Stakeholder Participation in Transboundary Water Management – Selected Case Studies

Edited by Anton Earle and Daniel Malzbender







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- Selected Case Studies -

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This reader of eight case studies was compiled in 2006 to complement background papers and seminar documentation of regional capacity building initiatives conducted by InWEnt in southern Africa during the period 2005 to 2007. The aim is to enhance the capacity of all institutional actors for effective participation in transboundary water cooperation: national and local government, service providers, private sector and the civil society.

The editors would like to thank all those who contributed cases to this volume - their generous sharing of experiences gained through work carried out on the topic of stakeholder participation has greatly assisted the editors.

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The compilation and editing was carried out by Anton Earle and Daniel Malzbender of the African Centre for Water Research (ACWR). The mandate of the ACWR is to promote the cooperative management of shared waters in southern Africa through developing capacity-building and applied research initiatives. The editors would like to thank all those who contributed cases to this volume – their generous sharing of experiences gained through work carried out on the topic of stakeholder participation has greatly assisted the editors. It is hoped that the net result is a reference tool which can provide input to the development of stakeholder strategies in transboundary water management.

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Stakeholder Participation in Transboundary Water Management – selected case studies

Introduction

Although water is essential to human survival it is estimated that roughly a billion people worldwide have insufficient access to clean water supplies (UNESCO-WWAP, 2003). Twenty seven nations are classified as "water scarce" and a further 16 as "water stressed" (Jansky & Uitto, 2005). This situation, coupled with the fact that many surface and groundwater systems are shared between two or more states has led the United Nations to identify rising water demand as one of the four major factors that will threaten human and ecological health over the coming generation (UNESCO-WWAP, 2003). Governments have recognised the importance of managing and developing water resources in a sustainable way – ensuring the long term ability of water resources to be maintained at sufficient levels of quality and quantity.

The efficient and environmentally sustainable management of water implies a commitment by water users to use available supplies in ways which avoid waste – maximising beneficial use. Households, farmers and industrialists have to implement water conservation measures – aiming to gain the maximum benefit from every drop consumed. However – countered with this need to improve efficiency is the reality that many people in the developing world are not using enough water – due to a lack of access. These include the roughly 6,000 people a day who die from water-borne diseases as well as the rural populations relying on subsistence agriculture for their livelihoods (UNESCO-WWAP, 2003). When developing water management strategies it is not enough to only consider economic efficiency and environmental sustainability – the third dimension of equity needs to be included. Water needs to be used as a vehicle for improving people's livelihood stability – supplying water for domestic use as well as small-scale agricultural and other productive activities.

For water management to effectively integrate the goals of efficiency, sustainability and equity a broad cross section of stakeholders need to participate. Whether on the local scale of a small catchment or on the international transboundary scale, water users and other interested parties need to be involved to varying degrees in the planning, development, implementation and monitoring of water management activities. The success of cooperative management strategies – incorporating inputs from a broad range of sectors & stakeholders – to a large degree hinges on providing the public effective means of participating in water-management decisions directly affecting them. The involvement of the public; "holds the promise of improving the management of international watercourses and reducing the potential for conflict over water issues" (Jansky & Uitto, 2005). Public participation in decision-making is one of the methods for enhancing deliberative democracy. At its heart, a deliberative polity promotes political dialogue aimed at mutual understanding, which does not mean that people will agree, but rather that they will be motivated to resolve conflicts by argument rather than other means. Participatory approaches enhance project quality, ownership and sustainability.

Civil society represents a resource which can assist governments in the formulation and implementation of projects, policies, regulations and laws around managing water resources (Bruch, 2000). The decision to involve the public in water management is not one taken for idealistic or moral reasons – rather, it presents tangible benefits to governments. Some of these benefits include:

- ***Improved quality of decision-making*** - allowing members of the public to express their views regarding social & environmental conditions in their communities and taking those views into consideration in the governmental decision-making process *expands the knowledge base for decisions*, resulting in better implementation of environmental & development goals
- ***Improved credibility and public support*** - Access to information, public participation, and access to justice *improve the credibility, effectiveness, and accountability of governmental decision-making processes.* Public participation at the outset of the decision-making process helps to build broad-based consensus for projects & programmes
- ***Improved implementation and monitoring*** - Public input *supplements scarce government resources* for developing laws, as well as for monitoring, inspection, and enforcement, by identifying environmental threats or violations of applicable laws;
- ***Early warning of potential challenges*** - Public participation can *identify and address problems at an early stage*, saving time, energy, and scarce financial resources in the long run (adapted from Bruch, 2000 and Jansky & Uitto, 2005).

In an effort to promote the institutionalisation of stakeholder participation, international water laws & agreements have, over the past decade, started incorporating provisions committing governments to involve stakeholders in water management decisions. Governments and river basin organisations (RBOs) have increasingly paid attention to the involvement of stakeholders. This volume presents several case studies of stakeholder participation in transboundary water management – drawing from a range of geographic regions and scales. Some of the processes have been started by stakeholders themselves, while others have resulted from an organisational initiative. Whether resulting from a top-down or a bottom-up approach, effective, stakeholder participation takes a long time. Where possible, stakeholder participation should be started early in the river basin planning process, today rather than tomorrow in order to allow integration of ideas, comments and input from stakeholders along the way. The aim of this volume is to illustrate some of the challenges to involving stakeholders in the management of transboundary watercourses as well as the solutions which have been developed to these challenges.

At the outset it should be acknowledged that each situation is unique – no two basins are identical. Individual combinations of geography, demographics, environment, political economy and level of development will dictate different solutions to the challenges faced in managing watercourses sustainably. It is recognised that no "blue-print" exists for public participation and that the public participation process should be organized and adapted to national, regional and local circumstances. However – amongst this vast range

of individual cases it does become possible to establish certain generalised lessons – or to recognise elements of cases which would, in an adapted form, have relevance to the situation in another part of the world. The cases in this volume each present an overview of a specific stakeholder participation process – some at a large scale (such as the Senegal and the Mekong) and others at a smaller geographic scale (such as the Pungwe River shared between Zimbabwe and Mozambique). The cases represent a wealth of information on the various models of stakeholder participation – covering a range of aspects, such as outreach & communication strategies, monitoring, resettlement policies, the role of NGOs, the media and civil society, environmental change and differences in legislative frameworks. Each contributor has sought to present "lessons learned" – not as directly transferable packaged solutions but rather serving as beacons in navigating the, often uncharted, waters of stakeholder involvement.

The first four cases are drawn from international rivers in various parts of Africa. In her study based on the Pungwe River, Barbara Tapela describes how a project – Pungwe River Basin Joint Integrated Water Resources Management Strategy – resulted in a greater involvement of stakeholders in the management of the basin. Much of the focus of the project was on "levelling the playing field" between Mozambique and Zimbabwe – allowing communities in the former to gain a solid understanding of the hydrology of the river. This illustrates the need for stakeholders to have the capacity to engage on an equal footing with each other and with water management agencies at local and national government level.

Mamadou Mactar Sylla in his overview of the role of community-based organisations in the management of the Senegal River describes the organisations which are responsible for promoting grassroots involvement in water management issues in the basin – the Local Coordination Committees. With over 40 of these committees in existence in various parts of the basin, local people participate in a broad range of projects and activities linked with the OMVS – such as poverty alleviation, public health and water quality management initiatives. He also highlights the important role played by the media – disseminating information and acting as a voice for communities. Thus each of the committees includes a member of the local media.

The study on stakeholder participation in the Komati River (a sub-basin of the Incomati) by Enoch Dlamini describes how the resettlement of communities affected by the building of two dams was implemented. The Kobwa (as implementing agent) had to build trust with the communities by involving them in the planning process early on – selecting alternative sites and having an input in the compensation and mitigation strategy. In addition, the communities became responsible for the monitoring of the compensation and mitigation strategy – checking that its elements are being adhered to by Kobwa. The communities are represented through a forum and also play an active role in the management of water from the river. There are indications that the institutional capacity created amongst communities has enabled them to withstand stressors – such as climate variation/change, changes in terms of trade and commodity price fluctuations.

A chronological overview of the development of some of the stakeholder participation processes on the Okavango River is provided by Shirley Bethune of the DRFN – detailing some of the activities they have been involved with over the past few years. The generation of trust – between representatives of national governments as well as with community representatives forms a core contribution to the advancement of stakeholder participation processes in the basin. The role of third party organizations – such as NGOs and academic research institutes – is highlighted, as they can be perceived as "honest brokers" by the various groups. This opened up the space for the various groups to start experimenting with solutions to the common challenges they face and developing a common vision for the sustainable development of the basin

The next two chapters cover stakeholder participation in the European context. Alistair Rieu-Clarke provides an overview of stakeholder participation in the Danube River Basin. The case study illustrates the role which international and domestic water legislation plays in the institutionalization of conflict potential. The divergent needs and interests of groups would potentially lead to stand-off or conflict if it were not for the legal clarity and predictability provided by these pieces of legislation. The study also highlights the important role played by the basin commission in facilitating and co-ordinating stakeholder participation efforts throughout the basin – even though these are embarked on at a national level.

A key ingredient to successful co-management of shared waters in Europe has been the harmonising influence of the European Union (EU) Water Framework Directive (WFD). Daniel Malzbender provides an overview of the provisions around stakeholder participation contained in the WFD. Under this legislation all member states as well as states awaiting membership of the EU have agreed to abide by the provisions contained in the WFD – thus harmonising their approaches to water management. The WFD proposes three levels of participation by the public - information supply, consultation and active involvement, with the first two being ensured through legislation, while the last needing to be encouraged. Under this approach stakeholders are divided into categories – with a level of participation commensurate with their direct interest in the water resource. The WFD provides a useful reference for other organisations wanting to embark on stakeholder involvement processes – covering aspect such as definitions of stakeholders, models for participation, conflict resolution and communication strategies.

The next case study examines the participation of stakeholders in the North American Great Lakes system. Joshua Newton chronicles the history of inter-governmental cooperation around the lakes – starting with the Boundary Water Treaty signed in 1909. In this case the key concern of stakeholders is around water quality and water user groups have been set up dealing with Areas of Concern as identified by the commission. It is noted that projects provide a good avenue for developing stakeholder participation – linking them around a common issue and combining short-term benefits for communities in long-term planning activities.

In his Mekong River case study Pal Davidsen provides an insight into the complexity of involving stakeholders in the management of a basin commission to which not all basin

states belong. This is exacerbated by the mismatches in political power between the basin states – making it difficult to involve stakeholders in a meaningful sense. However – his study serves to illustrate some of the successes which can be achieved when local traditional management structures (such as fishermen's groups) are involved in the management of the resource. Although these groups don't necessarily fit the modern expectations of participatory democracy (for instance woman are not involved in the groups) they can play a valuable role in promoting greater involvement of communities in managing their resources.

The above case studies are not comprehensive – in that they don't represent every element which needs to be incorporated in a stakeholder participation strategy. Nor do they represent every case of successful stakeholder participation from around the world. This would be close to impossible to produce in a generic way because of the unique nature of every situation. However, they do represent a broad cross section of some of the issues and challenges likely to be encountered as well as some solutions to overcoming them. The active involvement of stakeholders in managing the resources on which they depend is nothing new – most traditional communities in various parts of the world still regard it as their responsibility to protect and sustainably use these resources. It has been a disconnect between these traditional users and the national and regional governments which has seen a sense of alienation between the user and the resource – with decision-making supposedly vested in an official body of some sort. The recognition that stakeholders need to be incorporated in some way into these official decision making structures amounts to an acknowledgement of the natural balance between society and the environment.

In several of the case studies it emerges that stakeholder participation can be introduced or enhanced through the implementation of projects in the basin. These projects may be those initiated by government agencies or by NGOs and development organizations. In some cases they are initiated by the communities themselves. Stakeholders need a common linking issue of concern, such as:

- opposition/concerns about infrastructure
- environmental changes (GCC etc)
- compensation/reparations policies
- water quality
- public health
- poverty alleviation;
- water allocation.

Some projects are explicitly about promoting the involvement of stakeholders in the management of the basin (such as the Every River Has Its People project on the Okavango River linking communities in Angola, Namibia & Botswana into a Basin-wide Forum). Other projects have as their aim a developmental or conservation objective – but as a secondary effect promote stakeholder participation – often as an unintended consequence.

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Stakeholder participation in the transboundary management of the Pungwe river basin

By Barbara Nompumelelo Tapela[1]

1. Introduction

The Pungwe River Basin Joint Integrated Water Resources Management Strategy, hereafter referred to as the 'Pungwe Project', was initiated in February 2002 as a collaborative initiative by Mozambique and Zimbabwe to jointly manage, develop and conserve water resources in the Pungwe River basin. The project is funded by the Swedish International Development Co-operation Agency (Sida/Asdi) through an agreement with both Zimbabwe and Mozambique, and implemented by various consultancy agencies. This paper focuses on 'stakeholder participation' in the management of the Pungwe watercourse prior to, during and after the inception of the Pungwe Project in Zimbabwe and Mozambique.

There is a general acceptance that stakeholder participation plays an essential role in the formulation and implementation of water sector reforms in southern Africa. An assumption is that broad stakeholder participation contributes towards averting conflicts and fostering cooperation over the often 'scarce' water resources. The decentralization of water resources management to the sub-state and supra-state levels has therefore seen the involvement of a broader range of 'stakeholders' in both the regulatory and operational spheres in the region. A stakeholder can be defined as an interested individual, group or institution that may or may not be affected by decisions or actions pertaining to a specific resource, and may or may not be part of decision-making about the resource. More recently, there has been a progression from involving local stakeholders primarily in the operational functions of country-specific catchment or basin level institutions towards their involvement in inter-state dialogue. The optimism that has greeted this development has also been tempered with the realization that complexities, such as competing interests and power relations, presented by broad stakeholder participation at the sub-state level become particularly more challenging at the inter-state level. Apart from concerns with the practical applications of the concept, there are also questions around the conceptual bases of stakeholder participation.

Dube & Swatuk (2002) argue that the drive to involve stakeholders at the "lowest appropriate level" emanates from two very different conceptualizations of 'participation' (see Table 1 for typology), one neo-liberal and the other participatory-democratic, such that the underlying motives for devolving water management authority are varied. Neo-liberal interpretations of participation derive from market-related principles and emphasize 'efficiency' in water use, the 'user pays' principle and payment of water charges at the 'economic value' of the resource. The result is a tendency to emphasize commercial production, often with negative implications on food security and livelihood sustainability for resource-poor water users. By contrast, participatory-democratic approaches are more concerned with issues of equity. Of the two, neo-liberal approaches are the more dominant in global governance. A real danger therefore is that river basin management institutions might adopt neo-liberal conceptualizations of participation without addressing the tensions inherent between the commoditization of water and regional social integration objectives, such as poverty

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reduction, livelihood sustainability, agrarian reform and socio-economic development. This might result in the interests of resource-poor stakeholders, who constitute the majority within many regional watercourse systems, subsuming to the interests of capital. It is worth noting therefore that the effectiveness of participatory approaches in averting stakeholder conflicts hinges strongly on the degree to which interests of both the powerful and less powerful stakeholders are balanced. Apart from the importance of adopting mechanisms to strike such a balance, is essential that stakeholder participation is not implemented as a token of compliance with national and international frameworks, but confers to water users the degree of decision-making power required for securing a stake in the management of the watercourse system.

This paper initially gives an overview of issues pertaining to the management of the Pungwe watercourse. The paper proceeds to present the background to the Pungwe River Basin Joint Integrated Water Resources Management Strategy, henceforth referred to as the 'Pungwe Project'. Attention is then given to the Zimbabwean five-year experience with 'stakeholder participation' at catchment and sub-catchment levels. This is followed by an outline of Mozambique's more recent experience with promoting stakeholder participation in relation to the Pungue Basin Committee. Finally, the paper discusses the challenges of articulating stakeholder participation in a transboundary context.

Table 1: A typology of participation

Typology	**Components of each Type**
Passive Participation	People participate by being told what is going to happen or has happened. It is a unilateral announcement by an administration or project management without any listening to peoples' responses. The information being shared belongs only to external professionals.
Participation in information giving	People participate by giving answers to questions posed by extractive researchers and project managers using questionnaire surveys or similar approaches. People do not have the opportunity to influence proceedings, as the findings of the research or project design are neither shared nor checked for accuracy.
Participation by Consultation	People participate by being consulted, and external agents listen to views. These external agents define both problems and solutions, and may modify these in the light of people's responses. Such a consultative process does not concede any share of decision-making and professionals are under no obligation to take on board people's views.
Participation for material incentives	People participate by providing resources, for example labour, in return for food, cash, or other material incentives. Much *in situ* research falls in this category, as rural people provide the fields but are not involved in the experimentation or process of learning. It is very common to see this called participation, yet people have no stake in prolonging activities when the incentives end.
Functional Participation	People participate by forming groups to meet pre-determined objectives related to the project, which can involve the development or promotion of externally initiated social organisation. Such involvement does not tend to be at early stages of project cycles or planning, but rather after major decisions have been made. These institutions tend to be dependent on external structures, but may become independent in time.
Interactive participation	People participate in joint analysis, which leads to action plans and the formation of new local groups or the strengthening of existing ones. It

	tends to involve interdisciplinary methods that seek multiple perspectives and make use of systematic and structured learning processes. These groups take control over local decisions, so that people have a stake in maintaining structures or practices.
Self-mobilisation/ active participation	People participate by taking initiatives independent of external institutions to change systems. Such self-initiated mobilisation and collective action may or may not challenge existing distributions of power and wealth.
Source: Pimbert and Pretty 1994 cited in IIED, 1994:19	

2. Overview of Water Issues in the Pungwe Watercourse System

The Pungwe River Basin is an international watercourse shared by Mozambique and Zimbabwe. The Pungwe River extends 400km from its source in the Inyangani Mountains, which form part of the Eastern Highlands of Zimbabwe, to its estuarine mouth in the Indian Ocean coast of Mozambique (Figure 1). A relatively small proportion (5%) of the total basin area of 31 000 square kilometres is located in Zimbabwe. The rest of the basin and approximately 340km of the river length are situated within the central region of Mozambique. Despite the relatively small spatial extent of the portion of the Pungwe Basin located in Zimbabwe, this part of the basin contributes a significant proportion of the river's total annual discharge, owing to the relatively high precipitation (over 1800mm to 2400mm p.a.) received throughout the year in this upland portion of the basin. Despite relative abundance of water within the basin, however, there are sub-national and inter-state challenges to sharing Pungwe water owing to the existence of both water scarcity and excess in areas within and adjacent to the basin, as well as envisaged increases in the demand for Pungwe water in both countries.

Within Zimbabwe, water scarcity appears to affect areas adjacent to the Pungwe Basin rather than areas within the basin. The Nyanga communal and resettlement areas to the north of the Pungwe Basin have particularly high surface water deficits (Katerere, 1997; Mazambani, 1997). Water shortages created by a growing urban population and an increasing industrial water demand in the city of Mutare, which is located in the Odzi Sub-Catchment of the adjacent Save River Basin, have resulted in the development of an interbasin water transfer scheme, the Pungwe-Mutare Water Supply Project. The project involves the withdrawal of 0.7 m^3/s of water by gravity from the Pungwe River via a 4.3 kilometre long tunnel from the Pungwe River to an outlet into the Nyakupinga Tributary of the Odzi River, then to the Odzani Treatment Works, from where the treated water is transported through a 79 kilometre long pipeline to the City of Mutare's Christmas Pass Reservoir (Norconsult, 2000). This pipeline passes through the Mutasa Communal Lands. Water availability is a problem in the Mutasa Communal Lands, also located in the Odzi Sub-Catchment. Mutasa people have expressed an interest in gaining access to the Pungwe water for irrigation purposes. Within the Pungwe basin, there are envisaged increases in water demand from stakeholders in the Hauna business centre (a growth point) and from small-scale commercial farmers in the Honde Valley.

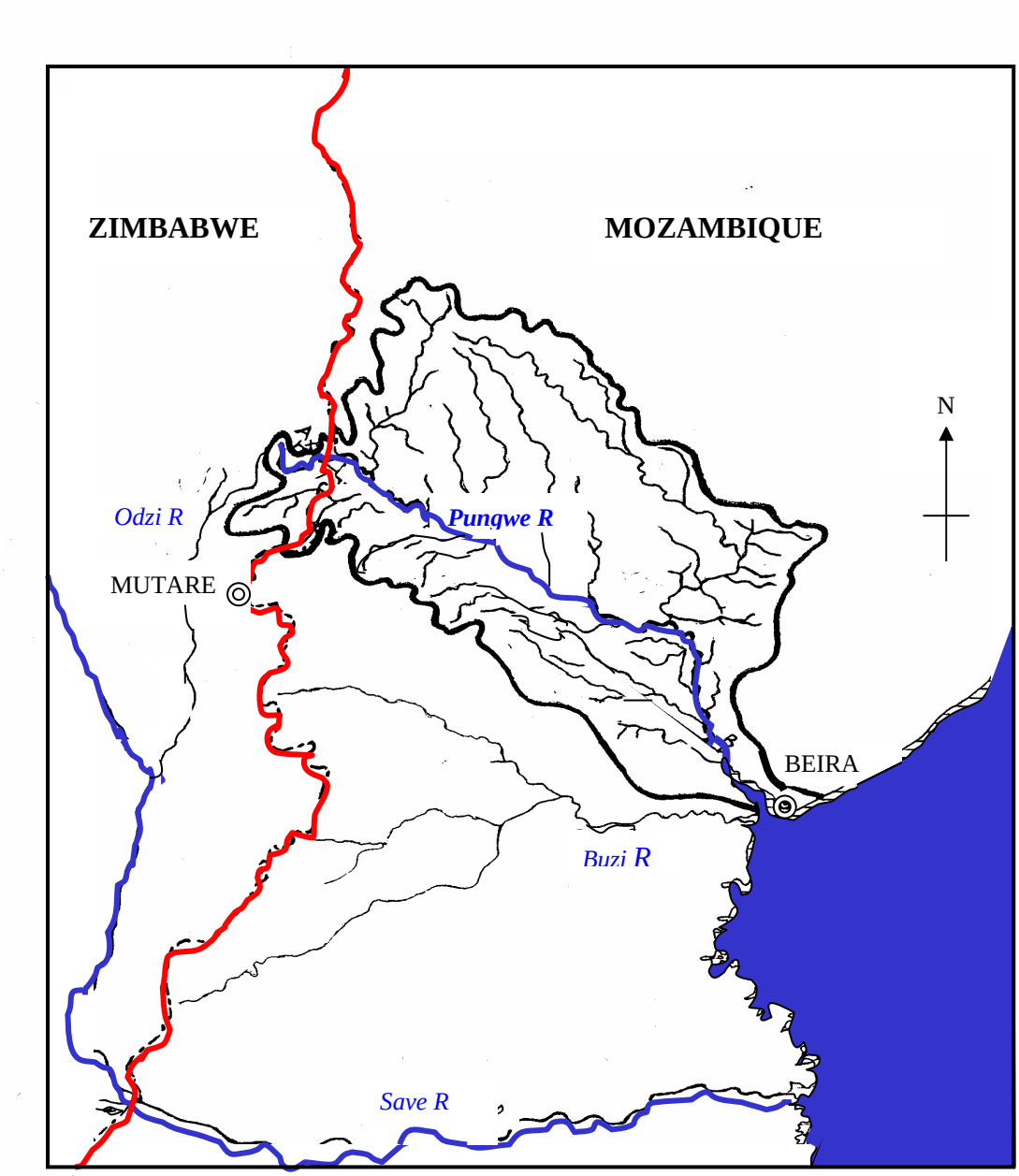


Figure 1: Location and Spatial Delineation of the Pungwe River Basin

In Mozambique, the water scarcity problem affects Beira City during the dry season, while the problem of flooding almost exclusively affects the lower reaches of the Pungwe floodplain during periods of high rainfall (van der Zaag, 2001a). Water shortages in Beira are due to the saltwater intrusion that occurs within the 80km long stretch of the river, where the intake pipe that supplies the city is located. Water shortage is also due to the inadequacy of the city's water supply infrastructure to cater for the potable water needs of the population. Excess water in the lower Pungwe poses as bigger problem as water scarcity in Beira City. Although the potential of the Pungwe to inundate extensive areas within the floodplain is recognized, there are as yet inadequate disaster mitigation strategies. Consequently, the security of human lives, livelihoods, property and commercial developments, such as the estuarine prawn fisheries, the Mafambisse Sugar Estate and the proposed Industrial Free

Zone north of Beira, continue to be threatened. Increases in water demand are envisaged to come from the Mafambisse Sugar Estate's rehabilitation of the Mandruzi and 7th of April Irrigation Schemes and the estate's proposed dam on the Muda River (a tributary of the Pungwe), the projected 26-fold increase (from 531ha to 14 000ha) in the area under irrigation in Barue District, as well as the influx of agricultural water users in along the Inhazonia River, also a Pungwe tributary (SWECO, 2005). In addition to the foregoing issues, there are concerns in Mozambique about the deteriorating water and environmental quality due to gold panning activities in both Mozambique and Zimbabwe.

The geographical characteristics of the Pungwe watercourse indeed point to the existence of a complex water governance situation that requires appropriate institutions to resolve potential conflicts and foster cooperation over the sharing of Pungwe water among the various stakeholders. A recent report (SWECO, 2005) projects that although the average annual discharge of the Pungwe is sufficient to satisfy all needs in the foreseeable future, the river will not always have sufficient water during drier seasons and droughts. Although issues around sharing water have not predisposed stakeholder relations towards high-level conflict, there has been a strong case for actors in both countries to establish appropriate institutional mechanisms for engendering cooperation in regulating river flow, reducing flood risk, mediating competing demands for limited water resources and implementing international agreements on water, among other responsibilities.

