press.
5. Molle, F. et al, 2007. River Basin Management. In: D. Molden, ed., Water for Food: Comprehensive Assessment of Water in Agriculture. London: Earthscan.
6. 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.
7. SADC. 2005. Regional Strategic Action Plan on Integrated Water Resources Development and Management. Gaborone: SADC.

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 practice and gain ideas regarding appropriate management practices including entry points for cooperation and dispute settlement.

Skills

- The capacity to successfully analyze the participant's own situation, 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 toward the Triple-E bottom line. A baker's dozen of change areas has been identified. Many water conflicts are the result of economically inefficient, socially inequitable, and environmentally unsustainable policies and practices – many, he 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, so 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 probe 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 so require careful short, medium and long-term plans.

Adaptation: Institutions emerge in response to perceived needs over time and once established change only very slowly. No matter how flexible and adaptable is a manager and his/her team, 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 13
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 un-served.

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 such that win-win outcomes are more likely than winner-take-all? Since we can not 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 73) 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 available at: 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)

ANNEXURE 1: Sample Course Programme

Time	Subject	Content/Purpose
	DAY 1	
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. It is also important for the facilitators to clearly and succinctly introduce themselves and to speak to their own intentions and expectations – so 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 following the formal introductions. Ensure that permanent markers and/or felt tip pens and small squares of colored 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 it is that 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.
0850-920	**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 ten 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**	
0930-01130: Session 2:	**Introduction to Integrated Water Resources Management (IWRM) and Water Conflict and Cooperation (90 minutes)**	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 toward sustainable water resource use and management. 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.

Time	Subject	Content/Purpose
DAY 1		
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	
0920-0930	Facilitators' Introduction: 10-15 minutes	
1130-1230 Session 3	Analysing Conflict (Duration: 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 (Duration: 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.

Time	Subject	Content/Purpose
DAY 1		
1330-14:00	Formal Presentation: Water and Conflict 30 minutes	
1400-1500 (start):	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 (Duration: 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 (Duration: 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: (Duration: 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 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 – i.e. 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 are the goals. If water use is to move toward more sustainable, equitable and efficient practices, it must also strive for similar processes. This means reutilizing stakeholder-centered, 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 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 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: (Duration: 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) and 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.
TEA BREAK		
1100-1600 Session 11	**Water Agreements and Management Arrangements (Duration: 4 hours)**	Sustainable water resource 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, 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. 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, local. The purpose of this session is also to provide an opportunity for course members to learn from and interact with local water experts.
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 to 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 to this topic, leaving ample time for interaction with course members
TEA BREAK		
1530-1630	**Formal Presentation (National/Local Cooperation) (1 hour)**	A local resource person should be engaged to speak to this topic, leaving ample time for interaction with course members.
1630-1700	**Formal Debriefing (30 minutes)**	
1900-onward: GROUP DINNER OUT 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 (Duration: 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 (Duration: 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	
1650-1730	Award of Certificates and Formal Closure: 40 minutes	
1730-onward: RECEPTION		

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Annexure 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, 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. Too many talking-heads, speaking to PowerPoint presentations is a sure fire 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 must 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, 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 stick and sticky stuff, 4 x 6 coloured cards, permanent and white-board markers, felt tip pens, writing pads, pens and pencils. Be sure also that all your audio-visual aids are in working order, are on hand in time, and that there is technical staff close to hand 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 and complement it with CD-Roms developed over the course of the training course.

- 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 in 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. Emphasise 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 would recommend that this be 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 something of a distraction in group work. Having said that the organising 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.

The organisers should take lots of photos and have appointed someone to upload these into a pictures 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 group work and post this in a central place around which 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 recognising and preparing for the loss of minutes here and there. Organisational elements (putting participants into groups; getting them to write down their thoughts in a succinct manner; bringing group work elements to a halt) will eat up time, so rather than be slaves to the schedule we can use the scheduled times 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 organisers 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 over to the organizers 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 you avoid a revolt from disgruntled participants forced to share cramped spaces).

  Box 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 still have time for a debriefing and exercise in classroom at the end. Whatever transpires, the organisers should aim to be back in the classroom by 16:00 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.

If you build in a free evening it is advised that you consider how particpants 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. A useful 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, no 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 cost! Unless you wish to put your participants to sleep and/or risk losing time unnecessarily, you should abandon this time-waster of a 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 and adhered to time to summarise 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 folded over into a closing reception.

Over the course of a five day meeting there should be space included 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 so 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. Such 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 Organisation of the United Nations
GNI	Gross National Income
GWP	Global Water Partnership
GO's	Government Organisations
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 Government Organisation
Nile IWRM-net	Nile Basin Capacity Building Network for IWRM
REDICA	Central America Capacity Building Network
NOSR	Netherlands Organisation for Social Research
SADC	Southern Africa Development Community
UN	United Nations
UNESCO	United Nations Educational Scientific and Cultural Organisation
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

International Network for Capacity Building in Integrated Water Resources Management

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