Owing partly to recognition of the need for cooperation, a 'participatory' process has been initiated to develop a joint strategy for the integrated management of Pungwe water resources through the Pungwe Project. While concerns over sharing water provide a strong basis for the unfolding process, the greater impetus, however, has emanated from international frameworks, such as Agenda 21, the Dublin Principles of 1992, United Nations Convention on the Law on the Non-Navigational Uses on International Watercourses and the 1995 SADC Protocol on Water (revised in 2000). These frameworks have vested governments of Zimbabwe and Mozambique with the responsibility of ensuring trans-frontier responsibility, cooperative governance and broad stakeholder participation in the management of shared watercourses. The international frameworks have also facilitated the disbursement of funding and project implementation services by development agencies in the north to the two countries, thereby enhancing local capacity to implement the demanding process towards broad stakeholder participation.

3. Background to the Pungwe Project: 1994 to 2002

In 1994, senior government officials of Zimbabwe and Mozambique began discussions on a joint study of the Pungwe. These culminated in an agreement in October 1999 by both countries to conduct a joint study whose development objective was to "achieve a sustainable, equitable and participatory management of the water resources of the Pungwe Basin, and increase the derived social and economic benefits for the people living in the basin, and other stakeholders" (Granit, 2000). A Joint Water Commission Concerning Water Resources of Common Interest was established by Mozambique and Zimbabwe in 2000 (Zimbabwe, 2001). At the time, the Joint Commission represented the only formal watercourse-wide management institution to emerge in the Pungwe watercourse. One achievement of the Joint Commission was its facilitation of an agreement between Mozambique and Zimbabwe on the Pungwe-Mutare Water Supply Project, an inter-basin

water transfer project located within Zimbabwe. Participation in this transboundary dialogue, however, was limited to senior government officials.

While there were pragmatic reasons for narrowing participation in early negotiations to state actors, there was also a degree of reluctance among these actors to engage with the complexities of involving a broad range of stakeholders in inter-state level decision-making. It would seem that the impetus for the shift towards participatory approaches originated more from international frameworks and structures than from self-mobilization within state agencies.

Following ratification in 1995 of the SADC Protocol on Shared Watercourse Systems by both Zimbabwe and Mozambique, water sector reforms were designed and implemented in each country. These reforms were largely based on the tenets of the Integrated Water Resources Management (IWRM) approach and, in Zimbabwe, also on the need to redress the persisting racially-skewed distribution of water allocation. There were differences in the manner in which water sector reforms unfolded in the two countries.

Zimbabwe's water policy design phase was followed by legal and institutional reforms, including the promulgation in 1998 of a new water law, the partitioning of the country into seven catchment areas, the establishment of a hierarchical framework of institutional structures ranging from sub-catchment level to central government, and the separation of regulatory and operational functions, with devolution of the latter to catchment and sub-catchment level institutions. Legal provision for stakeholder participation in Zimbabwe's water management is made through Statutory Instruments 33 and 47 of 2000 of the national Water Act, which identifies a range of stakeholders and allows catchment and sub-catchment councils to identify other relevant stakeholders within their respective areas of jurisdiction.

By contrast, the Mozambican Water Law of 1991 provides for a more limited role for stakeholders. In Mozambique, water sector reforms established basin committees as the main institutional structures for stakeholder participation. Since basin committees are legally constituted as consultative structures, stakeholder participation through these structures has largely been by consultation (see Table 1). The water management framework for Mozambique has tended to emphasize decision-making roles by regional water administrative agencies - or ARAs - of the Department of Water Affairs (DNA). There is very limited legal provision for stakeholder participation in the management boards of the ARAs. With specific respect to the Pungwe watercourse, ARA-Centro was established in 1998 as the responsible watercourse management authority (Carmo Vaz & Lopez-Pereira, 1998; van der Zaag, 2001c) and its statutes approved in August 2004 (SWECO, 2005). The delay in the approval of ARA-Centro statutes and the lack of legal provisions for broad and active stakeholder participation in water management posed a problem of misalignment in the policy environment required for Mozambique and Zimbabwe to jointly articulate a participatory approach to the transboundary management of the Pungwe.

4. Stakeholder Participation: Zimbabwean experience

Stakeholder participation in the management of the Pungwe watercourse in Zimbabwe formally began in July 1999 when the Pungwe Sub-Catchment Council was established as a constituent of the neighbouring Save Catchment Council. The Pungwe watercourse does not form part of the Save watercourse system, and this arrangement was therefore intended for

administrative expediency. Both the Pungwe Sub-Catchment Council and the Save Catchment Council were established with funding from the Swedish International Development Cooperation Agency (Sida), and they became fully operational in January 2001. Both the Pungwe and the Save councils represent various identified stakeholders within Zimbabwe, and are assisted in the more technical issues by the Zimbabwe National Water Authority (ZINWA), through services of a Catchment Manager and a Training Officer. By April 2005, the Pungwe Sub-Catchment Council had registered one hundred (100) water permit holders in Zimbabwe. These constituted 66% of all the water users within the sub-catchment, and commanded a share of 60 000 megalitres from the Pungwe. The remaining 33% of water users had yet to be issued with valid permits.

At the sub-catchment level, representation in the Pungwe Sub-Catchment Council includes large-scale commercial farmers, various sub-groups of small-scale commercial farmers, communal farmers, farmers in resettlement schemes and local authorities – represented by traditional leaders and councilors elected into the Mutasa Rural District Council (Table 2). Representation in the sub-catchment council is either by consensus or by election. Stakeholder groups have the freedom to choose the mode of their representation. Once nominated or elected into council, membership of the Pungwe Sub-Catchment Council is vested in the person of the representative. Membership does not vest with the stakeholder group or institution represented. Effectively therefore, the resignation or exclusion of a member does not automatically entitle the stakeholder group to nominate or elect a replacement. Rather, it is the prerogative of the council to nominate or call for elections of a new member. This strategy is aimed at ensuring the accountability of councilors in their personal and not institutional capacity.

Table 2 Stakeholder representation in the Pungwe Sub-Catchment Council, 2001

Stakeholder	Interest group represented
Large-scale commercial farmers	Commercial Farmers Union (CFU)
Small-scale commercial farmers	Banana Growers' Association Coffee Growers' Association Vegetable Growers' Association
Communal farmers	Zimbabwe Farmers' Union (ZFU)
Farmers in resettlement schemes	Various individuals and groups of resettlement farmers
Local authorities	Residents and institutions of Mutasa Rural District Council

Representation in the Save Catchment Council includes two members of each sub-catchment council the catchment council's area of jurisdiction. In 2001 (Tapela, 2002) and in 2004 (Kujinga & Manzungu, 2004), farmers were the most represented group, while the local authority represented was the Mutare City Council. However, attendance of meetings by the City Council was erratic, with the council not attending most of the meetings. Furthermore, the City Council appears to have shunted the responsibility of representing the residents of Mutare in the Save Catchment Council to water engineers employed by the council. In view of that the Mutare City Council is a key stakeholder in the management of Pungwe water resources, the lack of its active involvement in catchment council activities has been a source of concern for Save Catchment Council members, who feel that the City Council undermines their authority and efforts in articulating the new water policy. Assuming that elected councilors have greater responsibility to be accountable to their constituencies in Mutare than

employees of the City Council, the power play between the Mutare City Council and the Save Catchment Council effectively denies the Mutare constituency an opportunity to voice their concerns with regard to water problems that affect them, such as water pollution, supply and sanitation.

5. Challenges to effective stakeholder participation

Studies of both the Pungwe Sub-Catchment Council (Tapela, 2002) and the Save Catchment Council (Tapela, 2002; Dube & Swatuk, 2002; Kujinga & Manzungu, 2004) show that stakeholder participation is highly complex, and that there is a need to go beyond looking at mere inclusion in decision-making structures and to examine in depth the nuances of stakeholder roles, resources and relationships, in particular power relations.

5.1 Accelerated process of forming stakeholder institutions

The formation of the Pungwe Sub-Catchment Council and the Save Catchment Council was modeled on institutional design developed in the pilot phase of Zimbabwe's water sector reforms. Studies by Latham (2001), GTZ (2000) and Sithole (2000) indicate that there was a general lack of effective stakeholder participation in policy formulation in the pilot phase of Zimbabwe's water reforms. Policy discourses effectively remained top-down (Sithole, 2000), and the stakeholder identification process did not involve public participation (Latham, 2001). Despite this, the insights derived from the Mazoe and the Manyame Catchment pilot projects were to be extrapolated to the remaining five catchment areas in the country (Zimbabwe, 1995). Donor agencies were reported to have been particularly keen for the Save CC and its constituent SCCs to adopt the pilot Catchment Council models, as a way of saving costs.

Stakeholders within the Save Catchment Area appear to have been critical of the approach used in the formation of the pilot Catchment Councils. However, certain developments at the national political and macro-economic levels that coincided with the inception of the councils seem to have compelled them to adopt an even less participatory approach. In particular, the initiation of the government's "fast track" land redistribution programme seems to have exerted ripple effects on the water sector and put political pressure on stakeholders to fast track the water redistribution process. At the same time, the insistence by the IMF on the government to cut spending on public service also seems to have accelerated the process of devolution of authority to the river basin institutions.

The result of reducing the scheduled six month inception period for the Save Catchment Council and Pungwe Sub-Catchment Council to a mere six weeks was that the process of council formation was top-down. The fast tracking of the formation of river basin institutions seems to have created a number of difficulties, most of which related to the transaction costs of the reforms. Notwithstanding the acceleration of the devolution process, these transaction costs were also directly related to the persistence of the sectoral approach in water resources management in Zimbabwe.

5.2 Transaction costs of water sector reforms

The transaction costs included coordination and communication, both within the water governance hierarchy and in terms of related sectors, as well as enforcement of the new water

laws. The acceleration of the devolution process resulted in the river basin institutions assuming responsibilities before they had the necessary capacity to implement Integrated Catchment Management (ICM). The Save Catchment Council and the Pungwe Sub-Catchment Council had yet to acquire office premises, communication links and personnel for monitoring and enforcement. These setbacks seemed to have been effectively addressed through funding from SIDA as well as the ingenuity of the councillors. The more difficult challenge, however, related to the coordination of ICM planning.

The study found that there had been lack of effective coordination and consultation in the drafting of the Preliminary Catchment Outline Plan. The problem seems to have emanated mainly from the fast tracking of the inception of the Save Catchment Council and its constituent Sub-Catchment Councils. The first draft of the Outline Plan retained the traditional water management focus on surface water supply, to the exclusion of water demand management and the management of groundwater sources, particularly for primary use in the rural areas. A particular concern was that this focus did not take into account the fact that surface water scarcity severely affects three of the seven Sub-Catchments in the Save Catchment Area, and that rural people in these areas rely mostly on boreholes and wells. The focus on surface water also failed to address the view by the new water policy that all water, whether it occurs as surface water, groundwater or other forms, constitutes part of the same watercourse system, and should be managed as such. The Catchment Planning process that was used therefore went against the ethos of IWRM.

The Department of Natural Resources (DNR), which is the sector mainly responsible for catchment protection in terms of the Natural Resources Act of 1996, viewed the lack of effective coordination and consultation as having resulted in the drafting of a Catchment Outline Plan that was based on inadequate knowledge of the environmental conditions within the Save and Pungwe Catchment Areas. There was possibility therefore that some of the envisaged water development projects might have profound negative impacts on the security of downstream communities and ecosystems during periods of drought.

Local government sector officials considered that the lack of effective coordination and consultation in the catchment planning process had resulted in discrepancies between the needs perceived by councillors in the Catchment Councils and Sub-Catchment Councils and the actual needs perceived by local people. It is perhaps worth noting that in terms of the government's decentralization policy, the local government ministry, through local authorities, has the responsibility for coordinating local level service provision by the various sectors. This role includes the coordination of services related to primary water supply and sanitation. In terms of the new water policy, Catchment Councils and Sub-Catchment Councils are vested with the responsibility for coordinating water resources use, development and management at the catchment level, which transcends the local authority administrative boundaries. The reported lack of coordination of functions between the river basin institutions and the local authorities might therefore have potentially critical implications on social security issues such as basic water requirements, livelihoods, health and sanitation.

The lack of effective coordination was ascribed by some local government officials to the lack of a synergy between the new Water Act and related Acts administered by other sector agencies. Hence, although the legal instruments were not necessarily in conflict, the local level articulation of policies by Sub-Catchment Councils and local authorities tended to dovetail. A closer examination of the mandates of the various water related sectors seemed to

indicate that the problem lay also with the institutional actors' failure to develop new protocols of organizational behaviour in line with the recent shifts in the water sector.

Indeed, sentiments were expressed that there seemed to be some resistance by some established local authority actors to the new river basin institutions, who were felt to be usurping the political action space. In some cases, Rural District Council (RDC) personnel were said to have refused to participate in the sub-catchment planning process. Save Catchment Council records also show that a key stakeholder local authority, the Mutare City Council, had failed to attend more than ninety percent of the meetings held up to the time of the research.

The lack of effective coordination was also due to overlaps in the relative alignment of administrative and catchment boundaries. The Save Catchment Council and its constituent Sub-Catchment Councils, including the Pungwe, viewed some of the overlaps as inconvenient to ICM, and considered that certain portions of some Sub-Catchment Councils be managed by adjacent Catchment Councils since the places were more accessible from those Catchment Areas. In the case of the Pungwe Sub-Catchment Council, although the source of the Pungwe River was located in the southernmost portion of the Nyanga Rural District Council, the local authority did not participate in decision-making by the Sub-Catchment Council. This was mainly due to poor accessibility, and the fact that the said portion of the Nyanga RDC was predominantly comprised of a National Park, under the jurisdiction of the Department of National Parks, and the Large Scale Commercial Farming sector. The latter was represented in the Pungwe Sub-Catchment Council. While the Water Act of 1998 identifies local authorities within particular catchments as stakeholders, this situation points to a need for flexibility in the ICM framework in order to balance the legal requirement for stakeholder constituency representation with what is practically feasible at the operational level.

There were overlaps of functions in the institutional arrangement between ZINWA and the Save Catchment Council. The provision for the Catchment Manager to perform water allocation duties on behalf of the Catchment Council during intervals between Catchment Council meetings was made in order to facilitate expedience in the issuing of permits. However, the arrangement was likely to cause problems of coordination. Since the Catchment Manager was accountable to ZINWA, it seemed possible that some decisions might reflect the interests of the water parastatal rather than the stakeholders. Some respondents attributed the absence of conflict, in the case of the Save Catchment Council and the Save Catchment Manager, to the compatibility of personalities between the Chairman of the Catchment Council and the Catchment Manager. It would seem as if although there has been a degree of devolution of authority to lower level institutions, there remains a degree of state control over local stakeholder decision-making processes.

The problem of coordination might be ascribed, to a significant extent, to power relations between institutional actors in the various sectors. Competition for control over the political action space was prominent between the new river basin institutions and established local authorities. The latter have been responsible for coordinating development activities by the various sectors in the local administrative areas since the government's decentralization process started in 1984. By contrast, river basin institutions are more recent structures and they have yet to strengthen their capacity to carry out ICM responsibilities and thereby instill confidence among various interest groups. Since the ability of an institution to perform duties vested upon it contributes to the acceptability of institutional content, procedures and

processes, the problem of coordination by the Save CC and the SCCs would therefore appear to be linked also to the issue of institutional legitimacy.

5.3 Institutional legitimacy

There seemed to be a plausible link between the problem of legitimacy of the river basin institutions and the top-down process of council formation and accession into office by SCC councilors within the Save catchment area by nomination rather than election. However, legitimacy does not only derive from a democratic process of accession into office by stakeholder representatives. Rather, legitimacy in water resources governance derives more strongly from the extent to which the stakeholder representatives are seen to balance the pursuit of the interests of their local constituencies on the one hand with those of the broader watercourse, national, regional and global resource communities on the other.

Sentiment was expressed that most councilors in the Sub-Catchment Council pursued self-interest or the interests of their constituencies at the expense of the interests of the broader local community. While interviews with the councilors could not fully verify this, primary observation showed that representation in the Save Catchment Council and the Pungwe Sub-Catchment Council was heavily skewed towards representation by male members of the commercial farming sector. This seemed to have resulted in the preoccupation by the institutions with issues relating to the commercial use of water, particularly for irrigation purposes. Not much attention was given to issues of primary, industrial and recreational water use. Such omission raised questions on the commitment of the institutional actors to address the interests of stakeholders other than those of the majority constituencies represented.

The dominance of commercial farming interests seemed directly linked to stakeholder power relations and the requirement that water management institutions should finance their operations through levies collected from commercial users. The focus on commercial water use resulted in institutional failure to address some of the major water problems pertaining to Pungwe water resources. These included the wastage of Pungwe water by Mutare City Council and the discharge by Mutare's manufacturing and processing industries of industrial pollutants into streams flowing through Mutare. Problems also included challenges of addressing interests of downstream users, such as Beira City in Mozambique, which relies on the Pungwe River flow to prevent the salt-water intrusions that cause water shortages in the dry season. The catchment management institution seemed more concerned with the failure by Mutare City Council to attend the Save Catchment Council meetings than with the unaccounted for water loss of approximately 50% of the water obtained through the Pungwe Mutare Water Supply Project. It seemed as if water pollution, inefficiency in water use and interests of downstream water users in Mozambique, were less important than the levies that the water institutions generated from Mutare's use of the Pungwe water.

Notwithstanding the observed shortcomings of the Save Catchment Council in demonstrating commitment to serve the interests of the broader resource community, the Pungwe Sub-Catchment Council, by contrast, was found to have made a conscious effort to address more broadly the various interests ranging from the local to the international level. Such robustness was evident in the attempt by the Sub-Catchment Council to enhance gender representation and in the expressed objective for the Sub-Catchment Council to be directly involved in the interstate discourses concerning the use, development and management of the Pungwe watercourse. There was still need, however, for the Pungwe Sub-Catchment Council to give

the issues of representation and legitimacy a more rigorous treatment. With regard to strengthening institutional legitimacy, primary observation seems to suggest that the discrepancies in the management styles of the Save Catchment Council and the Pungwe Sub-Catchment Council owed more to personalities and stakeholder power relations than to any fundamental differences in organizational culture.

5.4 Power dynamics

Empirical observations of stakeholders in the Pungwe Sub-Catchment Council (Tapela, 2002; Dube & Swatuk, 2002) and the Save Catchment Council (Tapela, 2002; Dube & Swatuk, 2002; Kujinga & Manzungu, 2004) reveal that the issue of power pervaded relations among stakeholders and between water management institutions and other sector agencies, such as local authorities, other government agencies and non-governmental organizations (NGOs). Among stakeholders, power-distributing cleavages included interests in water resources, political and economic clout, gender, proficiency in the language of discourse and personality.

Language constituted a source of power among stakeholders. Despite that many of the stakeholder representatives spoke Shona as their first language and that most of the other representatives were conversant in Shona, the language used in Catchment Council and Sub-Catchment Council deliberations was English. In the observed Save Catchment Council meeting, this seemed to contribute to the difficulty of expression for some participants. By contrast, although English was also used in the Pungwe Sub- Catchment Council, where 90% of the councillors were first language Shona speakers, the debates at the observed meetings were very lively, and councillors showed a remarkable command of the language and confidence in expressing their needs. Indeed, one of the vocal members of the Pungwe Sub-Catchment Council had been reticent at the previous Save Catchment Council meeting. A follow up to this observation revealed that the reticence by some councilors in the Save Catchment Council was due to the dominance of certain personalities, who made it difficult for most other councillors to participate actively in the meetings. This seemed to point to the need for the Save Catchment Council to enhance its capacities and mechanisms in using participatory approaches, so that the representation of stakeholder interests could be more effective.

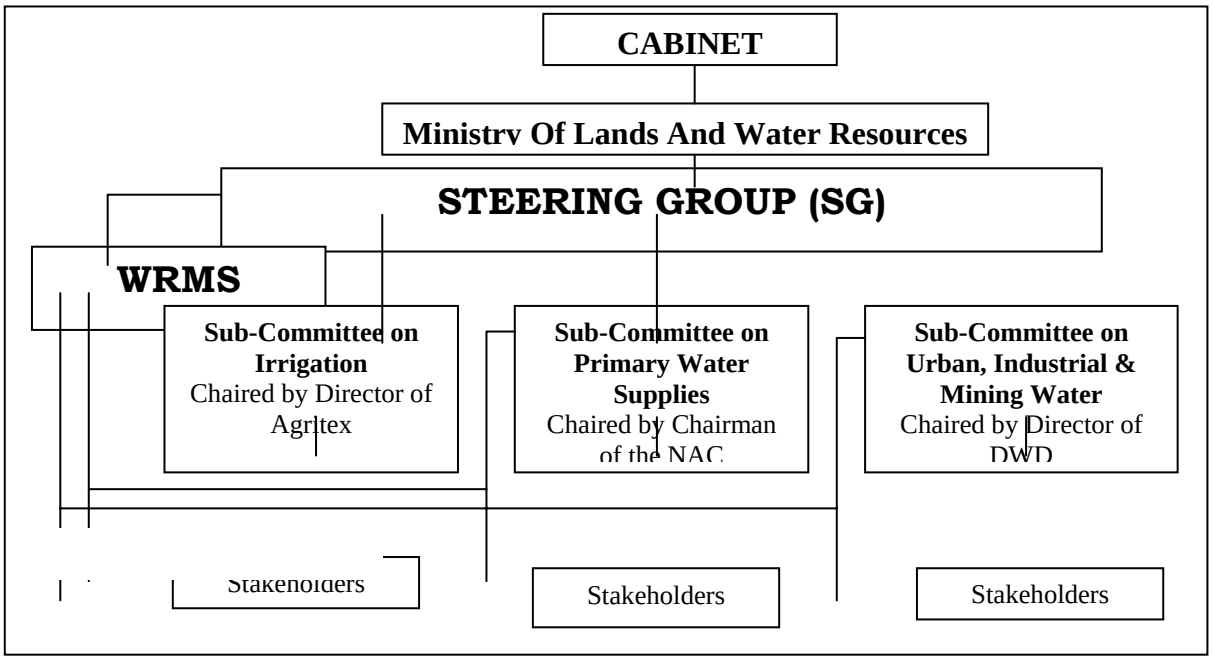
Competition of interests among stakeholders was manifest in the emergence of alliances among stakeholders belonging to the similar sectors. On the one hand, there had emerged an alliance between small-scale and large-scale commercial farmers, which enabled this group to dominate both the Save Catchment Council and the Pungwe Sub-Catchment Council. The result was a strong emphasis by river basin institutions on irrigation-related issues. On the other hand, elected and traditional rural local authority representatives were observed to voice the primary water interests of constituencies in Mutasa Rural District Council. However, because perhaps rural local authority representatives are a minority or because their constituencies do not contribute much to levies required for Catchment Council and Sub-Catchment Council operations, their clout in the decision-making processes is visibly lower than that of irrigation farmers. Given that Mutare City Council generates a significant share of revenue raised through levies by the catchment council, it is possible that had the Mutare City Council participated more actively in the Save Catchment Council meetings, there might have been a balance between the interests of farmers and stakeholders such as local authorities.

The power dynamics between the Save Catchment Council and the local government sector also seem to hinge on the issue of political clout. Whereas the latter had either established their authority over the years or through the ballot and networks, the former were only recently nominated. Consequently, the competition for political action space outside catchment council and Sub- Catchment Council meetings tended to be dominated by the local authorities. While the roles of the river basin institutions and the local authorities were indeed complementary, the power relations between the two undermined the integration of water management activities at the local level.

Consequently, water resources management activities at the rural local level were divided into two distinct domains. Groundwater and primary water supply were the domain of the RDCs, who were mandated to coordinate the implementation of the government's Integrated Rural Water Supply and Sanitation Programme (IRWSSP). Despite that the new water policy mandates the Catchment Councils and Sub- Catchment Councils with the integrated management of all components of a watercourse system, these institutions had so far avoided concern with groundwater and focused almost exclusively on surface water sources and commercial use of water. Atmospheric water, particularly as it related to the efficiency of water use in rain-fed and irrigated crop production, was also ignored. By reinforcing the traditional distinction between the various components of the watercourse system, the power politics between the river basin institutions and the RDCs contradicted the philosophy of IWRM.

The lack of an integrated approach in the management of the various components of the watercourse system seems to have been inherited from the pilot phase structure of organizational sector functions (Figure 2). The organizational functions were allocated according to the sources of water traditionally used or managed by the main sectors. Hence, while there was coordination by the Steering Group at the higher levels, there was no integration of functions at the lower levels of the hierarchy.

Figure 2 Zimbabwe Water Resources Management Strategy: Organizational Chart



Source: Zimbabwe, 1995: 10

Despite that women have been identified as playing a central and multi-faceted role in the provision, use and safeguarding of water (UNESCO, 2000; Zimbabwe, 1995) their involvement in water-related decision-making structures has been very low. The Save Catchment Council was largely composed of men. Within the entire Save Catchment Area, women councillors constituted 3.5% of the total number of Sub-Catchment councilors in 2002 (Tapela, 2002). Of the seven Sub-Catchment Councils, the Pungwe Sub-Catchment Council had made the greatest effort to actively involve women in decision making and planning, with women occupying 20% of the Sub-Catchment Council seats out of the council's gender representation target of 60% (Ibid.).

In addressing the issue of gender representation, the Pungwe Sub-Catchment Council has been robust enough to adopt a gender-responsive approach, against the prevailing tide of social attitudes that militate against women's involvement in strategic decision-making. However, the inclusion of women in the Sub-Catchment Council has largely been due to women's agency in staking a claim in the decision-making process, with donor support (Text Box 1).

Text Box 1 Gatsi Irrigation Scheme: Women's Claim for a Stake in Decision Making, 2001

Apparently, female members of the Gatsi Irrigation Scheme, near the Mtarazi Falls, staged a strong protest against the Save CC and the Pungwe SCC during a visit by representatives of the donor agency. Many of the women were single heads of households, who eked out livelihoods from micro-scale food production for sale and for household use. Their protest followed a decision by the Save CC to allow 1500 litres per household per day for primary purposes, the excess being levied at commercial rates. The protest also followed a communication by the Pungwe SCC of the requirement for commercial and semi-commercial water users to pay water permit application fees and water levies. The women responded by expressing a concern to the SCC about their inability to afford to pay the new water prices. When this concern was not given due consideration by the Pungwe SCC, the women insisted that their male leader further engage the SCC about their grievances. When the leader refused to be involved in challenging decisions by Pungwe SCC and the Save CC, the women gave him a vote of no confidence and proceeded to launch a direct challenge themselves. Hence, they staged a protest during the donor's visit. The SCC responded by altering the representation policy to allow two seats for representation of women micro-scale and small-scale farmers. Effectively, women became formally recognized as a stakeholder group within the Pungwe sub-catchment. The seats gave women a 20% measure of inclusion in the SCC.
(Source: Tapela, B. N. 2002)

Such inclusion of women in decision-making structures, however, does not automatically ensure that women's interests are voiced, as there exist power relations between men and women that result in unequal gender voices. Primary observation of the decision-making process by the Pungwe Sub-Catchment Council pointed to a need for the adopted gender approach to go beyond the issue of gender inclusion, and to enhance institutional capacities and mechanisms that build women's confidence in expressing their views.

5.5 Stakeholder conflicts

Many of the conflicts that the river basin institutions dealt with concerned the issue of compliance in the sharing of water for commercial use. The conflicts arising from differences

of interest and perception between the commercial and primary users seemed to be lower on the scale of the councils' priorities. The councilors conceded that this was because at the time of the research, there was an abundance of water within the Pungwe River Basin and there was therefore less competition for water. Water-related conflicts between commercial and primary users often increased during times of water scarcity, such as during the drought of 1991-1992. The Save Catchment Council and the Pungwe Sub-Catchment Council had contrasting mechanisms for resolving stakeholder conflicts. This was due to the differences in the hierarchical positioning of the two institutions, and therefore differences in their scale of operations.

In the case of the Pungwe Sub-Catchment Council, the general approach that had been found most effective was using the established customary regulatory framework to sanction against non-compliance, while avoiding confrontation. This involved subtly using social influence and moral obligation, as encoded in the non-formal customary law, to elicit compliance. Consequently water users who regularly exceeded their water allocations were compelled to comply or else face ostracism from the broader community and penalties from the community's customary court. The choice almost invariably made was that of compliance. It is worth noting that the effectiveness of the Pungwe Sub-Catchment Council's conflict resolution mechanism rested strongly on the fact that there was a remarkably high degree of common cultural background among stakeholders, and that the stakeholders within the Sub-Catchment boundary comprised a relatively small, close-knit group.

The Save Catchment Council, by contrast, had to deal with conflicts at a much broader and more diverse spatial, cultural and sectoral scale. Consequently, the Catchment Council had to use the "user pays" and "polluter pays" principles, as well as impose other penalties encoded in the formal water legislation. The Catchment Council had on a number of occasions penalized non-compliant users by cutting off their water supplies. Ultimately, the Catchment Council could revoke the water permit of a non-compliant user. Although the expectation of such penalties tended to enhance compliance, the reduction of non-compliance had not yet reached the desired levels. This was due to the Catchment Council's limited monitoring capacity. Towards solving this setback, the Save Catchment Council showed a degree of robustness in that it had initiated an awareness campaign to foster the ethic of self-monitoring. The Catchment Council had also started the process of recruiting meter readers who would monitor water use on its behalf. Apart from these measures, the Save Catchment Council had in principle adopted the fractional water allocation system to facilitate the fair, prioritized and proportional use of water during times of water scarcity, when water conflicts tended to escalate.

5.6 Ecosystem sustainability

The Preliminary Catchment Outline Plan for the Save Catchment Area had been drawn without sufficient knowledge of the environmental conditions within the catchment. The subsequent attendance of Save Catchment Council meetings by environmental and agricultural extension officers seemed to indicate that there was potential for this problem to be resolved. However, while environmental conservation measures do contribute to ecosystem sustainability, the main difficulty in pursuing this objective was that there was no exact scientific knowledge with which to determine the critical levels of water flow required to maintain the environmental reserves. There was ongoing research on this issue at two sites within the Save Catchment Area, including the Pungwe-Mutare Project's in-take point. In addition to this, ZINWA's technical support unit had almost completed the database on the

co-efficients of variation in river flows. This information was essential in providing a sound basis for decisions on water allocations for stakeholder use as well as for the environmental reserve.

5.7 The "fast track" land resettlement programme

The government's "fast track" land resettlement programme appeared to have become a key challenge to the implementation of IWRM. Many respondents expressed concern that the programme had resulted in the reduction of donor funding for many envisaged water-related projects. In addition to this, the government's prioritization of the programme resulted in government departments redirecting expenditure away from planned and budgeted social services towards resettlement beneficiaries' needs. A prevailing view was that this interfered with the inter-sectoral coordination, particularly of primary water supply. The redirection of development activities and funding to the newly resettled people had also created gaps in the provision of primary water to identified established communities, thus perpetuating their insecurity.

Respondents were also deeply concerned about the plight of displaced farm workers, who seemed to have been marginalized by the fast track resettlement programme. At the time of the research (Tapela, 2002), it was reported that about 34 000 farm workers would be displaced by the programme and 15 000 families resettled on the farms within the Save Catchment Area. Both the displaced workers and the resettled people would require coordinated inputs of services by the river basin institutions and other sectors, at a time when donor funding was becoming scarce.

The emergence of the newly resettled groups of people on the commercial farms demanded that the Save Catchment Council and the Pungwe Sub-Catchment Council address the issue of representation of this stakeholder group in decision making and planning. There had also emerged a need for the Save Catchment Council and the Pungwe Sub-Catchment Council to address the new requirements for access to water by the resettled people. However, no special concession had been made by these institutions to facilitate the representation of fast track resettlement farmers.

Although no clear-cut reason was given for this, it seemed as if the main reason was that the resettled people were viewed as being militant against any suggestion that they should pay the water permit application fees and water levies for commercial use. There seemed, however, to be no anticipation of difficulties in engaging the resettled groups of people about principles like equity in access to water, efficiency in water use and the sustainability of the ecosystem. The problem therefore was in trying to reconcile principles such as stakeholder participation and "the user pays" with the demands by the resettled people for free access to water and land.

In some cases, the resettled people co-existed with the established commercial farmers, who already had permits for the water on the farms. On the one hand, it was not easy for councilors to arbitrate conflicts emanating from shared use of water whereby one party paid for the water while the rest free-rode. On the other hand, there was the technical difficulty of finding appropriate mechanisms for resolving the problem of issuing additional permits for the same allocation of water in instances where all parties agreed to pay the permit application fees. Representatives from the large-scale commercial farming sector expressed

concern that while they were compelled by the law to continue paying levies for their water allocations, they were no longer able to use that water due to disruptions in production.

The "fast track" land resettlement programme indeed seemed to have introduced new dynamics in the power politics relating to the role of Catchment Councils and Sub-Catchment Councils in IWRM. Whereas the tensions prior to this programme had revolved around the river basin institutions and the local authorities, the emerging political dynamics had since shifted to revolve around alliances of small-scale, large-scale and communal area farming sector representatives in the water management institutions, on the one hand, and local government officials and resettled groups, on the other. It seemed that the farming sector representatives in the river basin institutions were making a conscious though strained effort, in the spirit of conflict-avoidance, to be conciliatory in addressing the needs of the resettled groups.

6. Stakeholder Participation in Mozambique: Pungue Basin Committee

The mismatch in the provisions for stakeholder participation in the water policies of Mozambique and Zimbabwe became a key factor determining the design of a participatory process for developing a joint strategy for managing the Pungwe watercourse. The Pungwe project therefore began as a strategy to create "a more level playing field" (SWECO, 2005) for stakeholder participation in Mozambique and Zimbabwe. The project was conceptualized in terms of institutional capacity building for ZINWA, Save Catchment Council and the Department of Water Development (DWD) in Zimbabwe and ARA-Centro and DNA in Mozambique. The project consists of three distinct phases namely, the Monograph, Scenario Development and Strategy Development Phases.

The Monograph Phase involved collection and documentation of base line data on the Pungwe watercourse. A key output of this phase was the 'Pungwe Monograph'. Stakeholder participation was designed to take place in the Scenario Development and Strategy Development Phases, which involved the construction of various scenarios for the development and management of the Pungwe watercourse and, ultimately, the selection of a single joint development strategy. However, since there were no stakeholder structures in Mozambique to complement a decision taken at the Inception Phase to use existing structures in Zimbabwe as platforms for stakeholder consultations in the Scenario Development and Strategy Development Phases, a decision was made to initiate stakeholder participation as a parallel process to data collection in the Monograph Phase in Mozambique. This process was initiated in March 2003 after the approval of the Inception Report by the governments of Zimbabwe and Mozambique as well as Sida/Asdi. The participatory process focused on assisting ARA-Centro to work towards establishing the Pungwe Basin Committee. Two preliminary phases preceded the formation of the Pungue Basin Committee. These were the Inventory and the Mobilization Phases.

6.1 Inventory Phase

The Inventory Phase ran from March to August 2003, and involved the drawing up of a basin-wide, structured and intensive inventory of stakeholders distributed across eight districts in the provinces of Sofala and Manica. Preparations for this phase by project implementing agents began in December 2002, and the more detailed preparations were made in the first (or "start-up) week of March 2003. Methodological issues were discussed and the

tasks of developing a stakeholder information brochure, an inventory data sheet, a questionnaire, a website for the Pungue watercourse and a stakeholder database were assigned to various working groups. Since existing information was limited to thirty (30) stakeholders, mostly government institutions (category 2 stakeholders) and two water users namely, Mafambisse Sugar Estate and Beira Water Company, the initial step taken was a survey to identify and draw up an inventory of stakeholders. Although effort was made to survey the whole of the basin area, irrespective of sparse population distribution in some of the districts, the exercise excluded parts of the basin falling within the Buzi, Maringue and Cheringoma districts, due to their commanding very small areas of the basin with little or no human activities.

Identified stakeholders included water users, government agencies and civil society organizations such as non-governmental organizations (NGOs). The stakeholder identification process directly addressed ARA-Centro's objective to increase the number of water use licenses through registering existing and prospective water users. Hence, at the end of the Inventory Phase, information generated by the stakeholder survey was captured in a newly-created stakeholder database of ARA-Centro. A total of ninety (90) stakeholders was registered in the database, and a further forty-four (44) were to be interviewed and registered.

Table 3: Chronology of Activities of the Stakeholder Participation Component

Inventory Phase	March 2003	Mar 3 – 7: Start-up week – Development of database, stakeholder brochure, registration forms, questionnaires and guides, website set up; Mar 11 – 12: Fieldwork in Nhamatanda; Mar 12 – 14: Fieldwork in Gondola; Mar 18 – 20: Fieldwork in Barue; Mar 26 – 28: Fieldwork in Gorongosa
	April 2003	Apr 2: Fieldwork in Muanza; Apr 23: Fieldwork in Manica; Apr 24: Fieldwork in Macossa
	May – June 2003	Data input in stakeholder database
	July 2003	Jul 28 – 31: Fieldwork Barue
	August 2003	Aug 1: Fieldwork in Manica; Aug 5 – 8: Fieldwork in Gorongosa; Aug 12 – 15: Fieldwork in Gondola
Mobilization Phase	September 2003	Sep 21: Mobilization Worshop in Catandica (Barue); Sep 22: Mobilization Worshop in Gorongosa;
	December 2003	Main Phase 1 workshop in Beira
	April 2004	Apr 21: Mobilization Worshop in Nhamatanda; Apr 22: Mobilization Worshop in Gondola; Apr 23: Mobilization Worshop in Dondo;
	July 2004	Jul 8: Constitution meeting of the Pungue Basin Committee in Chimoio

The project implementation agency communicated information on water reforms through personal interaction in interviews and workshops and a stakeholder brochure written in the Portuguese language. For the longer term, a website was set up and news bulletins planned to provided up –to-date information on water –related issues, such as flooding and scheduled

workshops. Stakeholder participation in the Inventory Phase was therefore mainly through consultation.

6.2 Mobilization Phase

The Mobilization Phase ran from September 2003 to April 2004. The phase involved the conducting of five (5) regional stakeholder workshops, whose collective objective was to mobilize stakeholders to take part in the creation of the Pungue Basin Committee. Of the one hundred-and-eleven (111) stakeholders who participated in these workshops, thirty-nine per cent (39%) were water users, fifty-one percent (51%) were government institutions and fifteen per cent (15%) were representatives of civil society. The Mobilization Phase was concluded in July 2004 with a meeting held in Chimoio to draw up a constitution for the Pungue Basin Committee.

A report by the project implantation agency describes participation in these workshops as "very good and even beyond expectation". What the report does not describe, however, are the concerns voiced by stakeholders or the power and language dynamics encountered during the consultative workshops. Such information is important in assessing the degree of participation.

6.3 Establishment of the Pungue Basin Committee

With the groundwork for establishing the Pungue Basin Committee underway, two issues posed a problem to formation of the new structure. These were the legal basis for the functioning of the basin committee and the issue of representation.

Legal difficulties arose from the fact that ARA-Centro statutes were still to be approved, and the institutional structure could therefore not be formally constituted. The functional relationship between the Pungue Basin Committee and ARA-Centro also had to be clarified. The water law required a formal interaction mechanism between ARA-Centro and stakeholders in the basin, such that there was a need to rationalize institutional roles and functions in activities such as water licensing and basin planning, which ARA-Centro had hitherto performed single-handedly. This issue was resolved through a decision by the Minister of Public Works and Housing to approve ARA-Centro statutes. The Pungue Basin Committee was then preemptively constituted on 8 July 2004, a few weeks before the approval of ARA-Centro statutes on 25 August 2004.

The issue of representation revolved around the question whether representatives of stakeholders were to be elected or not. It appears that the decision taken after some discussions was that elections were unnecessary and ARA-Centro would decide on the stakeholder representatives who would form part of the basin committee. The reasons underlying this decision were that:

- The Pungue Basin Committee was legally constituted as a consultative body to the Director of ARA-Centro and the committee's function was to give a voice but not a vote on behalf of stakeholders. Decision-making power therefore effectively lay with the Management Board of ARA-Centro rather than the basin committee;
- If it was in the interests of ARA-Centro to get the views of other stakeholders than those represented in the basin committee, ARA Centro could always solicit these views without prejudice to the basin committee;

- Given the function of the basin committee in channeling the views of particular stakeholder groups to ARA-Centro, representation had to take into consideration the level of organization of certain stakeholder institutions. This principle also applied to dissemination of information by ARA-Centro to stakeholders.

On the basis of the above rationale, the principles guiding representation in the Pungue Basin Committee became 'geographical spread' (ie. distribution across all districts and provinces which practically constitute part of the Pungue basin) and distribution across three stakeholder categories namely, water users, government agencies and civil society.

The Pungue Basin Committee consists of nineteen (19) members, who represent a range of stakeholders (Table 4). In numerical terms, 'small' water users have the largest representation (21.1%), followed by 'medium' water users and the commercial farming sector and civil society (15.8% each), and large water users (10.5%). In contrast to their stronger influence, the industrial and mining sectors, provincial and district government, conservation authorities and ARA-Centro have the lowest representation in the basin committee.

Table 4: Stakeholder representation in the Pungue Basin Committee, 2005

Stakeholders	**Number of representative persons**	**Percentage representation**
'Large' water users	2	10.5
'Medium' water users and commercial farming sector	3	15.8
Industrial and mining sectors	1	5.3
'Small' water users	4	21.1
Provincial government	2	10.5
District government	2	5.3
Conservation areas	1	5.3
Civil Society	3	15.8
ARA-Centro	1	5.3
TOTAL	**19**	**94.9**

Source: SWECO, 2005

The regulations governing the roles and functions of a stakeholder institution are an important indicator of the mode of stakeholder participation in IWRM. In terms of the internal regulations for the Pungue Basin Committee, the committee is defined as a consultative body to the Director of ARA-Centro and a platform of coordination between water users, managers of water supply and irrigation schemes, and other institutions involved in the use of water within the Pungwe basin. The principal objective of the committee is "to make every effort to optimize …water use in the basin, minimizing damage and conserving the environmental balance in the basin" (SWECO, 2005). The functions of the committee are to:

- Pronounce itself about the conciliation of water demands by various stakeholders;
- Propose the adoption of operational measures to optimize and improve the management of irrigation schemes and the use of water, infrastructure and soils;
- Propose measures to be adopted in case of "*force majeur*", particularly droughts, floods and accidents, promoting the definition of priorities for water use;

- Appreciate, from the perspective of water use, the development programmes for the basin;
- Pronounce itself about the performance of ARA-Centro, formulate pertinent suggestions and elaborate comments and viewpoints, as requested by ARA-Centro;
- Pronounce itself about the observance and the impact of international agreements of water sharing in the basin; and
- Pronounce itself about alterations in the bulk water tariffs.

Other envisaged functions include issuing water licenses on behalf of ARA-Centro and monitoring floods and collecting data through hydrometeorological networks.

In light of the above functions, an important question is whether the basin committee has the required institutional capacity. The capacity to perform the assigned functions is a key factor determining the degree to which stakeholders can effectively play a role in water resources management. Lessons from similar institutions elsewhere in the region indicate that newly-formed stakeholder institutions often start out with major capacity constraints, and have difficulty in mobilizing the required capacity, such as finance to cater for operational costs, skilled personnel, institutional infrastructure, communications and monitoring. In the case of the Pungue Basin Committee, ARA-Centro has undertaken to assume the operational costs of the committee. According to a the project implementation agency report (SWECO, 1995) the assumption of responsibility for operational costs by ARA-Centro indicates the importance that ARA-Centro attaches to the participation of stakeholders both in the Pungue Project and in ARA-Centro's longer term operations. Notwithstanding ARA-Centro's contribution, the Pungue Basin Committee has many other capacity constraints to be overcome. These include the logistical difficulties of achieving effective communication and coordination, and convening meetings for stakeholder representatives who are widely distributed over a large basin.

6.4 Stakeholder Participation in the Pungue River Basin Development Scenario Phase

This phase involved a series of consultations with stakeholders represented in the Pungwe Sub-Catchment Council of Zimbabwe and the Pungwe Basin Committee of Mozambique. Other key stakeholder institutions included in the consultations were the Save Catchment Council, and ARA-Centro. Four meetings were held between October 2004 and April 2005. The objectives of the meetings were for the consultant to make presentations and get views from stakeholders on:

- The draft final version of water demand projections based on the data inventory compiled with the support of the Pungwe Sub-Catchment Council;
- Progress made with Pungwe Basin institutions in the neighbouring country; and
- A report on the project identification exercise, with focus on hydraulic structures, such as dams.

Recommendations arising from stakeholder consultations in the Scenario Development Phase were that the involvement of the Pungwe Sub-Catchment Council and the Pungwe Basin Committee should be intensified in Phase III (the Strategy Development Phase), with the objectives to:

- Ensure acceptance of follow-up projects and of the joint management strategy; and

- Continue to build capacity of the two structures for the improvement of their functioning and the growing effectiveness of their interventions as water governance structures (SWECO, 2005).

7. Stakeholder Participation in a Transboundary River Basin Context: A Discussion

On the basis of past experiences derived from participatory initiatives elsewhere, there is recognition that certain elements are critical to the success or failure of an integrated transboundary basin management project. An outline of the critical elements of success is shown in Table 5 below. It is also widely recognised that each stakeholder participation initiative has its own unique set of factors, such that there are no blueprints or replicable models for project analysis. While there is not much to be gained through testing 'models', the identified critical elements for success or failure can provide useful insights in assessing the potential or the effectiveness of stakeholder participation initiatives in transboundary basin management.

Table 5: Outline of some critical elements for success of a stakeholder participation initiative

Critical Issues/ Elements	**Components**
The Policy Environment	- Policy and Politics - Legislative Instruments - Institutional Support
Rights	- Security of Resource Tenure
Political Empowerment	- Decentralisation of Authority - Strengthening of basin or catchment level institutions
Socio-economic Benefits	- Macro-level economic policies on Investment & Marketing - Devolution of Benefits
Local Capacity	- Nature of Resource Base - Degree of Stakeholder Community Cohesion - Levels of Organisational Development - Local Governance Structures - Technology and Information
Problem Definition	- Outsiders versus local stakeholders: Who defines the Problem? - Institutional Roles, Resources & Relationships - Accountability
Stakeholder Identification	- Representation of various stakeholder interests
Stakeholder Participation in:	- Project Design - Project Implementation - Project Evaluation/ Adaptive Management
Vertical & Horizontal Linkages	- Links with other similar initiatives

Source: Adapted from Tapela, 2002

7.1 Policy and politics

The manner in which stakeholders participate in water resource management activities is strongly determined by the broader policy context. Political commitment at governmental level towards establishing an enabling policy environment for promoting broader stakeholder participation and for translating political priorities into national budgets is an important prerequisite for IWRM. However it has been commonly observed that the political will to relinquish control and proprietorship over natural resources is weak in most governments (Murphree, 1994). Hence, although many states have adopted the conditions enunciated by Agenda 21, there is often a legacy of resistance by central government to the devolution of decision-making power and accountability over resource management to local stakeholders (Warburton, 1998; Feldmann, 1994). Apart from perceptions that some stakeholders, particularly local resource users, lack the capacity to implement sustainable development, state control over responsibility for water resources is also informed by the need for institutions that appropriately represent not only the interests of specific constituencies, but of all stakeholders at local, national and international levels. If initiatives to involve stakeholders are to be genuinely participatory, however, the state has to relinquish considerable authority over water resources to stakeholders. In the absence of proprietorship or secure tenure, "other forms of involvement must be understood for what they are: co-optional, co-operative or collaborative arrangements" (Murphree, 1994).

In the case of Zimbabwe and Mozambique, moves towards broadening stakeholder participation have been supported by varying degrees of political commitment. The devolution of operational functions, including decision-making, to the Pungwe Sub-Catchment Council of Zimbabwe over the past five years contrasts with continuing reluctance by authorities in Mozambique to concede any share of decision making to stakeholders in the Pungue Basin Committee. Although decentralization of authority in Mozambique has been strengthened by the formal constitution of the Pungue Basin Committee as a representative and legally accountable entity, ARA-Centro remains the driving force behind reforms in the Pungue Basin.

Experiences in southern Africa show that participatory initiatives become effective when local stakeholders are principal actors in the design and implementation process while all other institutions, including government and donors, become subordinate, enabling and supportive. There is still a need for Mozambique to strike a balance between stakeholders and traditional government in establishing new protocols of accountability and democracy. There is also a need to strengthen channels for increased stakeholder participation in decision making.

7.2 Legislative support and security of tenure

"Local people will feel responsible for their natural resources only when they can exert control over such resources, when they can impose duties and obligations on themselves, and when they have rights, knowledge and means to exert such control and are sufficiently interested in the process" (Gueye & Laban, 1990 in Laban, 1995:196).

The devolution of water resource management authority to stakeholders has to be supported by an appropriate legislative framework. Legislative support confers and guarantees claim-making or entitlement rights to stakeholders, particularly water users. In both Mozambique and Zimbabwe, the water laws have made provision for stakeholder institutions. The legal

constitution of both the Pungwe Sub-Catchment Council and the Pungue Basin Committee gives a significant degree of strength to these structures. However, it is worth noting that at the core of legal rights is secure tenure vested in stakeholders at the local level. Tenure refers to the extent to which an individual or community has rights of access to a resource and the degree of these rights (IUCN, 1997). The water laws of Zimbabwe and Mozambique have defined water resources as 'public goods', vested ultimate responsibility over water resources with the state and given water users security of access to water through permits (or licenses). However, tenure rights are complex and embrace not only the legal but also the informal spatial, temporal and social dimensions. Hence, it is essential that the ongoing identification and registration of stakeholders does not exclude the interests of people and institutions with informal or non-formal rights to water.

7.3 Definition of the water management problem

Transboundary water management initiatives are initiated on the basis of assumed or perceived environmental, social or economic problems. Conceptualizations of objectives and modes of participation are based on neo-liberal or participatory-democratic approaches. There are therefore often mixed motives or objectives belonging to those who are promoting stakeholder participation in IWRM. A critical question is therefore: whose definition of the problem is being invoked? Little (1994) asserts that the extent to which local stakeholders share in problem definition and participate in its identification is a prime factor affecting project success. Problem identification does not mean merely eliciting dialogue with water users, but includes the extent to which local NGOs, research institutes and other stakeholders participate in defining the water management problem.

In the case of both Zimbabwe and Mozambique, stakeholder participation in problem definition has been through consultations conducted by a project implementing agent. The degree to which stakeholders actually contributed to the problem definition is not clear. Nonetheless, some consensus has emerged on the need for a basin-wide management framework.

7.4 Identification of stakeholders

"The utilisation of natural resources at a particular place and time is the outcome of conflicting interests between groups of people with different aims. Usually there is no absolute dominance by one group, so there are commonly a number of different ways of using resources at the same place and time" (Abel & Blaikie, 1986:735 in Murphree, 1994:410).

It has been suggested that participatory initiatives in water resource management should start by identifying and consulting the major stakeholders in order to ensure that all the important issues are addressed and to strengthen commitment to implementing the necessary reforms. Murphree (1994) proposes that, since natural resource management is highly institutionalised, an actor-orientated approach is necessary for the analysis of the institutional actors in the political ecology hierarchy. The rationale is that the roles, resources and relationships of the various institutional actors involved in IWRM are important in determining the success or failure of an initiative. In the case of both the Pungwe Sub-Catchment Council and the Pungue Basin Committee, actor-orientated approaches have been adopted in stakeholder identification and analysis. For the Pungwe Sub-Catchment Council, although this process has resulted in the involvement of most of the primary, secondary and key stakeholders, Nyanga National Park, in which the source of the Pungwe is situated, is not among the

stakeholders included in 2001 (Tapela, 2002). For the Pungue Basin Committee, it is not very clear what proportion of stakeholders in the basin have been involved in the stakeholder identification and analysis process. Given that the committee is constituted as a consultative and not decision-making structure, the degree to which stakeholder views were taken on board by ARA-Centro is also not clear.

The case of the women of the Gatsi Irrigation Scheme (Text Box 1) confirms the view that resource management programmes are never gender neutral, and that the structure of opportunities available to women discriminates against them such that they have substantially less access to bases of social power and productive wealth. A critical element in articulating stakeholder participation therefore is a clear, gender-sensitive definition of the participants in the water resource management initiative at the initial stages of the programme process.

7.5 Stakeholder participation in project design, implementation and evaluation

It has been suggested that the most critical factor for the success of a development scheme is the degree of political participation in decision making by local 'beneficiaries' (Lees, 1980:375 cited in Derman & Whiteford, 1985) or 'stakeholders' (Murphree, 1994; Little, 1994). Stakeholder participation in both Zimbabwe and Mozambique will probably be greater in the longer term implementation of IWRM than in the initial design phases. This does not mean, however, that the trans-boundary basin management initiative will be irrevocably compromised.

Lessons on the importance of stakeholder participation in the successive stages of a transboundary basin management process can be drawn from case studies of community-based natural resource management. These show that local stakeholders generally are more likely to be involved in project implementation than in design activities, and local involvement in the design phase does not necessarily ensure a successful project (Litte, 1994). In a similar vein, studies of various case studies (Finsterbusch & van Wicklin, 1987 in Manikutty, 1997) indicate that the importance of participation increases at successive stages of initiatives, with the operation (or implementation) and monitoring phases showing the highest degree. The same studies show that the adequacy of communication and stakeholder commitment to the initiative may be the major significant factors rather than stakeholder participation *per se*. Adequacy of communication appears to be linked to the level of organizational development and the accountability of local organisations to the rest of the community. Stakeholder commitment on the other hand seems to be related to benefits and incentives such as livelihood security and security of tenure.

8. Conclusion

Although stakeholder participation in the trans-boundary management of the Pungwe Basin has begun in both Zimbabwe and Mozambique, there is still a need for greater institutional support, particularly in Mozambique, for stakeholder structures to achieve the required alignment in participation in decision making. Indications are that there is also a need for further support in organizational development, in building the capacity for equitable processes of representation and decision making, and for conflict resolution.

The Role of Basic Community Organisations in the Management of the Natural Resources of a Transboundary Water Basin – The example of the Local Coordination Committees of the Senegal River Development Organisation

By Mamadou Mactar Sylla[1]

1. Introduction

The Senegal River Development Organisation (known under its French name OMVS[2]) was created in 1972 by Mali, Mauritania and Sénégal to promote the integrated development of the Senegal River basin. The OMVS has built two dams (the Diama anti-salt dam and the Manantali reservoir dam) which have made it possible to regulate the flow of the river; partially during the flood season and totally during the dry season. Moreover, the construction of the high voltage hydro-electrical station has made it possible to increase and stabilise electricity production in the three countries, by guaranteeing an output of 800 GWh for nine out of ten years.

Thus, a large part of the conditions necessary for the development of the huge potential in land, water and natural resources are being met. Nevertheless, the investments made and the methods of development have caused serious damage to the basin environment of which the direct result is the change in the productive capacity (degradation of the soil, pollution of the water, loss of bio-diversity) and the development of water borne diseases (malaria and bilharzia). Conscious of the fact that the improvement of the living conditions of the population is closely linked to the awareness of environmental questions, the OMVS has initiated PASIE, a Mitigation and Follow-up Programme concerning the impact of the Manantali Energy Project[3]. The local Committees, which are the subject of this case study, were formed within the institutional framework established by the OMVS to accommodate the participative action required for the implementation of an integrated basin management strategy.

This case study, after a presentation of the basin context and of the OMVS programme, will try to analyse the capability of the Local Coordination Committees (LCCs), taking into account the functioning, the results obtained and the difficulties encountered, as well as the demands of shared management of the natural resources of the Basin.

2. General Description (Context, legal and institutional framework, programme of the SRDO)

The three countries Mali, Mauritania and Senegal (Guinea is a riparian state but not a member of the OMVS) which form the OMVS cover a total surface area of 2,5 millions km^2. Together the three countries have a total population in excess of 20 million inhabitants of which more than 3 million live in the Basin. In 1972, after a severe drought, these states decided to

[1] OMVS
[2] Organisations pour la Mise en Valeur du Fleuve Senegal (OMVS)
[3] Programme d'Attenuation et de Suivi des Impacts Environnementaux

combine their efforts to ensure an integrated and coordinated development of the shared river basin.

The Senegal River basin consists of three main tributaries (Bafing, Bakoye and Falémé), which originate in the Fouta Djallon massif in Guinea.

The river is 1 800 km long and its basin covers a surface area of 300 000 km^2. The average annual volume of water which flows in the river is close to 22 km^3.

The main potential of the Senegal River basin lies in the huge surface water and groundwater resources, big mineral reserves of phosphates, gold, iron, of building material (marble, limestone, etc.), several hydro-power dam sites of which the production potential is estimated at 4 million GWh, and the possibility to navigate on the 950 km from the river mouth at Saint-Louis (Senegal) to Kayes (Mali).

Map 1: The Senegal River Basin

After numerous studies, the OMVS chose a development programme for the three main water use sectors, i.e. irrigation, the production of hydro-electricity and navigation. This programme is based on a basic infrastructure composed of an anti-salt dam at Diama in the delta (23 km from the river mouth) that prevents salt water intrusion from the ocean into the river and of a regulating dam for multiple purposes at Manantali (Mali). The Manantali dam, which is the main construction, is built on the Bafing tributary, which provides 40% to 60% of the basin's water resources. Its total volume is 11 km^3 of water and its usable volume about 8 km^3. For hydro-power generation, a station with an installed capacity of 200 MW (5 units of 40 MW each) and a network of grid lines for the transmission of high voltage energy (more than 1 300 km of lines) have been added to the dam to supply the three countries. Construction of two dams at Felou and Gouina is also foreseen.

For navigation, complementary constructions are necessary. This includes a river-maritime port at Saint-Louis, a river port at Ambidedi, seven port stops along the river, and a navigable canal for the barges with a draught of 1,5 m.

The combined functions of the two dams (Diama and Manantali) provide for:

- the irrigation of 375 000 ha of soil;
- the maintenance of enough draught throughout the year to ensure navigation between Saint-Louis and Ambidédi;
- the annual production of 800 GWh/year of hydro-power for nine out of ten years;
- the maintenance, with respect to the availability of the resource, of the hydraulic conditions necessary for the flooding of the valley and for the traditional cultivations when the water is low;
- avoiding the river being invaded by salty seawater;
- the decrease of the exceptional natural floods at Manantali to reduce the risk of flooding in the valley;
- improvement of the filling of the lakes (the Guiers (Senegal) and R'Kiz (Mauretania), as well as lakes in certain low lying areas.

3. The Origin of the NCC and LCC

3.1 Review of the Objectives of the PASIE

In order to optimise the social and environmental impacts of its development programme for the Senegal River basin and for the long-term preservation of the environment, the OMVS has, following the initial development projects described above, implemented the Mitigation and Follow-up Programme concerning the impact of the Manantali Energy Project on the environment (PASIE, 1999-2004). Whereas public participation did not play a role in the initial development project, it is this follow-up project, which saw the introduction of the LCCs as a public participation structure.

The PASIE aims to define and to implement a series of actions integrated in a basin-wide strategy of protection and preservation of the environment. Initially seen only as an accompanying measure to the Manantali hydro-power project, this programme has finally taken on a comprehensive dimension, covering virtually all socio-economic aspects, to the benefit of the population. It comprises six facets:

- the mitigation programme of the impact of the Manantali energy project and supervision of the construction of the electricity network (lines, posts and hydro-electric station), which sets out the conditions to be respected for the protection of the environment (e.g. through environmental impact assessments)

- the appropriation programme of the most important network of lines and stations (APNLS), which outlines the procedures of expropriation and compensation of the population

- the optimisation programme for the management of the reservoirs (OPMR), to define the management rules for the water projects, the legal framework and the communication and early warning systems

- the environmental health programme (Steering projects for health, for the development and follow-up of the Regional Sanitary Plan)

- the accompanying measures to maximise the positive results of the Energy Project. These concern the establishment of socio-economic and environmental projects for the benefit of the rural population (Projects to combat poverty, the promotion of rural electricity supply and feasibility studies for the construction of hydro-power dams at the Felou and Gouina sites)

- the follow-up and coordination programme which specifies the mechanisms and instruments of coordination and communication and is monitored in order to ensure the participation of all stakeholders as well as those responsible for the management and monitoring of the environment.

3.2 The Institutional Framework

The implementation of this programme has caused the OMVS to restructure its institutional set-up in order to create a participating framework for periodic discussions between the stakeholders of the various facets of the programme. Over and above the Steering Committee, which is responsible for the supervision of the overall implementation on the regional level, the plan of action consists of decentralised structures on national and local levels. It is thus that within each member country, a National Coordination Committee (NCC) and Local Coordination Committees (LCC) have been created, which report to the OMVS National Cell.

The Steering Committee is the implementing organ for projects of the PASIE programme. It defines the directions of the programme, monitors its execution and formulates recommendations.

The OMVS National Cell is the executive branch of the Steering Committee. It is the focal point of coordination and of the implementation of the projects which ensures the interface between the programme structures (NCC and LCC) and the intervening parties (consultants, companies). It falls under the direction of a National Coordinator, which also ensures the institutional link between the OMVS and the riparian state concerned.

The National Coordination Committee (NCC)
Created in 1998, at the level of each member state, the mandate of the Committee is to facilitate the exchange of ideas and coordination on the national level to ensure proper execution and monitoring by the different PASIE branches. In this capacity, this consultative organ, which facilitates the technical and administrative functions, is the representative of all the stakeholders participating in the PASIE at national level. It forms the interface between the national and the sub-regional level. It is also responsible for the creation of Local Committees. The NCC links all the technical departments involved in the implementation of the PASIE with the representatives of the public. In total there are three NCCs (the NCCs of Mali, Mauritania and Senegal).

The Local Coordination Committees (LCC)

Initiated by the OMVS, the LCC were created by a unilateral prefectorial decree and legal administrative order taken by the respective competent authority. As such they are formal associations that are legally constituted; however, they do not have formalised legal status (meaning that they cannot borrow from financial institutions or be contractors to execute a project in the name of the community to which they belong).

The LCCs form the institutional framework for dialogue among stakeholders (and with government), for the circulation of information and for sensitisation and awareness raising at grass-roots level.

It needs to be pointed out, that the name local coordination committee may be misleading, as the scope of the LCCs often extends beyond local areas. In Senegal for example "local" refers to the district level. Initially, the PASIE allowed the establishment of 5 LCCs in Senegal (Bakel, Matam, Podor, Dagana and Louga), 4 LCCs in Mali (Kati, Kita, Bafoulabé and Kayes), and 3 LCCs in Mauritania (Nouakchott, Trazza and Gorgol).

With the implementation of the GEF/Senegal River basin programme, new LCCs have been established to cover the basin. In Mali ten LCCs have been established, in Senegal there are seven, in Mauritania seven LCCs have been established and in Guinea (although not being a member to OMVS) four new LCCs have been established.

The mission statements defined by the OMVS and included in the decrees which created the LCCs, give the LCCs a very important and wide-ranging role in the responsibility for local development, by means of the management of the natural resources. The main functions of the LCCs have been defined as follows:

- to inform, raise awareness and promote of the PASIE in order to permit the good execution of the programmes initiated by the OMVS and to assure the involvement of all components of the public
- to monitor the implementation of the OMVS programmes in the field
- to supervise the discussions carried out and recommendations taken at the level of the decision-making parties
- to be the interface between the populations (stakeholders), the national authorities and the OMVS

These prerogatives of the LCCs have been reinforced by the OMVS with respect to participation in the implementation of development actions initiated by the OMVS in the basin.

Within the framework of the Management Programme for Water Resources/GEF, the main functions (information, education, training and follow-up/evaluation of projects) are well defined. This division of the work constitutes the first step towards the improvement of the structure of the organisation and towards the formalisation of the LCC's functioning.

The composition of the LCCs is not uniform. Each decree has its own specification since the choice of the stakeholders corresponds to those being directly affected by the passage of the

electricity line (within the framework of the Energy programme); it is therefore independent from PASIE's overall objectives. Generally, a LCC is composed of:

- the prefect
- presidents of rural councils
- representatives of the heads of villages;

- representatives of basic community associations;
- the local president of women promotion associations;
- agricultural cooperatives (typically stock farmers and fishing organisations) and
- relevant non-governmental organisations
- a representative of the local press

Delegates from the respective regional government's technical services (agriculture, hydrology, health), affected by the activities of the PASIE programme, attend the LCC meetings as observers to give technical advice.

The appointment of LCC members by the respective competent administrative authority is based on a transparent procedure, which allows the local and district development councils to intervene and relies on the advice of the local government, which represents the local population.

However, the members of the LCCs representing the Basic Community Organisations (BCO) can change from one meeting to another. This change in representation does not always facilitate the effective circulation of information, nor the communication necessary to ensure effective public participation.

On the operational level, a problem is the no clear regulations exist to define the organisational rules of the LCCs (periodicity of meetings, institutional relationship between the LCC and the NCC). The LCCs function on a level of dialogue between the representatives of cooperatives, of NGOs and of BCOs and to what extent its recommendations are implemented depends on the decision of the government's technical services divisions. Hence, until today the prevailing approach has been consultative rather than truly participative.

Decisions are made during meetings called by the Chairman in his capacity as Commissioner. The opinions and viewpoints of the management on the resources of the basin are disseminated and discussed at the level of the NCCs and the Steering Committee.

This form of organisation (the LCCs) has allowed the OMVS to involve the population in the environmental follow-up of the Energy Project as well as in the training for the accompanying PASIE projects. It will also be used in the implementation of the Project on the Management of Water Resources of the Senegal River basin (GEF), which aims at equipping the riparian states (Guinea, Mali, Mauritania and Senegal) with a framework to ensure sustainable participative management of the basin as well as with the institutional and technical capacity necessary for its implementation. Hence, the LCCs are now moving from the initial experimental stage towards becoming permanent structures involved in basin management. They will therefore in the following be analysed in more detail according to the level of representation, the level of information and the level of involvement in the activities of the OMVS.

4. Review of the LCCs

4.1 Level of representation

At NCC level, the population is represented by representatives of the different LCCs. At the level of the LCCs, the population is represented by locally elected persons, the heads of the village and the organised structures formed by cooperatives (farmers, fishermen). The involvement of NGOs as stakeholders in the participation procedure has been a drawback in the plan of action due to the lack of clear criteria for their selection. Unless such criteria can be developed, the involvement of the community most directly aligned with the village seems to be a better approach.

4.2 Level of Information

The information and awareness raising activities for the population were specifically developed by a sociologist recruited by the World Bank, and made available to the National Cell.

The communication approach which was adopted in the absence of a formal communication plan has been adequate. It is based on the following techniques of engagement and community participation:

- general assemblies grouping together the heads of village, the persons in charge of the cooperatives of which some are members of the LCCs

- individual interviews with the owners of irrigated land or the people concerned whose properties and goods (houses, fields) have been affected by the introduction of the electricity grid lines

- working groups in the villages using the « Focus Group » (men, women and young people) approach

- having resource to the mass media, especially the rural radios for the transmission of information to the local authorities, to villages and to the population

However, difficulties have been observed at the communication and information level. These are due to the distances to cross in order to reach all the target groups, or to the inability of the representatives of the BCOs to ensure the dissemination of information. The absence of an engagement programme, of information platforms and of the production of communication tools have not facilitated the networking of all the groups represented. With the engagement of the LCCs being one of the most important factors for the successful implementation of the participating framework of the natural resource management projects, it is important to equip each LCC with an organ which is specifically responsible for communication and information. Its role would be to plan and develop various forms of participation programmes, working in collaboration with the OMVS, the media and the population.

This information system must also be based on an external network on a national and transboundary scale of which the functioning mechanism must be defined within the framework of a programme for the participation and sensitisation of the public.

4.3 Level of involvement

The LCCs have as a mandate the development of the activities under the environmental follow-up programme to the Energy Project (PASIE), the development of activities under the various accompanying PASIE projects and to contribute to the development of the Water Charter of the Senegal River.

4.3.1 Appropriation Programme of the stations and HT electric line services (PADE) of the Manantali Energy Project (1999-2003)

The aim of this programme, one of the main components of PASIE, is to minimise the effect on the environment before, during and after the construction of hydro-power stations and the grid network of the Manantali Project. The LCCs have carried out the following tasks:

- to sensitise and inform the population about the routing of the Manantali power line, and about the questions associated with the management of the water resources and the environment

- to participate in determining the optimal use and validation of the Eastern (Manantali-Bamako) and the Western lines (Manantali-Kayes-Bakel-Matam-Podor-Dagana-Tobène with a bypass through Dagana-Rosso-Nouakchott)

- to contribute to establishing scales for compensation of affected people

- to identify the beneficiaries who have a right to claim for damage

- to negotiate the expenses incurred and to compensate the beneficiaries for it

In order to perform these activities, the LCCs have organised themselves around the National Cell of the OMVS and the Project Manager, who supplied the technical support, communication aids, cartographic and reference tools and assessment procedures.

The national technical services have been mobilised to monitor the progress of the communication plan, and the negotiation with and compensation of individual and collective beneficiaries. Local LCC technical commissions for the evaluation of damage have played a very important role in the identification of damage and of beneficiaries before the construction of the sites.

To the benefit of this plan of action, the LCCs created the appropriation programme, from the identification of damage until the information contained in the files, in an excellent manner.

All the reports were completed and the files sent to the national state services in 2002. Since the services were cleared, the Energy Project could therefore go into operation.

In Mali, the assessment of the damage and the identification of beneficiaries made it possible to evaluate the compensation at an amount of 560 millions of francs CFA for 511 people. In Mauritania 136 cases were recorded for an amount of 45 million Ouguiyas. In Sénégal 97 millions of francs CFA were estimated for 110 beneficiaries. The compensations, under the supervision of the LCCs and NCCs, have been paid in full.

During and after the construction of the grid lines, the LCCs showed a willingness to cooperate. They have ensured the dissemination of information amongst the population, the

enterprises and the State services, which have contributed to prevent conflict between the population and the mediators.

No specific constraints or claims were recorded. Thanks to the LCCs' contribution, this project has proved to be a great success.

4.3.2 Development of the Water Charter

In 2002 the OMVS undertook socio-economic studies for the development of a water charter with the following objectives:

- to establish the principles and ways of distributing the water of the Senegal River between the various economic sectors: agriculture, food, drinking water for the population, energy, navigation

- to define the means of assessment and approval of new projects submitted by the states for the use of the water resources, as well as the conditions of authorisation

- to lay down the legislation applicable to the preservation and protection of the environment

- to define the framework and the conditions of participation by water users in water resources management decision-making

When the basin studies were carried out, the LCCs were involved and consulted in matters such as the definition of the framework and the conditions of public participation, the inventory of water users, the conditions of approval and the legislation pertaining to the environment.

Their opinion was included in the reports on the restitution work in which they participated. Their strong involvement made it possible for the OMVS to make use of an innovative and modern legal instrument which outlines the rules framework for the allocation of and access to natural resources. This Water Charter could serve as a « Code » for the LCCs for their information and follow-up activities on the environment issue.

4.3.3 The accompanying projects

Training by the LCCs for the accompanying PASIE projects has also included the Steering Projects on Health and the projects to combat poverty.

(i) Steering projects on Health

The Steering Projects on Health fall within the framework of the Environmental Health branch of the OMVS, with the objective of participating in the combatting of water-borne diseases, particularly bilharzia. The LCCs of the areas concerned have participated in:

- the identification and choice of the locality and of the type of infrastructures to use. Meetings of the Focus Group (women, men and young people) supported by sociologists and the study leader made consensus possible.

- the introduction of committees for infrastructure management (management and maintenance of canals, wash houses, water supply systems, toilets etc.)

The LCCs have also developed or accompanied the Information-Education-Communication (I.E.C.) activities in the villages, participated in the training of key stakeholders responsible for the distribution of educational messages on the fight against bilharzia. These actions have enabled the reduction of bilharzia occurrence in certain places. For example in the village of Mali, a place where the rate of occurrence was very high, a zero rate of reported cases has been achieved.

(ii) Micro-projects to Combat Poverty (MPCP)

This programme is one of the accompanying measures of the PASIE to support Member States in their efforts to combat poverty through the promotion of income generating activities in the Senegal River basin.

For the preparation and the implementation of the MPCP, the LCCs, after being informed of the selection criteria, have made an inventory, identified and pre-selected the projects relevant to their locality (district). In total, more than 300 projects are being carried out in various sectors (agriculture, hydraulic, (cattle) breeding, trade) at an overall cost of 600 million CFA.

Meetings organised at LCC level have made it possible for populations to identify their priorities and to define the best ways of implementation as well as procedures for the management and oversight of projects.

Some LCCs have chosen the equipment and entrusted the work to local entrepreneurs. Other LCCs have engaged mutual credit and savings agencies for the management of the funds put at their disposal. Monitoring the implementation of the projects is ensured by the technical services.

On the whole, satisfactory results have been obtained in the implementation of the PASIE, and in spite of certain weaknesses due to their relative recent formation, the LCCs seem to have carried out their role of coordination and supervision very well, and they have succeeded in installing confidence in the local authorities and the communities concerned. They have an undeniable potential for mobilising and coordinating the monitoring of environmental activities and for carrying out projects within an atmosphere of sharing and participation with the population. Moreover, the LCCs have a stable institutional base and practical experience with regard to monitoring the environment which make them powerful tools for the integrated basin wide management of natural resources.

5. The LCCs/NCCs and the OMVS Programme for the Management of Natural Resources

Following the success of the experimental stage, the LCCs are now becoming a permanent structure involved in all forthcoming development programmes initiated by the OMVS as part of their Natural Resource Management Programme.

5.1 Participative Aspect of the Programme

Integrated transboundary water resource management for sustainable ecological development is a strategic long-term exercise. This exercise is based in the first place on the local management of natural resources, which means that the population is in control of the

decisions, rules and initiatives pertaining to the use of shared resources on which their livelihoods depend.

The integration of local initiatives on a higher geographic and strategic scale (communal, regional and national) will consolidate the process. In practice, this means that a framework and tools must be found with the purpose of promoting not only consultative but also collaborative participation. This participation is founded on some fundamental rules which relate to:

- the exercise of decision making power by the local collectives and to give them management responsibilities (i.e. identification, planning, implementation and monitoring of actions)
- an awareness of the common interest and the collective action
- the dialogue, the sharing of experiences and the search for synergies between the development protagonists (NGOs, projects, community action).

The aim of participating in the management of common resources is clearly set out in the Senegal Water Charter and will be achieved through the coordinated implementation of closely connected activities, foreseen within the framework of the OMVS programme in which the LCCs play a key role.

5.2 What is the role of the LCCs/NCCs?

The main roles of the national and local coordination structures are the following: (i) to ensure coordination, supervision and advice in the implementation of the activities of the project; (ii) to facilitate dialogue and the communication of information between the members of each structure as well as between the structures themselves and (iii) to promote participation on a large scale by the stakeholders of the Senegal River basin in the development, the implementation and the follow-up evaluation of the measures required for sustainable resource management. In the future this will include:

- greater involvement/representation of the affected parties, especially the communities, NGOs and local private operators in the decision-making organs (NCCs, LCCs)

- reinforcement of the communication, consultation and exchange of information amongst all the stakeholders in order to facilitate cooperation and synergy on both the horizontal and vertical levels (branch responsible for the participation of the public)

- reinforcement of the organisational, negotiation, technical and planning capacities and also of the management by the population through their organised structures for a better understanding of local development activities (micro-projects, fundamental management, etc.)

- involvement of the local NGOs and of inter-community associations in the raising of awareness and information dissemination activities

- greater participation of the communities in the programmes for micro-subsidies, for health and for the combatting of poverty. These programmes were initiated by a horizontal coordination amongst the stakeholders and a vertical coordination on the local and the national level, and the national and regional levels

5.3. Challenges and recommendations for improvement

In order for the coordination structures (NCCs/LCCs) to play an effective determining role in the process of participative management and to thus contribute to meeting the challenges that the sustainable management of natural resources present, they have to comply with certain requirements regarding organisation, information and the technical capacities of engagement, planning, execution and follow-up-evaluation.

5.3.1 Challenges

An analysis of the first (experimental) stage (the PASIE project) of public involvement in the activities of the OMVS shows certain difficulties in behaviour, communication and partnership have occurred. The following aspects should be kept in mind and be addressed in order to ensure the sustainability of the structures:

- ***At national level,*** we note especially:
  - (i) a weakness in the practice of planning and follow-up evaluation;
  - (ii) the information management is not organised and the distribution of information is limited;
  - (iii) a still restricted knowledge of the multi-sectoral dimension of the environment.

- ***At local level,*** the problems are more complex and are generally associated with a multitude of constraints which are closely connected:
  - (i) the absence of information mechanisms at local level
  - (ii) the weak capabilities of the population and their organised structures with regard to organisation, negotiation and management
  - (iii) the weak intervention capacities of the communities and the lack of clarification of the responsibility of the community in the management of natural resources
  - (iv) the lack of available financial resources on the local level, in particular for participation
  - (v) the weak intervention capabilities of local private operators

Organisational level
The LCCs not only have to function as a consultative organ but occasionally also as implementing agencies to promote development and work programmes. Consequently, it is important to clearly set out in writing:

- the organisation and the functioning of the NCCs/LCCs (periodicity of meetings, planning and monitoring tools, products expected and commitments, including the statutory reports, responsibilities, archiving of documents, distribution of information);

- the roles and responsibilities of the structures (LCCs) under the Senegal Water Charter and other relevant legislation

- the procedures elaborated by the LCCs pertaining to the management of programmes and projects to be implemented (micro-projects to combat poverty, micro-subsidies, programme to combat alien vegetation).

More specifically concerning the internal organisation of the LCC, the responsibilities of the different stakeholders must be made clear and the financial means necessary for the realisation of their activities must exist.

Since the LCCs ensure consultation on a district level, the possibility of establishing contact points on a communal and local (villages) level should be envisaged. In fact, the decentralisation of meetings is imperative for broadening dialogue.

At the village level, one should identify, and eventually organise the villagers into village units for sustainable development or management, by favouring the consolidation of endogenous structures. The OMVS, together with the World Bank and within the framework of a Management Programme of the Water Resources and of the development of practices with multiple aims, will initiate a delocalised programme run by the inter-village units for sustainable development.

Technical level
The new responsibilities of the national and local coordination structures assigned to these basic organisations necessitate a more in-depth knowledge in the following fields:

- environmental evaluation (for the implementation of micro-projects)

- the sensitive areas of the OMVS programme: degradation of land and ecosystems, pollution of the water, importance and management of wetlands

- participative approach and communication and dialogue techniques (engagement of groups, focus group, semi-structured interviews, networking, sharing of experience). In order to do this a specific plan aimed at the LCCs to improve information exchange and communication, and a plan for the distribution of information between the LCCs and the different categories of local stakeholders must be included in the general communication plan

- the strategic assessment planning of the needs of the population (objectives, results, activities, follow-up indicators and tools and procedures of follow-up evaluation)

- methods for the better inclusion of the interests and the specific priorities of women and their involvement in management structures

5.3.2 Recommendations

Experience has shown that community groups form entities that are capable of managing the natural resources on which they directly depend. To this effect, the introduction of partnership and complementary systems between the population and the various intervening parties has proved to be an efficient tool to make the population more responsible and at the same time to provide them with the support and the knowledge required. This approach is the only one which can guarantee the feasibility of community actions and ensure their sustainability. However, it implies a change in mindset of both the population and the various entities responsible for development. In fact, it implies that both parties have to learn a new way of operating, based on listening, dialogue, exchange of information and knowledge, commitment and a mutual respect for the laid down rules.

1. The communication aspect must play an essential role to create the framework of dialogue necessary for the development of the partnership (collaborative

participation). Nevertheless, there are other important parameters linked to the improvement of the legal and institutional framework which must of course also be taken into account.

2. The propensity of individuals to organise themselves in view of a collective action will depend on the advantages they expect, which in turn depend on several parameters. The level of decentralisation must get to the stage where the local populations take responsibility and ownership for managing natural resources. For this the LCCs in the long-run must be given full legal status, allowing them to take loans, to collect user fees and enforcement capacities to ensure that their water (and other resources) use regulations are respected.

3. The benefits of the efficient management of natural resources are usually only evident in the long term. This is why it is important that this dynamic be accompanied by sub-projects which result in financial and/or economic profit for the local communities in the short term, at the same time achieving the objectives of efficient resource management on a local scale. The objectives of the micro-subsidy programme of the project point in this direction.

4. Finally, a large-scale adoption of successful examples of local management systems requires the formalisation of efficient institutional and operational linkages between the public sector, the private sector and the community groups. The following are the prerequisites for this formalisation:

   - to ensure a realistic representation of all stakeholder groups concerned with the management of basin resources

   - to support the structuring and organisation of the local level organisations, to allow them to act out the role of disseminating information

   - to strengthen local management capacities for the implementation and management of micro-projects

   - to clarify and formalise the responsibilities of partners (institutions of the basin, territorial administration, technical services, communities, basic community organisations)

   - to strengthen communication between the populations of the basin in order to contribute to the sharing of experience as well as the transfer of know-how through suitably adapted communication programmes

   - to provide the LCCs with the adequate financial means for continuous operation. This is indispensable for an enlarged level of dialogue for the population and continued support of the decentralisation process.

6. Conclusion

In order to give the public answers in respect of the various opportunities offered by its programme, the OMVS has, through the LCCs, started a participative action, the results of which are very encouraging.

This participative action of a collaborative nature must be widened in order to give stakeholders all the opportunity to make their voices heard. In the light of this, it is important that representatives of the main groups of the affected parties play an active role and feel that they are fully responsible. The limitations mentioned in the analysis section of this study show some of the current weakness of the participative approach, which lie in the institutional and organisational set-up, a shortage of human and financial resources and a lack of knowledge in evaluation and monitoring. However, despite these weaknesses the establishment of the LCCs is an important step towards true public participation in the Senegal River basin. Addressing the outlined weaknesses will strengthen the structures and their role in managing the basin's resources will further increase.

List of acronyms

AMSR : Active Method of Shared Research

APNLS : Appropriation Programme of the Network of Lines and Stations

BCO : Basic Community Organisation

CDA : Cross-border Diagnostic Analysis

FWE : Fund for World Environment

I.E.C. : Information, Education, Communication

LCC : Local Coordination Committee

MNR : Management of Natural Resources

NCC : National Coordination Committee

NGO : Non-Governmental Organisation

OPMR : Optimisation Programme for the Management of Reservoirs

PCAP : Programme for the Combatting of Poverty

PSA : Plan of Strategic Actions

SRDO : Senegal River Development Organisation

UNDP : United Nations Development Programme

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Local action for a global challenge – the case of the Komati River Basin

By Enoch Dlamini[1]

1. Introduction

"The sage's transformation of the world arises from solving the problem of water. If water is united, the human heart will be corrected. If water is pure and clean, the heart of the people will readily be unified and desirous of cleanliness. Even when the citizenry's heart is changed, their conduct will not be depraved. So the sage's government does not consist of talking to people and persuading them, family by family. The pivot (of work) is water."
Lao Tze

Aaron Wolf (2002), Associate Professor of Geography at Oregon State University, uses the above quotation in the introduction to his paper on "Conflict Prevention and Resolution in Water Systems". In this paper Wolf reprints the most significant cases on the prevention and resolution of conflict over water resources. He forecasts particularly on the human dynamics that are involved when conflict over water resources impact on different interest groups, economic sectors and legal or political boundaries. He discusses key issues arising both at local and international level: How people interact in these situations of conflict? What methods do they use to find a compromise? What institutions they create – either jointly or unilaterally – to overcome problems in the future? Water resources professionals and practitioners can take a leaf in Wolf's interdisciplinary collection on conflict prevention and resolution in water systems. Resolving tensions over water can be used as a tool for peace and cooperation amongst neighbors and nations. Cooperation on water matters is therefore paramount. This paper discusses the case of cooperation on the Komati River Basin between the independent states of the republics of South Africa, Mozambique and the Kingdom of Swaziland. This cooperation goes deeper than simply cooperation between the countries, it has fostered cooperation amongst water users within each country, each water use sector as well as amongst the countries. Although small and localized, such actions contribute meaningfully to the global challenge on water.

2. Background

The Komati River Basin forms part of the Incomati River Basin (Figure 1). It is a shared watercourse system between the independent southern African states of the Republic of South Africa, the Kingdom of Swaziland and the Republic of Mozambique. These states are members of the Southern African Development Community (SADC). The SADC Protocol on Shared Watercourses governs transboundary water resources management in the SADC member states. The Protocol is aimed at promoting cooperation, peace and

[1] Komati Basin Water Authority (Kobwa)

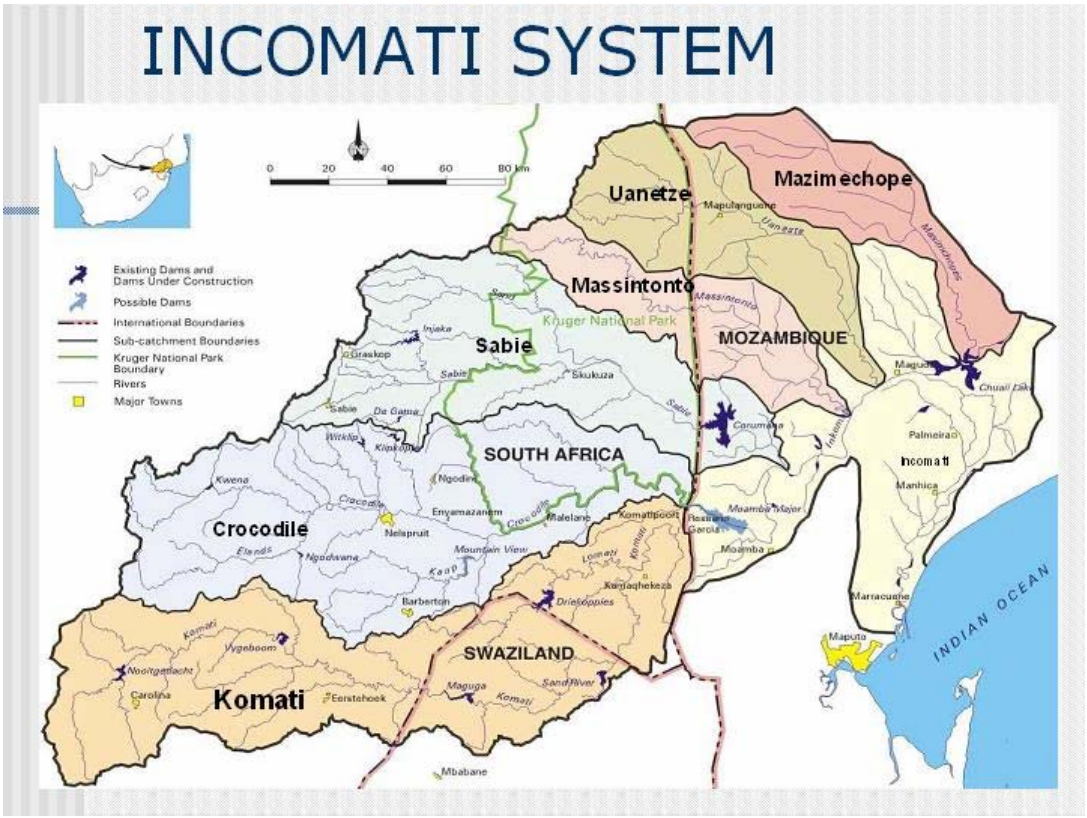
development among basin states through the joint management of shared river basins. One of the fundamental objectives of the Protocol is the establishment of multinational Shared Watercourse Institutions (SWCI) for transboundary watercourses and the harmonization of legislation and policies for integrated water resources management. The Komati River Basin is managed in accordance with the principles of the Protocol. Since 1948 there have been bi-lateral cooperation forums between the Governments of the three countries. These forums, called Joint Permanent Technical Committees (JPTC) are technical committees composed of government officials from any two of the countries.

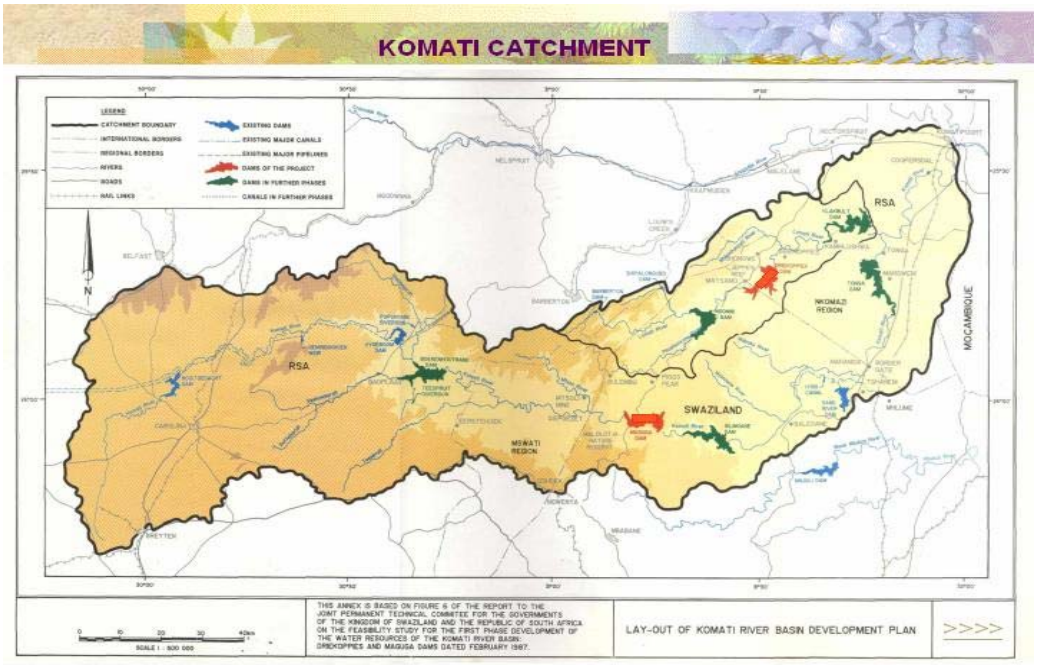
The committees advise the governments on matters relating to rivers of common interest. In 1983 a tri-lateral forum, the Tripartite Permanent Technical Committee (TPTC), was established between the three countries. In 1992 the Kingdom of Swaziland and the Republic of South Africa signed the Joint Water Commission (JWC) Treaty. This treaty effetely converted the JPTC between the two countries to a commission. On 29 August 2002 At the World Summit on Sustainable Development (WSSD) in Johannesburg South Africa, the three basin states, including Mozambique, signed the "Tripartite Interim Agreement between the Republic of Mozambique and the Republic of South Africa and the Kingdom of Swaziland for co-operation on the Protection and Sustainable Utilization of the Water Resources of the Incomati and Maputo Watercourses". This agreement is currently at implementation stage. A comprehensive water sharing agreement is expected by the year 2010.

In 1992 the Treaty on the Development and Utilization of the Water Resources of the Komati River Basin was signed between the Republic of South Africa and the Kingdom of Swaziland. The treaty provides the legal basis for the Komati River Basin Development Project and effectively is a comprehensive water sharing agreement between the two countries, thereby taking cognizance of Mozambique's requirements. Although the Republic of Mozambique is not a signatory to the treaty they gave consent through the Pigg's Peak Agreement for South Africa and Swaziland to proceed with the Project. The Piggs Peak Agreement provided for: (i) South Africa and Swaziland to proceed with the implementation of the Komati River Basin Development Project. Water sharing between Swaziland and South Africa is stipulated in the Treaty on Development and Utilization of the Water Resources of the Komati River Basin. (ii) An interim cross-border flow to Mozambique of 2 m^3/s averaged over 3-days at Rossano Garcia. (iii) The Joint Incomati River Basin Study (JIBS) to proceed. The JIBS would be used as the basis for assessing Mozambique's equitable share of the water resources of the Incomati River Basin. The results of JIBS were used in the "Tripartite Interim Agreement" signed at the WSSD in 2002.

The Komati River Basin Development Project comprises the construction of several dams in the Komati River Basin as indicated in figure 1. The Komati Basin Water Authority (KOBWA) was established through the treaty to implement phase 1 of the Project; comprising of the construction of the Driekoppies Dam in South Africa (sub-phase 1a) and

Figure 1: Incomati Catchment





Maguga Dam in the Kingdom of Swaziland (sub-phase 1b). The project is a water resources development project aimed at reducing poverty and to create employment opportunities through commercial agricultural development, especially in rural communities. Apart from implementing phase 1 of the project, KOBWA was tasked with the responsibility for the overall management of the water resources of the Komati River Basin including the delivery of the 2 m^3/s cross-border flow to Mozambique that was the subject of the Pigg's Peak Agreement and the environmental water requirements of the river system.

2.1 Regional and International Water Initiatives:

While the events involving the signing of the treaties and agreements between the three countries were unfolding, parallel developments were taking place at regional, continental and global levels. The Southern African Development Community (SADC) Protocol on Shared Watercourse Systems was signed in 1998. All water initiatives in the SADC region were coordinated through the SADC Secretariat. SADC's main objectives for water resources development are defined to respond to the Regional Indicative Strategic Development Plan (RISDP): (i) to provide a sustainable enabling environment for Water Resources Management and Development; and (ii) provide leadership and coordination in water resources strategic planning, use, and infrastructure development through the application of integrated water resources management at both Member States and Regional Levels.

On August 7th, 2000 in Windhoek Namibia, the SADC Protocol on Shared Watercourses was signed by member states to replace the SADC Protocol on Shared Watercourses Systems. The revised Protocol brought the SADC Protocol in line with the May 1997 UN-Convention on the Law of the Non-navigational Uses of International Watercourses. The SADC Secretariat was restructured and the water sector, which was a stand-alone sector, was incorporated under the Infrastructure and Services Directorate to facilitate better funding. In June 2004, in Gaborone (Botswana) the SADC Integrated Committee of Ministers (ICM) approved a number of programmes for the region in the water sector under the SADC Regional Strategic Action Plan on Integrated Water Resource Management (RSAP-IWRM). These included (i) the Regional Programme for Water Supply and Sanitation Development (WSSD), which will be used by SADC as a framework to facilitate the achievements of the Millennium Development Goals (MDG) in the focal areas of water and sanitation, (ii) the Regional Programme for Human Resources Development in Integrated Water Resources Management and Development (IWRMD), of which one of the key components is the Training of Practicing Professionals in Integrated Water Resources Management (IWRM), (iii) Waternet programme on Integrated Water Resources Management network for SADC, and (iv) the Regional Water Policy(adopted by ICM) and the draft Regional Water Strategy. Recently in March 2005 in Johannesburg – South Africa, the SADC Ministers responsible for Water approved the vision and mission for the SADC Water Programme.

At continental level, water can play a vital role in the realization of the objectives of the African Union as outlined in the Treaty establishing the Union. The main objectives of the African Union include amongst others, to: (a) achieve greater unity and solidarity between

the African countries and the peoples of Africa; (b) accelerate the political and socio-economic integration of the continent; (c) promote sustainable development at the economic, social and cultural levels as well as the integration of African economies; and to (d) promote co-operation in all fields of human activity to raise the living standards of African peoples; (e) promote peace, security, and stability on the continent; (f) promote democratic principles and institutions, popular participation and good governance. African leaders realized that water is an essential vehicle in achieving these objectives. In preparation for the Summit on Sustainable Development (WSSD) in Johannesburg in 2002, African Ministers for water launched the African Ministerial Conference on Water (AMCOW) in Abudja – Nigeria on September 2001. AMCOW was established in order to formulate Africa's agenda for the water sector based on the vision outlined in the instruments establishing the African Union. In the Treaty establishing the African Union and in the New Partnership for Africa's Development (NEPAD), African Heads of State and Government indicated that the destiny of the continent is in the hands of its people. AMCOW recognized that the primary responsibility for ensuring the sustainable and equitable management of water resources, in Africa, rests with its Governments and people and that the Ministers have a special role to play. The Komati River Basin Project goes a long way in contributing to the above regional and continental initiatives by increasing the surety of water supply. It has contributed to the sustainable development of people of the Komati River Basin in the basin states. Subsistence farmers are now participating actively in the mainstream economy by being involved in commercial agriculture. Through continuous interaction in the activities of the project, the project has promoted unity, solidarity, peace, security, stability between the residents in the riparian states. They have come about as a result of the principles of democracy brought about by the project. Regular meetings are held at every level of decision making between the countries' governments at JWC, TPTC, JPCT forums as well as between water users and water user sectors at the Komati Joint Operations Forum (KJOF) meetings. These interactions are explained in detail in the next section.

3. Implementation of Phase-1 of the Komati River Basin Development Project

The Komati Basin Water Authority (KOBWA) was established through the Treaty on the Development and Utilization of the Water Resources of the Komati River Basin to implement phase 1 of the Komati River Basin Development Project. KOBWA was established as a private company with legal status in both Swaziland and South Africa. KOBWA has a Board of Directors comprised of six members, of which each country appoints an equal number. The Directors are appointed based on the individual expertise they bring to the Board in order to implement the Project. KOBWA reports to the JWC, which is comprised of six members, of which each country appoints an equal number from members of the civil service of the Government. It is important to highlight the importance and advantages of jointly developing the water resources of the Komati River Basin. The joint development and management of the water resources of the Komati River Basin made it possible for KOBWA to apply the principles of integrated water resources management and to manage the river in a basin context. For example in the Komati River Basin

Development Project, the best dam sites were selected based on technical and economic basis without being confined by national boundaries. The selected dams supply water to both countries irrespective of their location. KOBWA raised loans backed by the Governments of the two countries to finance the Project. The loans are raised by KOBWA as a private company but the Governments guarantee the loans. This removed financial, economic and political limitations that would have been faced by each of the countries if they undertook the project individually. KOBWA being a private agency is able to attract highly qualified staff without being limited by legislation or practices that may restrict the Government of a participating country from employing the most suitable staff available in any one of the countries. In addition KOBWA has less restrictive requirements and a much bigger labor market to recruit from in that they can employ anyone from the participating countries. As a result KOBWA was able to implement the Project by applying best international practice. Since KOBWA has legal status in both countries, KOBWA has the advantage of dealing with the water resources of the Komati River Basin in a river basin context and in an integrated manner. Joint development also meant that KOBWA has to consider the economic, social and political disparity between the two countries. The main aim was that of ensuring parity in the implementation of the Project in both countries. This is possible because the implementing agency is the same in both countries and cannot be seen to be treating the subjects of one country differently from that of the other country. This was more important in matters relating to environment and resettlement matters associated with the dams. KOBWA is responsible to the Joint Water Commission and not directly to the Governments. This Joint Water Commission ensured that in implementing the Project, KOBWA ensures that the interest of each country is taken into consideration. None of the countries wants to be seen to have contributed to the impoverishment of the people affected by the Project in the other country.

The policy of the Project stipulated that, “the affected people must be left better off than they were prior to project implementation.” To achieve this goal, it was important to involve the affected people at all levels of decision-making. When the infrastructure of the Project was planned and the Comprehensive Mitigation Plan (CMP) was developed, various committees were established and trained to assist in the planning and implementation of the project. The committees comprised of a number of stakeholders but most importantly representatives from the affected people. (affected people came from rural communities around reservoir area.) These included committees for employment during construction, resettlement, dispute resolution and development. The committees for development were established to address matters related to grazing, irrigation, public infrastructure (road, electricity, water supplies, etc.), business development and other relevant matters. There were also committees formed consisting of representatives from Government institutions who will continue to assist the affected people when the project implementation is completed. The project funded the participation of community representatives on these committees to ensure full participation. All the information generated by these committees was utilized by KOBWA as the implementing agency and ultimately the Joint Water Commission and the Governments who had the ultimate responsibility for enforcing action.

In addition members from the affected communities were motivated to become actively involved during the implementation of the CMP. This was done by constructing

replacement houses, installation of rural water supply schemes, construction of fences, etc using local contractors and utilizing skills available within these communities. Where possible preference was also given to the employment of local people and local sub contractors during the construction phase of the main infrastructure.

By involving all stakeholders at all levels of decisions making and ultimately involving them during implementation as well it is hoped that the stakeholders will make every effort that the initiatives put in place are sustainable. The project has committed itself to long-term monitoring (10 years) based on the baseline study carried out before the project. The main aims are to monitor progress, implement corrective action where possible to promote sustainability and effective rural development amongst the affected communities. While external monitoring agents were appointed provision was made to involve all stakeholders including community representatives. Community representatives were trained to assist with the monitoring activities. The monitoring activities as well as the participation of stakeholders are budgeted as part of the project. Monitoring reports are shared with everyone interested in order to commit everyone interested to the process. A panel consisting of international recognized experts carried out periodic monitoring to ensure compliance with international best practice.

However, at times there are problems beyond the capabilities of the project and particularly the stakeholders such as the severe droughts ongoing in the region, changes in commodity prices, international trade agreements, etc. These factors have the tendency to test the stability and resilience of the stakeholders involved. To counter the impact of these events stakeholders are involved in formulating recommendations regarding the implementation of water restrictions, agricultural producers are motivated to diversify production activities, communities are motivated to engage in non-agricultural activities like tourism development, etc.

The involvement of the affected people in their own destiny, particularly the construction of their own houses and other infrastructure, may appear to be expensive initially. However, when this is looked at in the long run, the development and transfer of skills are invaluable in ensuring the sustainability of the infrastructure and community organizations. At times the project discovered that it was cheaper to give the community certain projects to do such as fencing and others, than to use qualified service providers in the form of contractors. This is true even if one factors in the cost of providing technical support. The major benefit however, remains the fact that by being involved in the construction phases of the infrastructure, the community also accepted ownership and responsibility for the future of their projects.

3.1 Water Resources Management in the Komati River Basin

After the completion of the construction of Driekoppies Dam in 1999, KOBWA moved to the operational phase of the Project. It was very important that the operating rules of the Komati River System be established. The water resources available in a river basin depend on the hydrology, land use, size and type of infrastructure developed and the manner in which the infrastructure is operated. It is important that the operating rules of the Komati River Basin be established at basin level. The TPTC is representing the three countries was

the custodian of the operating rules. During 2000, the TPTC set up the Incomati System Operating Task Group (ISOTG) to develop and make recommendations regarding operating rules for the Incomati Systems. The ISOTG comprised of representatives appointed by the three governments. In its recommendation to the TPTC the ISOTG proposed that KOBWA develop decision support systems for the management of the Komati River System. They also proposed the establishment of a monitoring network to provide essential river flow data to support the decision support systems. Besides collecting the necessary hydrologic data required for the system, the river flow-monitoring network also serves as an early warning system for floods, droughts, diseases and incidents of pollution (water quality). The monitoring network comprises of near real time water quality and quantity measurement that are conveyed to all stakeholders. There are essential in providing an early warning system during flood events. They flood emergency preparedness plan for the two dams rely on the monitoring network. In addition, the monitoring network provides water quality data. Regular sampling and analysis of water quality information of the dams and the river system supplement the water quality data. This information assisted immensely in incidents of waterborne diseases outbreaks. Any outbreak from one country is communicated to the other basin states in time for measures to be put in place to prevent the spread of the outbreak. ISOTG proposed the establishment the Komati Joint Operations Forum (KJOF) comprising of representatives from the Water Departments of the three countries as well as water user representatives, to assist KOBWA with the operational matters of the system. Information regarding the management of the river is discussed at the KJOF first, then to the KOBWA Board and finally to JWC and the Governments. Figures 2 and 3 shows the institutional setup for managing the Komati River Basin and that of the KJOF respectively.

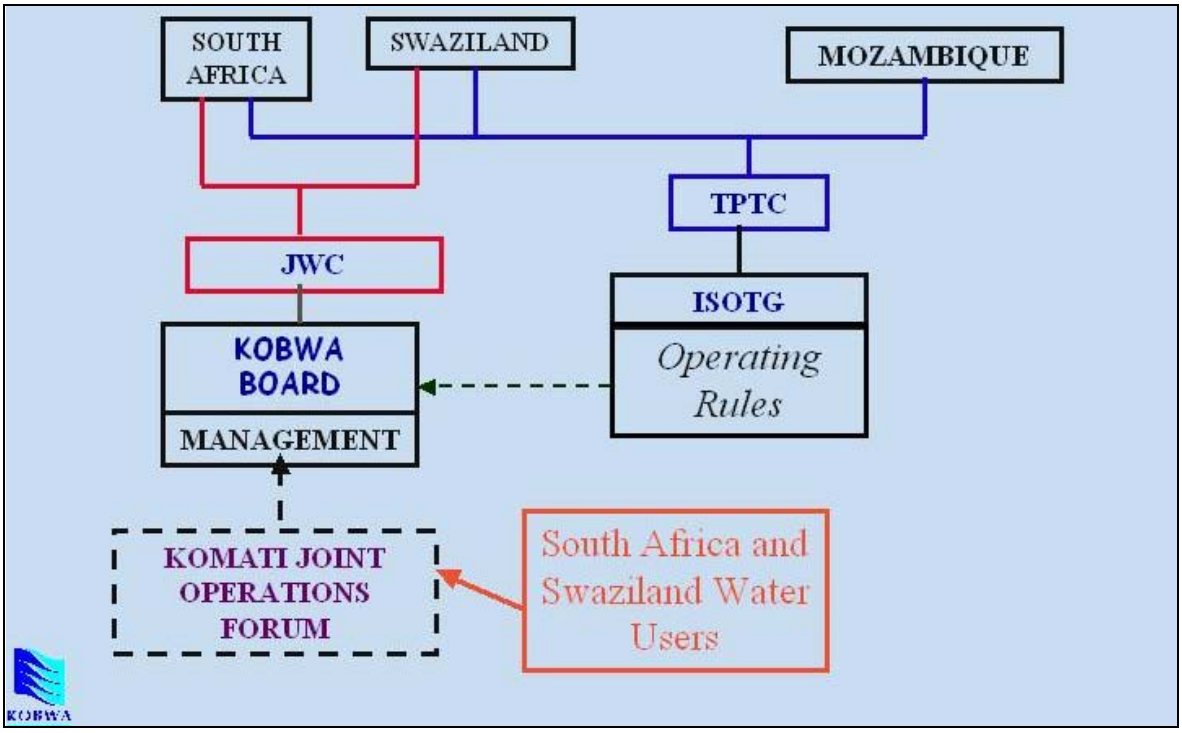
3.2 Institutional Framework for Managing the Komati River Basin

The cornerstone of the management of the water resources of the Komati River Basin lies in the effective involvement of stakeholders through suitable institutional channels. Stakeholders are essential in assisting KOBWA with informed decision-making. KOBWA as the operator is at the centre of the institutional set-up. Matters affecting policy are decided upon at the Joint Water Commission (JWC) as advised by the KOBWA Board of Directors. KOBWA Management decides upon operational and administrative maters as advised by the Komati Joint Operations Forum (KJOF). The KJOF is the engine of the institutional setup. As indicated the KJOF comprises of representatives of the water users and officials from the Water Departments of the countries and is chaired by KOBWA. On average all these bodies meet separately once a month depending on the need. At present Mozambique is not participating regularly as the operational activities is mainly dealing with the water utilization in the two up stream countries. The current operational interest of Mozambique is in the cross border flow as per the Piggs Peak Agreement. However this is likely to change with the implementation of the Interim Incomaputo Agreement.

The legislation in both countries requires the establishment of grassroots water user forums. These include catchment forums, irrigation boards, project boards, water associations and other environmental advocacy groups. At a high level, representatives from the grassroots organizations meet at catchment management level forums. The establishment of the KJOF through the Project has provided a forum where representatives from various water user

sectors represented by the grassroots organization meet with KOBWA and the Government Departments representatives monthly at Basin level to discuss operational matters concerning the water resources of the river basin. At the KJOF meetings KOBWA presents the state of the river basin to the members of the forum. Members are given the opportunity to voice their concerns regarding the management of the river. Issues raised at the KJOF are addressed by the KOBWA management and if required submitted to the KOBWA Board of Directors, the Joint Water Commission and finally to the respective Government depending on the nature of the issue.

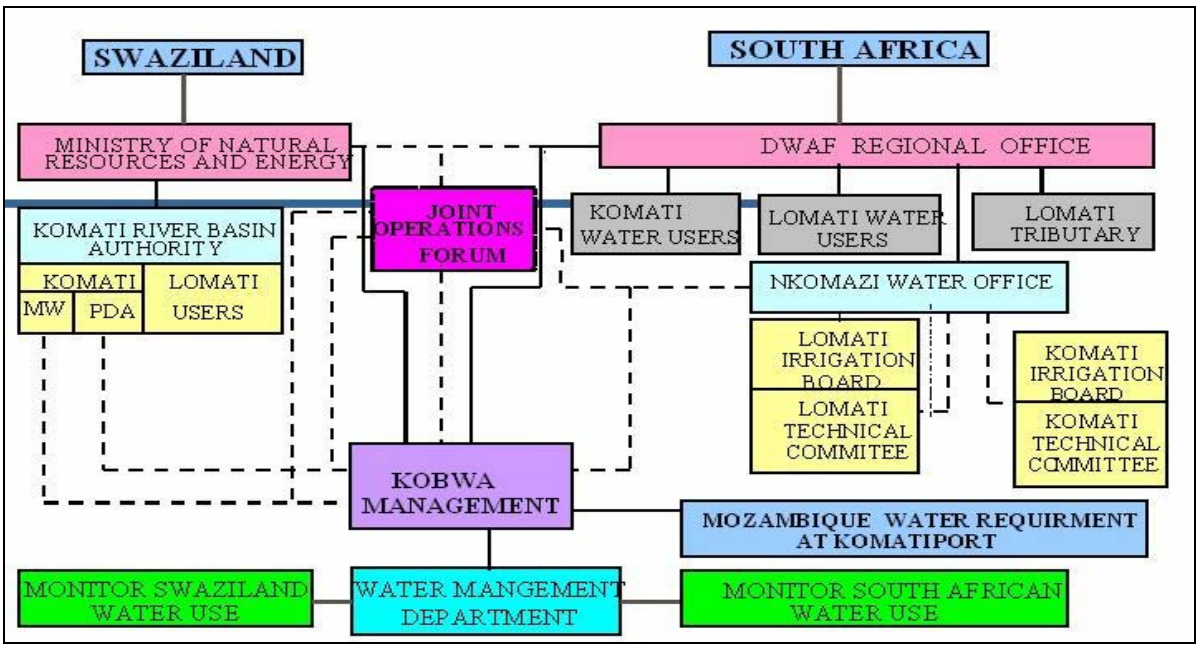
Figure 2: Institutional Framework



3.3 Decision Making Process:

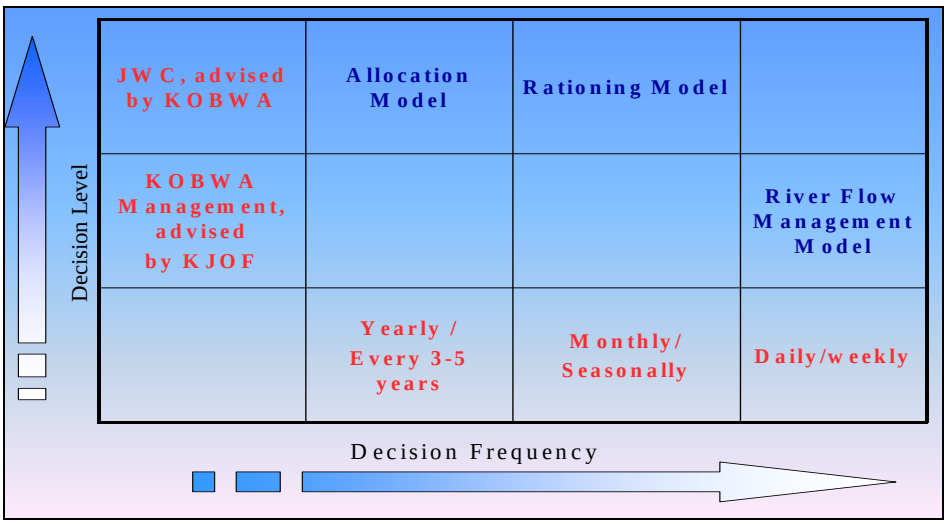
The institutions involved in the management of the water resources of the Komati River Basin make decisions using the information provided by KOBWA. The levels and types of decisions are depended on whether the decisions are operational, managerial, policy or political. First, KOBWA makes the analysis and discusses the matter with the Komati Joint Operations Forum (KJOF). If the decisions required are purely operational, KOBWA as the managing authority makes those decisions in consultation with the KJOF. Generally these are decisions on river flow management. If the decisions are strategic, KOBWA consults with the KJOF and then makes a recommendation to the KOBWA Board of Directors.

Figure 3: Institutional Framework for the KJOF



If the decision involves policy matters then the recommendation of the KOBWA Board of Directors is forwarded to the Joint Water Commission (JWC) for a final decision. These include decisions related to water allocation and water curtailment (rationing) as a result of water shortages. The Governments as advised by JWC are responsible for political decisions. The implementation of curtailment decisions is governed by national legislation in each of the countries. It is for this reason that they have to be made by the Governments as advised by JWC. The Parties must in turn implement these decisions in accordance with the requirements of their legislation.

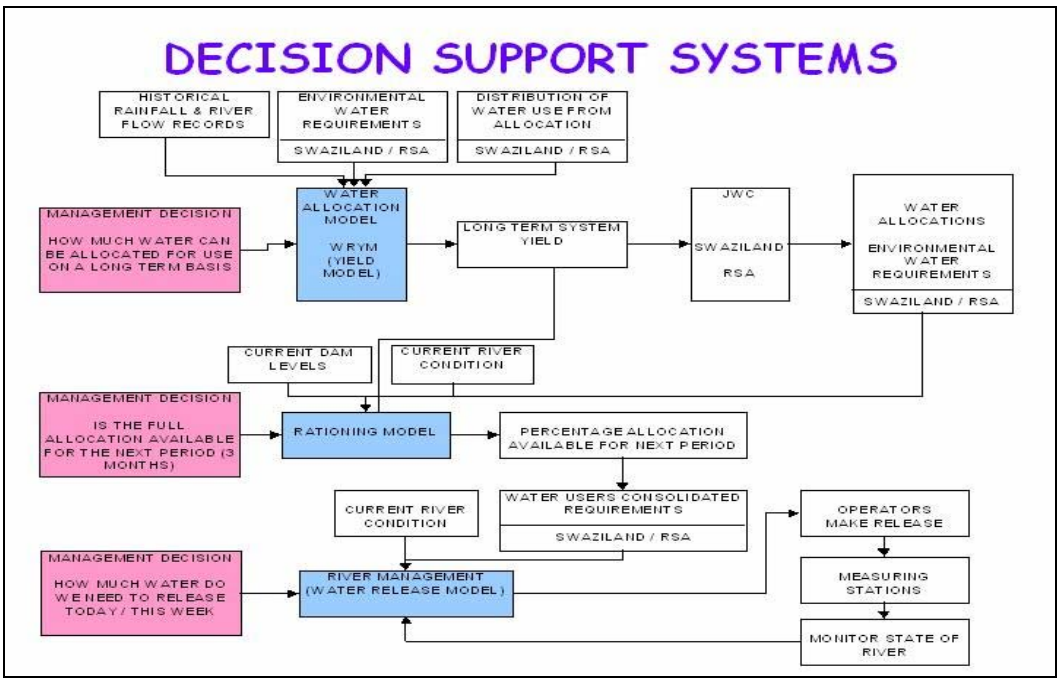
Figure 4: Decision Levels



3.4 Water Use and Reconciliation Statements:

Information generated by KOBWA's decisions support systems (Figure 5) and the monitoring network of river gauging stations and abstraction records is used to provide water use and dam reconciliation statements to the parties. This information is compiled and adjusted using a mass balance of each river reach to determine water usage in that river reach taking into account other factors such as accruals and losses (See Figure 6). The use of a mass balance approach is to account for the inaccuracies in the recording of individual abstractions or failure to record them.

Figure 5: Decision Support Systems



From the mass balance, a water use statement for each country is compiled as shown in figure 7. This statement is then compared with the annual allocation for each country in accordance with the agreed seasonal distribution of that allocation.

It is important to reconcile the water use for each country based on the planned or approved use pattern. Otherwise the country that used its water upfront may have an unfair advantage over the other when curtailment has to be effected. To counter this problem, system reconciliation is carried out whereby water that should have been used by a country is deducted from the remaining water in the system and that which was taken in advance is put back in the system. This is an accounting exercise carried out to level matters between the countries before the short-term yield of the system is re-assessed. This way the rights of one country are not jeopardized by the behavior of the other country while the short-term yield of the system is analyzed from what it should have been. A typical reconciliation record is shown in figure 8.

Figure 6: System Mass Balance

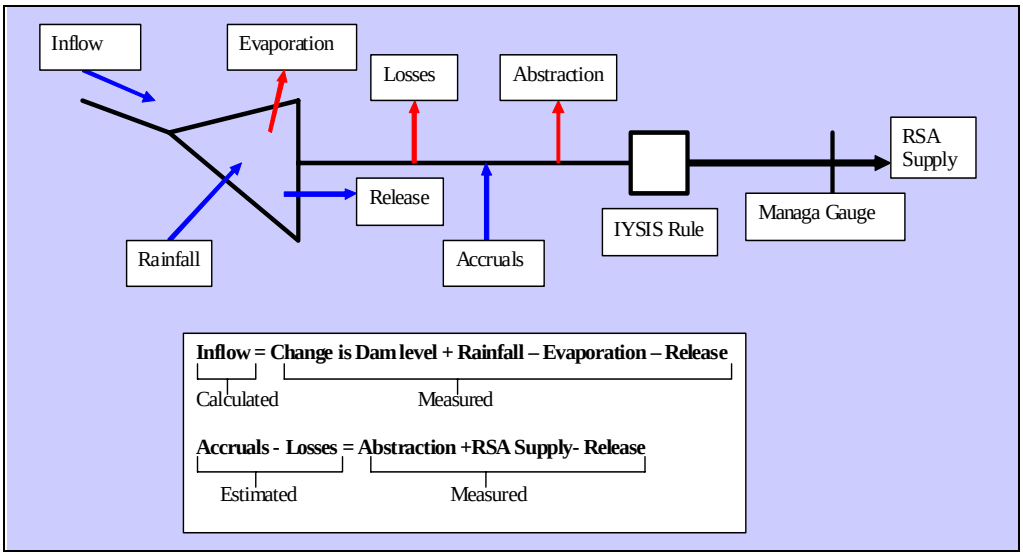


Figure 7: Water Use Statements

WATER USE DOWNSTREAM OF DRIEKOPPIES DAM
APRIL 2004 - SEPTEMBER 2004

	AMOUNT (million m^3)	BALANCE (million m^3)
Releases from Driekoppies Dam: Over measuring weir	37.3	
Direct abstraction	3.5	
		40.8
Subtract flow to Mozambique	34.8	
		6.0
Subtract Riverine Losses	9.4	
		-3.4
Subtract Domestic Use	4.4	
		-7.8
Add accruals from Driekoppies to Lebombo:		
Diffuse	9.8	
Inflow from Komati River at Tonga	31.0	
		33.0
Add assumed water used from storage in weirs	0.0	
Irrigation water use in 2004/05*		33.0
Add over-abstraction brought forward from 2003/04	15.5	
		48.5
Subtract rationed low assurance water available at 2% risk for 2004/05**	60.0	
Unused balance of irrigation water available for 2004/05* **		11.5

* Estimated 15.5% on average of full annual allocation of 212.3 million m^3.
** Based on reference storage as at 1 April 2004. Estimated 28.3% on average of full annual allocation of 212.3 million m^3 excluding the benefits of accruals downstream of Mananga and Driekoppies Dam.
*** Estimated 5.4% on average of full annual allocation of 212.3 million m^3.

Figure 8: Dam Storage Reconciliation

DRIEKOPPIES DAM STORAGE RECONCILIATION ON 30 SEPTEMBER 2004

	AMOUNT (million m^3)	BALANCE (million m^3)
Total stored volume at start of water year	72.6	
Add Inflow for water year	35.7	
		108.3
Subtract:		
Net evaporation losses	3.8	
Releases from dam	40.8	
Total stored volume at end of month		63.7
Add back balance of water available in Maguga Dam on 1 April 2004 from active filling of dam	10.6	
		74.3
Subtract release of water stored in Maguga Dam from active filling	0.0	
		74.3
Subtract water due to Mozambique from Komati River that was supplied from Crocodile River:		
Brought forward from 2003/04	5.0	
Cumulative for 2004/05	6.0	
	11.0	63.3
Subtract remaining share of water due to Mozambique to be held in Driekoppies:		
Brought forward from 2003/04	8.5	
Cumulative for 2004/05	1.4	
	9.9	53.4
Add back use of water available at 2% risk in excess of average seasonal distribution:		
Over-abstraction in 2003/04	15.5	
South Africa irrigation*	6.2	
Swaziland	0.0	
	21.7	
Reference Storage Available in Driekoppies Dam from 1 October 2004		75.1

* Based on 60 million m^3/a of water available for irrigation at 2% risk from 1 April 2004.

4. Conclusion

The institutional setup for managing the Komati River Basin is the key to solving water resources issues between the riparian states. An important component of the institutional setup is the water user stakeholders, which are involved in all stages of the decision-making process. A network of monitoring stations and decision support systems that promote transparency and trust between water users as well as the Governments involved backs the institutional setup. The regular meetings held in the forums created have promoted mutual trust between members. This has resulted in better information transfer on water resources data such as river flow as well as water quality data. Outbreaks of diseases from one section of the basin are reported timeously to all parties to ensure that measures are put in place to control their spread. The model provided by the Komati River Basin can go a long way in providing a solution to the global challenge for water. The important thing is to have the political will and to start small with simple steps such as establishing common water resource databases and monitoring activities. These assist in creating other information exchange platforms, transparency and understanding. It is important to consider the establishment of institutions that are considered neutral in the process – such as KOBWA in the case of the Komati River basin. However, such an institution must truly be independent and neutral in its operation.

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Stakeholder participation in the Okavango River Basin

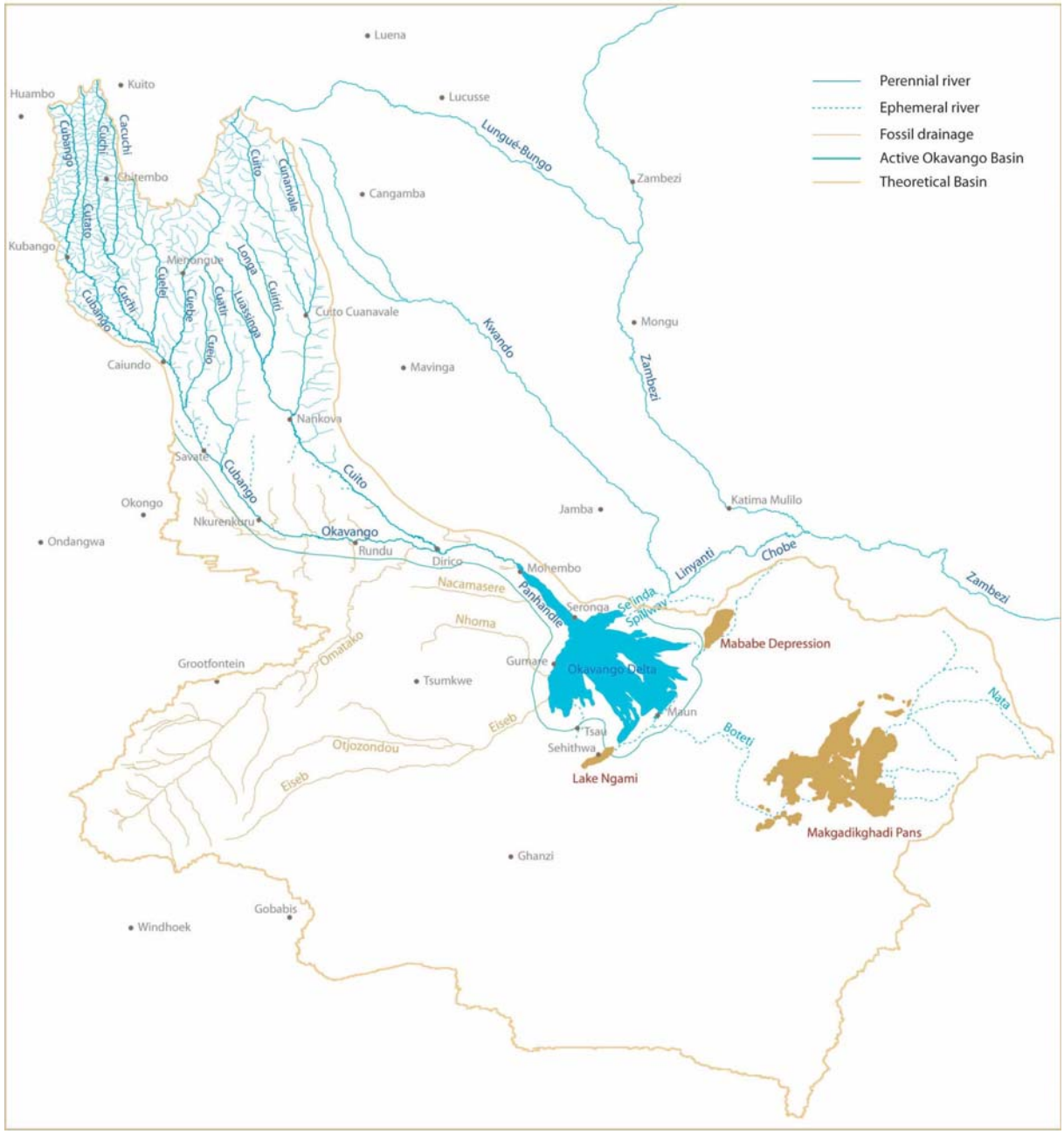
By Shirley Bethune[1]

1. Introduction

The Okavango River Basin extends across three countries: Angola, Namibia and Botswana, covering an area of some 700 000 km^2. Yet, the section that contributes actively to surface flows, that is the hydrologically active part of the basin only covers an area of about 192,500 km^2 (Mendlesohn and El Obied 2004). In Angola the river is called the Rio Cubango, flows southwards in a series of parallel tributaries and falls mainly within the Kuando Kubango Province. The main tributary is the Rio Cuito. In Namibia, the Okavango River is often referred to as the Kavango River, it flows eastwards through the Kavango Region for some 415 km before turning abruptly southwards at Mukwe from where it forms the border with the Caprivi Region for the next 55km, until it enters Botswana at Mohembo (Bethune 1991). In Botswana, it forms the world famous Okavango Delta in Ngamiland. The Okavango Delta covers 22 000 km^2 and can be divided into four main regions, the panhandle, the permanent swamp in the upper section of the alluvial fan, the seasonal swamps in the lower section of the alluvial fan and several large islands such as Chief's Island and the sandveld peninsulas that extend from the mainland into the delta as found in the eastern part of the Moremi Wildlife Reserve (Ellery and Ellery 1997). The altitude varies from over 1500mm above sea level at the source, to 1000m for most of the Namibian section to 940 m ASL at Maun.

[1] Desert Research Foundation Namibia

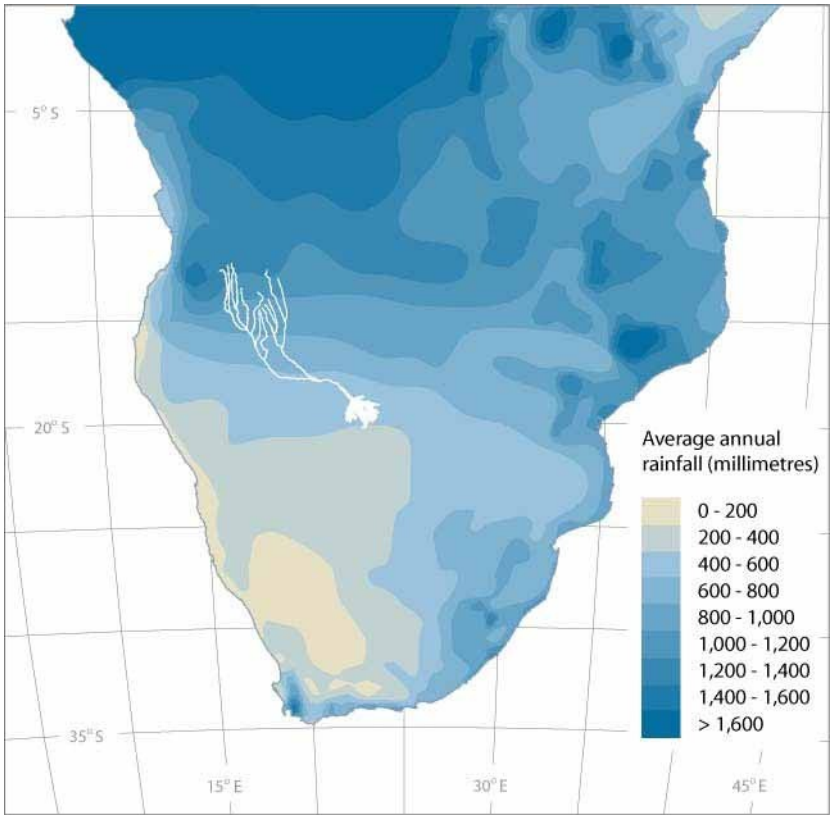
Figure 1. Map of the riparian countries showing the position of the active portion of the Okavango River Basin – by John Mendelsohn of RAISON



1.1 Water Resources

Rainfall decreases markedly from north to south. The annual average precipitation is over1200mm in the Angolan Highlands, whereas at Maun, situated at the distal end of the Delta in Botswana, it is only 850mm.

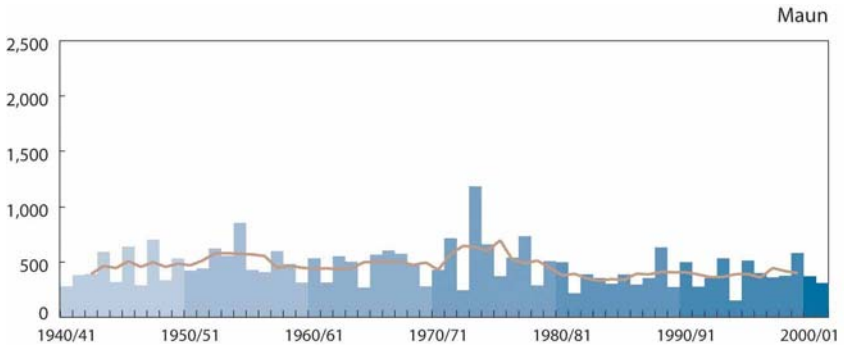
Figure 2. Map of southern Africa showing average annual rainfall in mm and the position of the Okavango River Basin from Mendelsohn and el Obied 2004.



As a result of this disparity in rainfall, almost two thirds of the water entering the system originates in Angola. The Rio Cubango sub-catchment (88 700km^2) contributes about 55% and the Rio Cuito sub-catchment (60 000 km^2) 45%, of the 9 000 -10 000 Million m^3 of water that passes the gauging station at Mohembo on the Botswana border each year. Although several fossil river channels drain towards the Okavango River in Namibia, they do not provide any real runoff to the river. The largest of these tributaries is the Omuramba Omatako, which has no flowed beyond Kanovlei in living memory. A further 6 000 Million m^3 is contributed by rainfall directly onto the Delta in Botswana. The lowest flow ever measured at Mohembo was 6 000 Million m^3 for the 1992/93 season and the highest flow recorded was ten years later in the 1983/84 season when 13 640 Million m^3 was recorded, more than twice as much (Bethune and Van Wyk 2004).

Rainfall, particularly in the southern half of the basin, is variable. The figure below shows how rainfall in Maun varies from year to year, from as little as 151mm in a very dry year to 1186 mm in a very wet season, 1973/74. This natural variation in rainfall, contributes to the vulnerability of the water resources of the Okavango River Basin.

Figure 3. Graph showing total annual rainfall recorded at Maun over a sixty year period – 1921/22 to 2001/02 from Mendelsohn and Obied 2004.



As rainfall decreases, with distance downstream, the climate changes from tropical and humid to semi-arid and evaporation rates increase. In the drier southern portion of the catchment the river provides water to an otherwise dry environment and has attracted dense settlement both in Namibia and in the panhandle section in Botswana. The further south, the more variable the rainfall and it becomes increasingly difficult to predict where, when and how much rain to expect. As a result the area is vulnerable to droughts and floods and farming is marginal at best and often a risky venture.

A further drawback to crop farming in the area, is the thick, infertile Kalahari Sand that overlies much of the basin (Mendlesohn and el Obied 2003, 2004). Yet, in countries as arid and Namibia and Botswana, the natural wetland resources provided by large perennial rivers such as the Okavango, contributes positively to the livelihoods, particularly of the rural poor living alongside these rivers. Although not yet calculated for the Okavango River, wetland resource accounting for the nearby Zambezi River wetlands in Namibia and Botswana, show substantial contributions. For example, the fish harvested is worth over six million rands a year whilst the reeds and papyrus used are worth a million rands each to the inhabitants of the wetland as a whole. The estimated value of fish per household was about R 1 800 a year at 1999 values (Turpie *et al* 1999).

One advantage of the very sandy substrate is the excellent water quality. Okavango River water is typically clean, clear and low in nutrients (Bethune 1991). This nutrient-poor water favours the growth of papyrus, so important in maintaining the dynamics of the Delta ecosystem. Fertilizers used in agriculture alongside the wetlands upstream of the delta pose a threat to this water purity. Care must be taken in the proposed expansion of irrigated agriculture in Namibia and Angola to avoid contamination by chemicals, both fertilizers and pesticides. Already DDT, a known bio-accumulator, used to control malaria in Namibia, can be detected in fish tissues and is known to soften egg shells thus reducing the breeding success of fish eating birds. A further threat to water quality is increased siltation caused by erosion as a result of bank clearing alongside the river in Namibia and by deforestation as the upper catchment in Angola is resettled. Conversely, cutting off sediment transport downstream poses an even greater threat as the dynamics of the delta depend on a regular input of sediment. Long term studies in the Delta and more recent studies on a

proposed hydro-power development at Popa in Namibia have highlighted the dire consequences of cutting off sediment inputs (McCarthy1992, NamPower 2004).

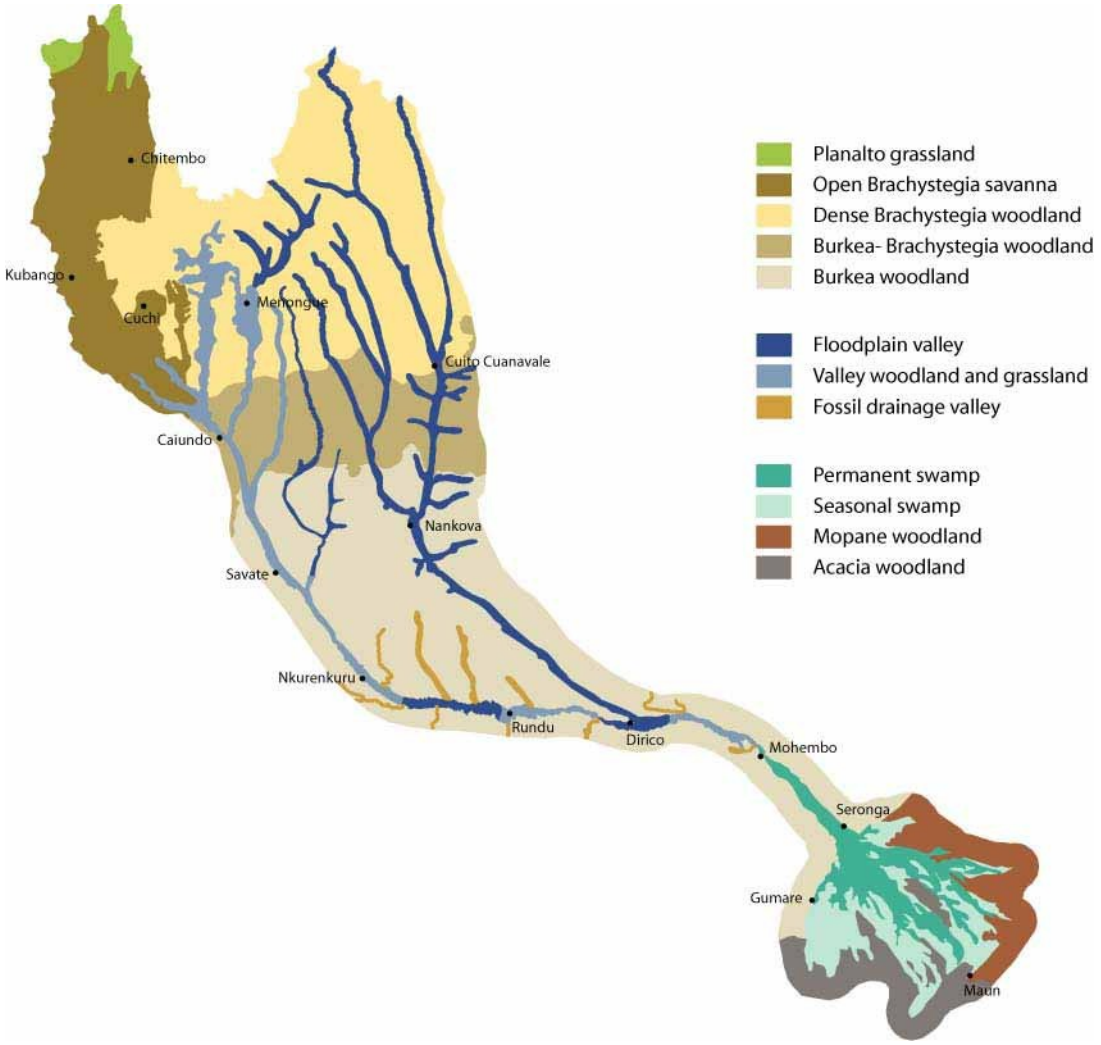
1.2 The Natural Environment

The Okavango River system is a dynamic system, dependent on seasonal floods. The seasonal floodplains in the middle section of the river in Namibia and Angola and the seasonal swamps, in the lower alluvial fan in Botswana, typically alternate between annual dry and wet periods. In the dry season, these seasonal floodplains provide grazing and fertile soils for molopo farming. When inundated by the annual floods they provide shallow, safe, well-vegetated breeding and nursery areas for fish, amphibians, birds and other aquatic animals and support a diverse flora. (Barnard *et al* 1998). Any alternation in the timing, intensity or duration of the flood will disrupt the ecological functioning of the system (Bruton and Merron 1985).

Within the Delta section, it is not only the seasonal water inputs that are essential, but also regular sediment input that drives the longer term switching of channels, the mechanism by which salination is controlled. This renewal is made possible by the papyrus plants that fringe the channels in the permanent swamp. The papyrus holds back the sand that enters as sediments but allows the water to leak through into the surrounding swamp. As more and more sand accumulates, the channels are gradually elevated above the surrounding area until they are cut off from further inflows and die. With time, the peat that accumulated when the channel was active, dries out and burns, releasing nutrients that in turn supports grazing for wildlife and cattle. New channels form over time and the cycle is repeated, effectively removing the accumulated salts (Ellery and Ellery 1997).

As may be expected, vegetation cover reflects the changing rainfall patterns and the diversity of habitats supported by the seasonal flooding of the river. Much of the catchment supports open or dense woodlands of mixed tree species. In Angola the highland area is called the *Planalto* grasslands (Mendelsohn and el Obied 2004), a boggy area where the river has its source. The numerous tributaries are mostly well-defined, swift flowing, sometimes rocky streams flowing through the miombo, *Brachystegia* and *Burkea* woodlands, with some quieter meandering sections with large floodplains. The Namibian section includes extensive, annually inundated floodplain areas as well as some of the most species rich riparian woodlands in the country (Curtis and Mannheimer 2005). Habitats vary from; the deep, swift flowing, open river, with reed fringed banks, to the well-vegetated floodplains, more permanent swamp at the Cuito confluence, to the islands and rocky rapids of the section downstream of Mukwe (Bethune 1991). The Okavango in Botswana first forms a defined panhandle fringed by woodlands, reeds, papyrus and grasses and then an alluvial fan or inland delta of permanently and seasonally flooded areas of papyrus and reed fringed channels and well-vegetated backwaters or lagoons as well as islands that may be fringed with sedges or riparian trees and support a diversity of trees such as fan palms, mangosteens and water figs, to the east are so called “sandveld tongues” of Mopane woodland, whilst the seasonal swamp to the west of the delta is typically *Acacia* woodland (Ellery and Ellery 1997).

Figure 4. Map showing the broad vegetation types associated with the Okavango River Basin from Mendelsohn and Obied 2004.



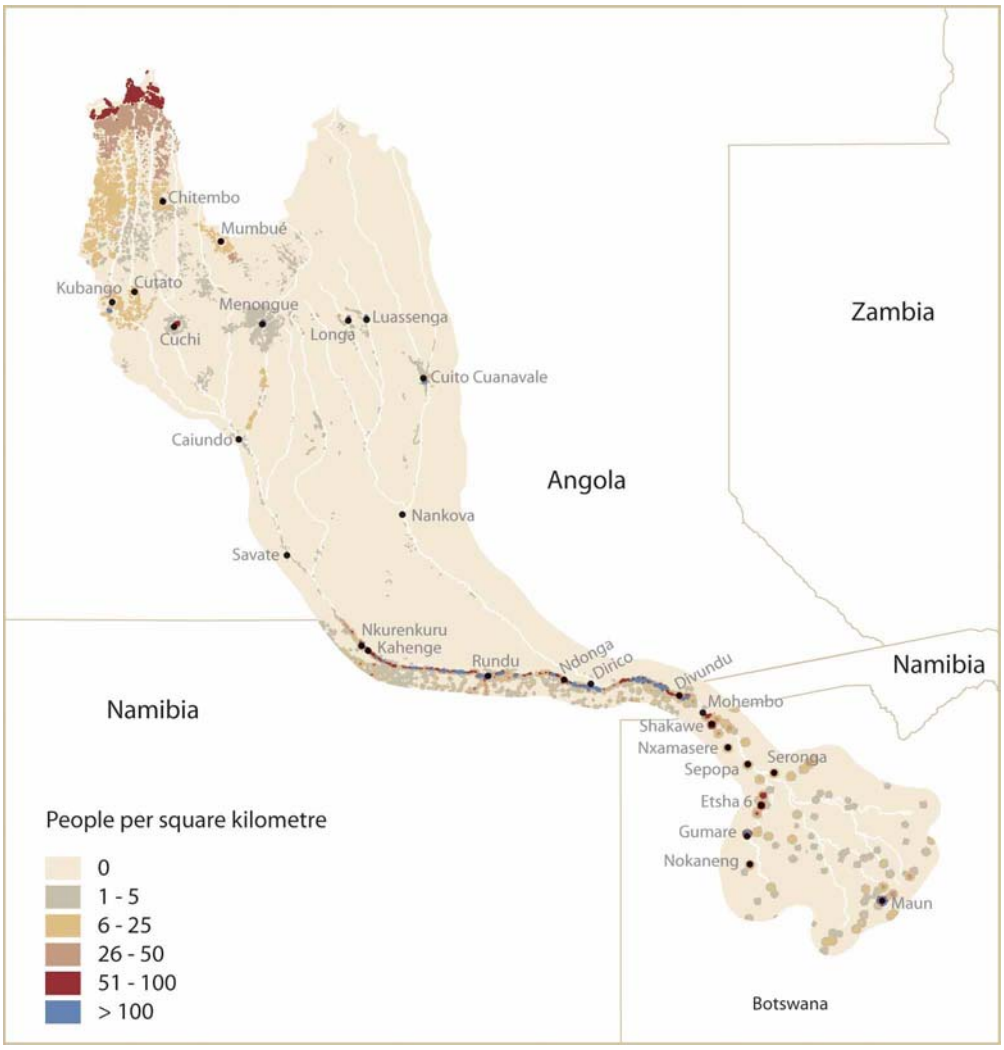
According to Mendlesohn and Obied (2004), wildlife numbers are low in most of the Angolan and Namibian portions, yet high in protected areas such as the Muhango and Moremi parks and in much of the Delta in Botswana. The dense settlement and increasing clearing in the Namibian portion accounts for this paucity of game, yet the overall species richness along the Okavango River in Namibia is considered high for molluscs, insects, fish, frogs and birds (Curtis *et al* 1998). The high productivity in both the floodplain areas and the delta is due partly to the deposition of nutrients from upstream and partly to the rich diversity of habitats.

Thus, the Okavango River Basin is rich in renewable natural resources. Yet, two factors make these resources vulnerable: the variability of rainfall particularly in the lower, drier portions, making water supply unpredictable and droughts more likely, and; the high dependence of the Delta dynamics on seasonal inputs of sediment from upstream (Bethune *et al* in press).

1.3 Socio-economics

The Okavango River Basin is home to some 600,000 people. As can be seen in the map below their distribution is uneven. About 350 000 (58%) live in Angola, 163 000 (27%) in Namibia and 88 000 (15%) in Botswana. Urban centres, Menongue,Cuito Cuanavale, Rundu and Maun account for 30% of the basin population. The highest rural concentrations are at the source of the Cubango in Angola, along the south bank in Namibia and in the panhandle area in Botswana (Mendlesohn and el Obied 2004).

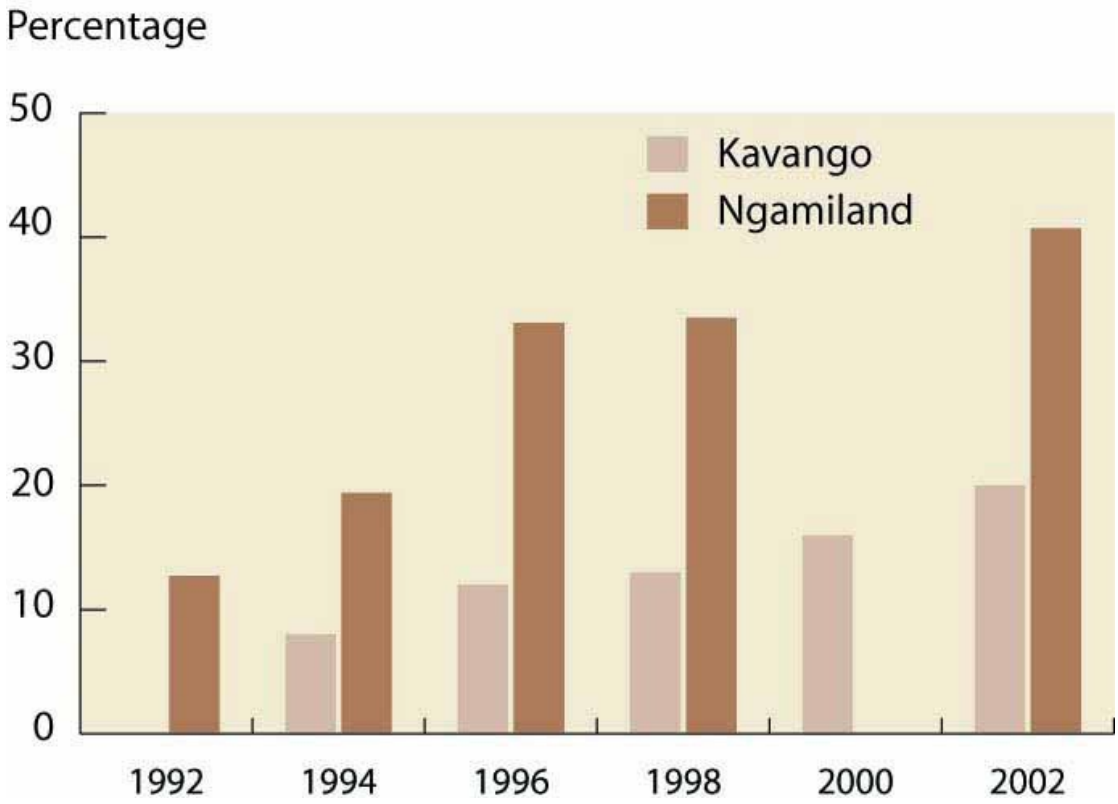
Figure 5. Map showing population densities in the Okavango River Basin by Mendelsohn and el Obied 2004.



The populations in Kavango, in Namibia, and in Ngamiland, in Botswana, are dominated by young people, where more than half are children younger than 15. Population numbers in both these areas have increased markedly from 1961 – 2001. In Namibia the increase was particularly marked, averaging a rate 5,2% per year. Much of this was due to in migration particularly from across the river during the conflict in Angola. In both countries improved health services have also contributed (Mendelsohn and el Obied, 2003, 2004).

Yet, the high incidence of HIV/Aids is altering this. By 2002, 40% and 20% of the pregnant women tested in Ngamiland and Kavango, respectively, were HIV positive There are no reliable figures for Angola and health services remain poor (Mendelsohn and el Obied 2004).

Figure 6. Graph showing the increase in HIV infection over a decade from 1992 in Kavango and Ngamiland from Mendelsohn and el Obied 2004.



Despite the relatively good natural resource base, Mendelsohn and el Obied (2003/ 2004) argue that the agricultural potential over most of the area remains poor, and that as a result over all rural densities are low and much of the area is still undeveloped and relatively pristine. The high urbanization rates are due to people seeking better lives in towns. Urban settlements in the basin have grown rapidly in recent years as a result.

The lack of development along the Okavango has allowed the river to remain comparatively pristine. This can be attributed to: years of conflict in Angola, the fact that in all three countries the basin is remote, there are no mineral resources, population numbers are relatively low, poor soils and because much of the area has been designated as communal land. In recent years several national developments have been proposed but vetoed due to the sensitivity of the Okavango Delta to any alternations in the upstream flow regime.

Although the Portuguese considered hydro-electric schemes on several headwater tributaries in the 1960's, there are now plans to implement any major hydro-electric or water supply schemes at present. Currently Namibia uses less than 0.2% of the river water, to supply Rundu and a few irrigation schemes alongside the river.

Namibia plans to expand this irrigation substantially, possibly including areas on the Angolan side of the river and has investigated the potential of augmenting the water supply to the central area and for small scale hydropower. Botswana uses only about 0.1% of the river flow to supply towns mainly in the panhandle section and one irrigation scheme near Shakawe. The main use of the water in Botswana is to maintain the world-famous Okavango Delta, now the largest Ramsar site in the world, a major source of foreign revenue through tourism. Much of the success of tourism as an industry in the Okavango Delta is firmly based on good environmental management of the natural resources of the Okavango River and the realization that good conservation practices promote a viable eco-tourism industry. Botswana has more to lose than its upstream neighbours if the flow of Okavango is altered. Not surprisingly, environmental groups in Botswana react with alarm at new proposals for upstream use of Okavango River water.

2. Intergovernmental Co-operation

Intergovernmental co-operation within the Okavango River Basin started long before the formal signing of the SADC Revised Protocol on Shared Watercourses in 2000. Initial co-operation between Namibia and Botswana was fostered by SARCCUS, the Southern African Regional Commission for the Conservation and Utilisation of the Soil, formed in Pretoria in 1950. The Departments of Water Affairs in both countries actively participated in the standing committee for Hydrology and the sub-committee on aquatic weeds. For several decades this allowed exchange of information on matters related to shared river systems and rather clandestine, cross-border visits, to gauging stations (Taylor and Bethune 1999).

Namibian independence in 1991, paved the way for more formal cooperation through the Joint Permanent Water Commission (JPWC) between Namibia and Botswana and the Permanent Joint Technical Commission (PJTC) between Namibia and Angola. At the first meeting of the JPWC in Gaborone in November 1991, a proposal for a basin-wide, multi-disciplinary environmental assessment of the Okavango River Basin was tabled and agreement reached to investigate this further. Both commissions independently discussed the need to establish a tri-partite water commission for the Okavango River Basin. The result was the establishment of the Permanent Okavango River Basin Water Commission (OKACOM) in September 1994, its founder members drawn from the JPWC and the PJTC (Taylor and Bethune 1999).

2.1 The OKACOM

The OKACOM is now recognized as the highest-level, regional institutional body for the Okavango River Basin. Its main objective is to advise the respective Governments on the conservation, development and utilization of the water resources of the Okavango River Basin (Okacom 1994). It is mandated to give advice on:

- Measures to determine the long term safe yield of the available water resources
- Reasonable water demands of stakeholders in the basin
- Suitable criteria for conservation, equitable allocation and sustainable water use

- National and regional investigations to do with the development of the resources
- Pollution prevention and the control of aquatic weeds
- Short-term measures to alleviate water shortages due to droughts, taking into account the availability of stored water supplies and national water needs

Three OKACOM commissioners are all high ranking officials within the water and environ-ment sectors appointed by cabinet and are assisted by senior technical staff members in each country who serve on the Okavango Basin Steering Committee (OBSC). A permanent secretariat for the commission will be established soon in Maun.

To date, the OKACOM has focused mainly on developing the regional environmental assessment project first proposed to the JPWC in 1991, and later revised to include the development of a strategic management plan for the Okavango River Basin. After several years of negotiations with the Global Environmental Facility, this regional project was finally launched as the UNDP/FAO project "Environmental Protection and Sustainable Management of the Okavango River Basin "(EPSMO) in 2004. The project office is currently in Luanda and national co-ordination units in each country are intended to allow basin-wide stakeholder participation in the process.

There are several recent national and regional projects that aim to improve sustainable use and joint management of the water resources of the Okavango River Basin. Currently, the Integrated River Basin Management Project funded by USAID, is building on an earlier project called Shared Waters to help strengthen OKACOM mainly by assisting Sida with setting up a permanent secretariat for OKACOM in Maun, and by improving hydrological monitoring and stakeholder participation in Angola. The Every River project has been working with a variety of stakeholders, particularly at local community level, since 1999.

2.2 The legislative framework

Water sector reforms in all three riparian countries have recently brought about the review and revision of national water policies and legislation, for example, the review in Namibia that led to the National Water Policy (2000) and Water Resources Management Act (2004).

In all three countries opportunities were seized to incorporate international water management concepts like Integrated Water Resources Management, Water Demand Management, Polluter Pays, Environmental Flow Requirements and a basin-wide approach to water resources management. Stakeholder participation has been promoted and recognition given to national obligations on shared waters. All three countries are signatories of the Ramsar Convention, and both Namibia and Botswana have recently drafted their National Wetland Policies (Bethune 2004, Bethune *et al* 2005).

These national policies and laws, together with regional protocols and international water laws such as the Helsinki Rules on the Uses of the Waters of International Rivers (1966) and the UN Convention on the Law of the Non-navigational uses of

international watercourses (1991), the International Convention on Wetlands (1971) and the Dublin Principles all guide the activities of OKACOM.

3. Stakeholder participation and interaction with Okacom

At its annual meeting held in Maun in 1999, OKACOM approved and endorsed the Every River has its People project, requesting Sida and regional partners to assist OKACOM by developing the capacity of local communities within the basin to enable them to participate more fully in future decision making. Initially the project worked only with communities in Namibia and Botswana, but expanded into Kuando Kubango province in Angola as soon as peace was restored there (Namibia Nature Foundation 2003). The project works through existing community organizations such as conservancies, trusts, and fishermans' associations to build peoples' confidence in managing their own natural resources and by allowing communication with other stakeholders in the basin. One of the most important achievements of the project is the establishment of the Basin-wide Forum (BWF). The BWF is a regional committee of local authority representatives of the basin. The BWF was officially introduced to OKACOM in 2003 and has since participated in several important projects including the Okavango Delta Management Plan (Every River has Its People 2004).

Perhaps the most important change in recent years is that stakeholders in the three countries have been able to exchange visits, using these opportunities to see different parts of the basin, gain a better understanding of how the system functions and to share ideas. For the first time, OKACOM members, i.e. Government officials from Luanda, Windhoek and Gaborone have been able to speak to local community members living alongside the river, not only in their own countries but in neighbouring countries too.

4. Lessons learnt

Two booklets have been published on the lessons' learnt from the experiences gained through the Every River has its People Project (Namibia Nature Foundation 2003, Every River has its People 2004). These identify 15 practices that worked to promote more effective Stakeholder participation within the Okavango River Basin under the particular circumstances and at the time of the first phase of the ERP from 1999 – 2004. The basic approach was to promote good governance for shared river basin management. It is recommended that following practices be part of a flexible, responsive approach geared towards tangible products.

- *Legitimacy and trust*
  It is necessary to gain approval from the appropriate institutions at all levels, to work through existing institutions and to align the project aims with those of the existing basin authorities and to keep them informed of project activities and progress

- *Stakeholder role definition and links*
  The role of each stakeholder must be clear, both at community and technical level and be in line with their normal functions.

- *Consensus building*
  All the stakeholders must agree on a common understanding of shared basin management and see advantages in a joint approach.

- *Early consolidation and dissemination of information*
  Available information on the basin should be made available to all stakeholders when the project is initiated, to give a base-line for the development of a common understanding. It provides a tangible product and clear start to the process.

- *Open-ended and flexible process approach*
  Activities should not be planned in detail, but rather allow the opportunity to evolve in response to the needs of the stakeholders as they arise and allow a flexible approach to better handle unforeseen complications.

- *"Pay full price" of community participation*
  The project must allow communities to precede at a pace comfortable to themselves, as the primary resource users they should be afforded full participation.

- *Equitable involvement of basin states*
  Allow regular opportunities for communication between countries at all levels and be sensitive to communication problems seeking innovative ways to solve these.

- *Understanding community perspectives and early consensus building*
  Use PRA and RRA tools to ascertain the community point of view and create early opportunities to bring together different levels of stakeholders and develop a common understanding of shared issues.

- *Community capacity building*
  In the spirit of information exchange, share knowledge with communities and other stakeholders, to better understand each others points of view and share best practices.

- *Information for planning and decision-making*
  Compile and integrate information on the ecological, hydrological, social, economic and political aspects of the river basin, publish it in a style suited to the layman and disseminate widely to share as much available information as widely as possible.

- *Accessible and shared information*
  Make sure that existing and new information is shared by all stakeholders by making it available through the most appropriate media to each level, from local language radio through resources for teachers, to government reports and international websites.

- *Community involvement*
  Through approaches such as community-based natural resource management (CBNRM) make sure that effective links are established between community organizations and decision making forums at all levels and booster their legitimacy to act on behalf of their members, whilst fostering an understanding of community needs in decision makers be they at district, national or regional level.

- *Policy review and reform*
  Although, recent policy reforms in Namibia and Botswana favour community involvement in natural resource management and promote regional co-operation it may be necessary to review and propose revision in other basin countries.

- *Facilitiate horizontal and vertical links in the basin*
  There is a need to facilitate communication between communities, between different government sectors and between countries as well as to improve the vertical links from communities to local authorities, to district level, to national level and to the level of basin commissions.

- *Staff retention strategy and institutional performance safeguard.*
  Provide incentives for project staff to remain "on board" for the entire duration of a project, to maintain trust and ensure smooth implementation, and have an institutional "shadow structure" in place to step in if a staff member should have to leave.

These experiences gained through the ongoing implementation of the Every River has its People project in the Okavango River Basin should prove valuable to any organization attempting to promote stakeholder participation in other shared watercourse systems in Southern Africa.

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An Overview of Stakeholder Participation within the Danube Basin: What current practice and future challenges?

By Dr Alistair S Rieu-Clarke[1]

1. Introduction

Water resources have played a vital role in the regional development of the Danube Basin. The citizens of the Danube are dependent on its waters for a host of uses, including water supply, agriculture, industry and mining, power generation, navigation, recreation and ecosystem protection. Such a variance of interests in the Danube - which flows from West to East Europe and encompasses a rich tapestry of cultures - inevitable leads to competition. There is a clear need to ensure that such diverging interests in the Danube Basin are reconciled in an equitable, legitimate and transparent manner. The Danube Basin States have made significant strides towards achieving the latter endeavour by developing a strong legal foundation and implementing various tools to facilitate stakeholder participation. However, the Danube Basin States are at the beginning of the journey and face a number of challenges on the road to fully effective stakeholder participation at the international, national and local levels.

The purpose of this chapter is to analyse current practice and identify potential challenges to implementing stakeholder participation within the Danube Basin. The chapter will begin with a brief overview of the Danube Basin and its uses. An examination of the legal foundation for stakeholder participation will then be presented, before looking at specific tools that have been adopted to facilitate stakeholder participation. The penultimate section will address some of the challenges States face in implementing a strategy for stakeholder participation within the basin, while the conclusion draws together the key findings and considers lessons that can be learnt for other basin around the world.

2. Basin Characteristics

The Danube River Basin is shared by more States than any other basin in the world. The entire of Hungary, almost all of Austria, Romania, Slovenia, Slovakia and Serbia and Montenegro, and significant parts of Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Germany, Moldova and Ukraine are located within its catchment area. In addition, small parts of the basin (less that 2000km^3) can be found in Albania, Italy, Macedonia, Poland and Switzerland.

Flowing 2,778km from its source in Germany to the Delta at the Black Sea, and with an area of 817,000 km^2, the Danube is Europe's second largest river. Major tributaries of the Danube include the Inn River (Germany); Morava River (Czech

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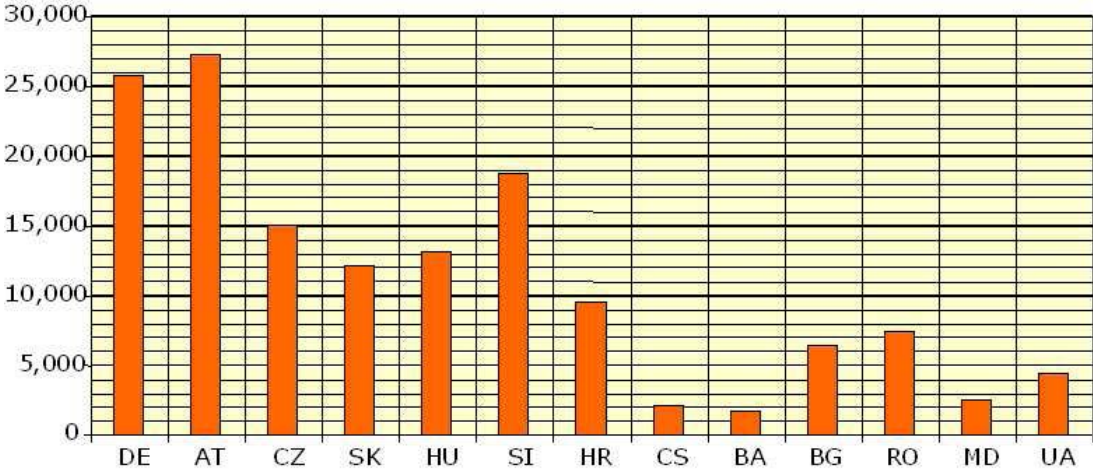
Republic, Austria and Slovakia); Tisza River (Hungary and Romania); Sava River (Slovenia, Croatia, Bosnia & Herzegovina, and Macedonia); and Prut River (Romania and Moldova). The Danube also contains many natural lakes, wetlands and a number of navigational canals.

Map 1: The Danube Basin (WWF, 2006)

The Danube Basin covers 10 per cent of mainland Europe and represents a highly complex European region. The climatic and physical conditions within the basin vary considerably. The Basin is influenced by Atlantic, Mediterranean and Continental climates, with annual precipitation ranging from 2000 mm per year in the upper regions to 500 mm per year in the plains. The upper Danube Basin, a largely mountainous region, extends from the river's source within the Black Forest, Germany, through Austria, to Bratislava, the capital of Slovakia. The middle Danube Basin, the largest region, extends from Slovakia, through the Hungarian plains to the Iron Gate gorge, which borders Serbia and Romania. The area is characterised by large hydropower installations and reservoirs. Within the lower Danube Basin, the river flows wide and slowly where well developed alluvial plains benefit agricultural production. The lower Danube Basin is also home to the Danube Delta, a wetland of international significance.

Table 1 GDP-Basin States (ICPDR, 2005a)

2002 GDP Danube Basin States, €/Capita/Year



81 billion people of diverse cultures, histories and languages are dependent on the waters of the Danube. The Danube Basin States vary significantly within political, social and economic terms. Within the Upper Danube, Germany and Austria enjoy relatively high levels of economic development (See Table 1). Within the middle Danube Basin, the Czech Republic, Slovakia, Hungary, Slovenia and Croatia, formally centrally planned State systems, can be classed as having reached medium levels of economic development (UNDP/GEF, 2006). Within the latter countries, significant economic transformation since the 1990s has resulted in a reduction in industrial and agricultural production, which in turn has led to a decrease in pollution loads. Both Macedonia, and Bosnia and Herzegovina are also located in the middle Danube Basin but due to recent conflicts remain in a state of political, legal, administrative, social and economic transition (UNDP/GEF, 2006). The countries of the lower Danube River Basin, Romania, Bulgaria and Ukraine suffer from serious economic and social problems, although as a result of economic transformation that saw many large industries close, there has been a significant reduction in pollution loads in recent years.

Despite some reduction in pollution loads throughout the Danube basin water quality remains a key issue. The Danube Basin is heavily utilised for a variety of industrial, agricultural and domestic purposes. A significant part of the pollution load entering the Danube originates from urban centres in the form of major point source discharges (UNDP/GEF, 2006). Around 60 per cent of the overall wastewater generated in the Danube River Basin comes from the municipal sectors. Inappropriate agricultural practices within the Danube Basin - mainly through the excessive use of pesticides and fertilisers - have further contributed to a degradation of water quality and soil erosion throughout the Basin. Key challenges for the sector include the reduction in use of agrochemicals, a decrease in soil erosion, and implementing best environmental practices. Industry is also a major user of the Danube's waters. 62 per cent of total water abstracted is for industrial purposes, not including cooling water for power production. Outdated industrial facilities and inadequate pollution control technologies have taken their toll on the Danube. Major polluters include ore mining, chemical and petrochemical industries, pulp and paper, metal works and machinery, food industry and textiles (UNDP/GEF, 2006). The problem is exacerbated by the regular occurrence of accidental spills, such as the Baia Mare cyanide spill in Romania in 2000, and the tailing dam burst at Baia Borsa in 2000. Around 51 per cent of the Danube is impacted by hydropower, with the total installed hydropower capacity being in the region of 19,200mw. Environmental problems associated with the hydroelectric power production include sedimentation and soil erosion problems, and the loss of various wetlands. Finally, navigation has long been a major user of the Danube river system, and the Danube countries have co-operated in navigational matters since 1856. Negative environmental impacts associated such navigation include water pollution through accidental and illegal release of toxic substances.

Heavy use and the associate environmental problems faced within the Danube basin is disturbing the ecological balance not just of the basin but also the Black Sea. The habitats of unique wildlife such as pelicans, sturgeon and beavers continue to be threatened due to pollution and land use practices. Around 80 per cent of the Danube's wetlands and floodplains have been lost since the end of the 19th Century. Floods are also a major concern within the Basin. The floods of 2005 and 2002,

worsened by canalisation and the loss of natural floodplains, caused in excess of €20 billion in damage across Austria, Germany, the Czech Republic and Slovakia.

3. Legal Basis for Stakeholder Participation in the Danube Basin

3.1 International Agreements

Most of the Danube Basin States are party to various global environmental and water-related agreements, including the 1971 Convention on Wetlands of International Importance especially as Waterfowl Habitat, and the 1992 Convention on Biological Diversity. However, the most influential laws have been adopted at the regional level, namely through the European Union (EU) and the UN Economic Commission for Europe.

3.1.1 The European Union

Of the main Danube basin States, many are EU members, including Austria, Czech Republic, Germany, Hungary, Slovenia and Slovakia. In addition, Bulgaria, Croatia and Romania are applicant countries. Applicant countries must comply will all EU law and policy (*acquis communitaire)* prior to becoming full members. Bulgaria, Croatia and Romania are therefore currently in the process of revising their laws and policy to satisfy EU entry requirements.

The most pertinent piece of EU legislation is the Directive 2000/60/EC establishing a framework for Community action in the field of water policy (hereafter: EU WFD), which is an umbrella agreement that seeks to secure good water status in all EU waters by 2015. Under the provisions of the Directive, Member States must identify river basin districts and assign a competent authority responsible for the implementation of the Directive within each of the districts. In addition, a river basin management plan must be developed for each of the river basin districts. The management plan should be designed to ensure that the provisions of the Directive and related EU legislation are implemented at the basin level (Art. 13(3)). Article 14(1) of the EU WFD deals with Stakeholder Participation, requiring that:

> "Member States shall encourage the active involvement of all interested parties n the implementation of this Directive, in particular the production, review and updating of the river basin management plans. Member States shall ensure that, for each river basin district, they publish and make available for comments to the public, including users:
>
> (a) a timetable and work programme for the production of the plan, including a statement of the consultation measures to be taken, at least three years before the beginning of the period to which the plan refers;
>
> (b) an interim overview of the significant water management issues identified in the river basin, at least two years before the beginning of the period to which the plan refers;
>
> (c) draft copies of the river basin management plan, at least one year before the beginning of the period to which the plan refers.

> On request, access shall be given to background documents and information used for the development of the draft river basin management plan."

Danube States have taken a major step towards increased cooperation by agreeing to implement the provisions EU WFD throughout the *entire* Danube Basin – not just within the territories of EU Member States (ICPDR, 2001). The States have also assigned the International Commission for the Protection of the Danube River (hereafter: ICPDR) as the competent authority for overseeing the implementation of the Directive. ICPDR has therefore been assigned the tasks of developing a Basin wide management plan, and facilitating stakeholder participation at the basin level in accordance with Article 14 of the EU WFD. As a preliminary step toward developing a River basin management plan, the ICPDR and the Basin States have conducted a Danube Basin Analysis, which was approved at a ministerial meeting of the Danube States on the 13th December, 2004 (ICPDR, 2005b). The analysis seeks to identify pressures and impacts on the Danube Basin, and identify areas where action is required in order to achieve good water status by 2015. The content of the analysis report includes a description of the Danube River Basin District and its international coordination arrangements, a characterisation of surface water and groundwater, an inventory of protected areas, an economic analysis of water uses and a description of public information and consultation measures. (ICPDR, 2005b). Next steps towards the implementation of the EU WFD include filling the knowledge and data gaps identified through the basin analysis, and developing a draft Danube River Basin plan for stakeholder consultations.

In addition to the EU WFD and other EU water-related instruments, there are a number EU laws that are applicable to the management of the Danube. For instance, in relation to stakeholder participation the EU has adopted Directive 2003/4/EC on public access to environmental information, and Directive 2003/35/EC providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment. Moreover, with regards to environmental assessment, the EU has adopted Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment, and Directives 97/11/EC and 85/337/EEC on the assessment of the effects of certain public and private projects on the environment. Directives relating to conservation of living and natural resources have also been adopted, such as Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, and Council Directive 79/409/EEC on the conservation of wild birds.

3.1.2 The UN Economic Commission for Europe

The European Commission for Europe has been active within the field of transboundary waters for over 50 years (Wouters & Vinogradov, 2004). In 1992, the UN ECE adopted the Convention on the Protection and use of Transboundary Watercourses and International Lakes (hereafter: 1992 UN ECE Convention). The 1992 UN ECE Convention entered into force in the 6th October, 1996 and is binding on the following Danube Basin States: Austria, Bulgaria, Croatia, Czech Republic, Germany, Hungary, Moldova, Romania, Slovakia, Slovenia and Ukraine.

The purpose of the 1992 UN ECE Convention is to prevent, control and reduce any transboundary impact within Europe's transboundary waters. In relation to public information, Article 16 provides that:

> "1. The Riparian Parties shall ensure that information on the conditions of transboundary waters, measures taken or planned to be taken to prevent, control and reduce transboundary impact, and the effectiveness of those measures, is made available to the public. For this purpose, the Riparian Parties shall ensure that the following information is made available to the public:
>
> (a) Water-quality objectives;
> (b) Permits issued and the conditions required to be met;
> (c) Results of water and effluent sampling carried out for the purposes of monitoring and assessment, as well as results of checking compliance with the water-quality objectives or the permit conditions.
>
> 2. The Riparian Parties shall ensure that this information shall be available to the public at all reasonable times for inspection free of charge, and shall provide members of the pubic with reasonable facilities for obtaining from the Riparian Parties, on payment of reasonable charges, copies of such information."

The 1992 UN ECE Convention is complimented by a range of other environment-water related Protocols and Conventions, including the 1999 Protocol on Water and Health, the 2003 Protocol on Civil Liability, the 1991 Convention on Environmental Impact Assessment, and the 1998 Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (hereafter 1988 Aarhus Convention).

The 1998 Aarhus Convention is particularly pertinent given its focus on public participation, and the fact that most Danube Basin States have either signed and/or ratified the Convention. The Convention adopts a rights-based approach, requiring parties to guarantee rights of access to information, public participation in decision-making and access to justice in environmental matters to all national and foreign citizens on a non-discriminatory basis. While the 1998 Aarhus Convention and related EU legislation can be seen as a positive step forward for stakeholder participation within the Danube basin, problems remain in its implementation. In many Danube States, non-existent or weak legislation has impeded the effective transposition of EU and UN ECE legislation relating to the stakeholder participation (REC, 2005). In other areas there is a need for enhanced capacity through mechanisms such as information centres or training for personnel assigned to handle public information requests (REC, 2005). Similarly, in some countries, officials deny information on the grounds that it contains confidential business matters or national security without any justification or transparent policy for exemptions (REC, 2005).

3.2 The 1994 Danube Convention and Commission

The UN ECE, and in particular the 1992 UN ECE Convention, proved extremely influential in the decision of the Danube States to adopt the Convention on the Protection and Sustainable Use of the Danube (hereafter: 1994 Danube Convention), which was adopted in June 1994. In addition to the European Union, there are twelve parties to the Convention: Austria, Bulgaria, Croatia, Czech Republic, Germany,

Hungary, Moldova, Romania, Serbia-Montenegro, Slovakia, Slovenia and Ukraine. Bosnia and Herzegovina will also soon become a contracting party once its ongoing ratification process is completed. The Danube Convention adopts a broad focus encompassing the sustainable and equitable management of the Danube Basin. Pursuant to the 1994 Danube Convention the contracting parties agree to: the conservation, improvement and the rational use of surface and ground waters in the catchment area; control discharge of wastewaters, inputs of nutrients and hazardous substances from point and non-point sources; control floods and ice hazards, control hazards originating from accidents; and reduce pollution loads of the Black Sea from land-based sources within the Basin. The contracting parties further agree to cooperate on fundamental water management issues by taking all appropriate legal, administrative and technical measures to improve the environment and water quality conditions throughout the Danube Basin.

In relation to stakeholder participation, the 1994 Danube Convention contains similar provisions to that of the 1992 UN Helsinki Convention, obliging that:

> "1. The Contracting Parties shall ensure that their competent authorities are required to make available information concerning the state or the quality of riverine environment in the Danube Basin to any natural or legal person, with payment of reasonable charges, in response to any reasonable request, without that person having to prove an interest, as soon as possible.
>
> 2. The information referred to in paragraph 1 of this Article, which is held by public authorities, may be given in written, visual, oral or data-based form.
>
> 3. The provisions of this Article shall not affect the right of Contracting Parties, in accordance with their domestic legal systems and applicable international regulations, to provide for a request for such information to be refused where it affects:
>
> (a) the confidentiality of the proceedings of public authorities, international relations and national defence;
> (b) public security;
> (c) matters, which are or have been "sub judice" or under enquiry including disciplinary enquiries, or which are the subject of preliminary proceedings;
> (d) commercial and industrial confidentiality as well as intellectual property;
> (e) the confidentiality of personal data and/or files;
> (f) material supplied by a third party without that party being under a legal obligation to do so;
> (g) material, the disclosure of which would make it more likely that the environment to which such material related would be damaged.
>
> 4. A public authority shall respond to a person requesting information as soon as possible. The reasons for a refusal to provide the information requested must be given in writing."

The main decision making body under the 1994 Danube Convention is the ICPDR, which was established on the 1st October 1999, following the entry into force of the Convention in October 1998. The work of the ICPDR is divided into six thematic work areas, for which strategies, guidelines and joint activities are developed, these being: flood protection, river basin management, ecology, emission, water quality, and accident prevention and control. Since its inception the ICPDR has proved to be

an extremely useful mechanism in strengthening cooperation throughout the Danube Basin. The ICPDR is supported, *inter alia*, by a permanent Secretariat and a number of permanent and interim expert groups. In addition to the activities mentioned above relating to implementation of the EU WFD, the Commission has identified and facilitated funding for 45 projects investing in wastewater treatment plants; set up a network of more than 75 water quality monitoring stations; developed an emission inventory for pollution originating from municipalities, industry and agriculture; put into operation a basin-wide accident emergency warning system; assessed and reduced potential accidental hotspots; and prepared a basin-wide Danube Flood Action Programme.

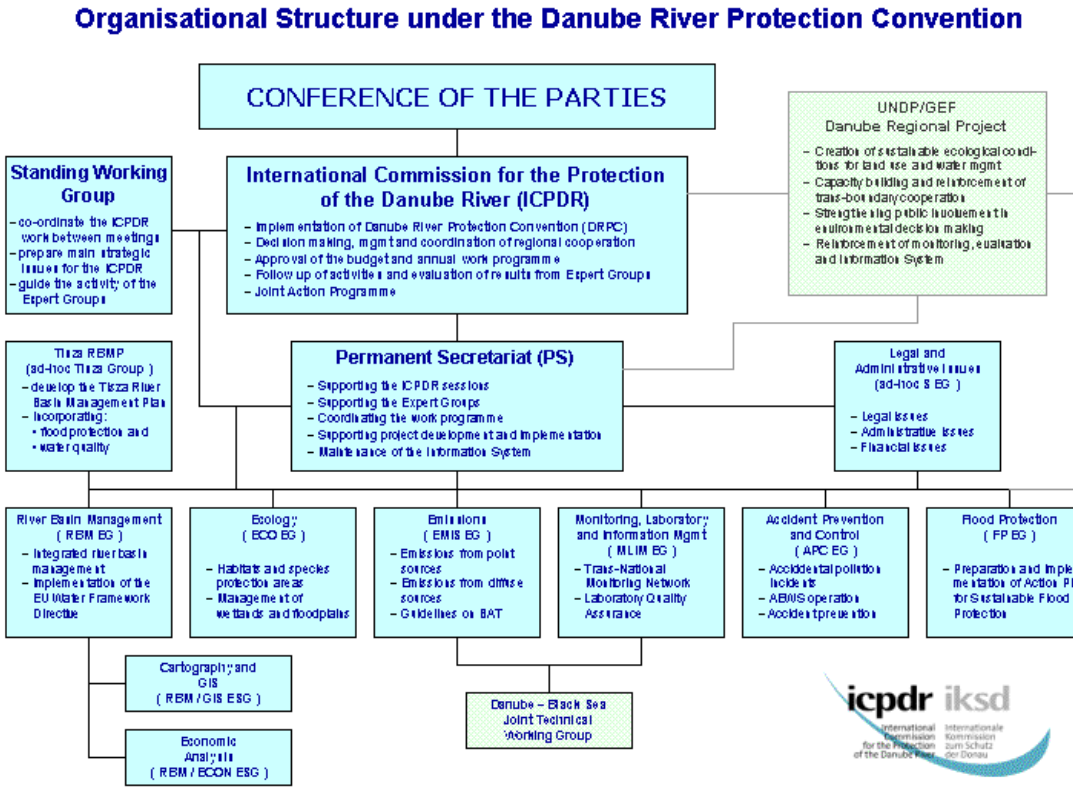


Table 2: Organisational Structure (ICPDR, 2006)

4. Tools for Implementing Stakeholder Participation within the Danube Basin

4.1 International Commission for the Protection of the Danube River

The Danube Commission is clearly the central body for facilitating stakeholder participation at the basin level. A number of *tools* have been adopted by the ICPDR in order to facilitate such participation, these include affording observer status to groups within a legitimate interest in the work of the ICPDR, developing a strategy for public participation, and adopting guidelines for business cooperation. The aforementioned tools are central to the ICPDR's endeavour to engage stakeholders

from both within and out with the basin and will therefore be discussed in more detail in this section.

4.1.1 Observers

A number of stakeholder groups representing NGOs, private industry and intergovernmental organisations participate in the activities of the ICPDR through their status as *Observers*. These groups include the Black Sea Commission, the Danube Commission (navigation), the Danube Environmental Forum, the Global Water Partnership for Central and Eastern Europe, the International Association for Danube Research, the International Association of Water Supply Companies in the Danube River Catchment Area, UNESCO International Hydrological Programme, Ramsar Convention, Regional Environmental Centre for Central and Eastern Europe, World Wide Fund for Nature, and The Danube Tourist Commission. Stakeholders are afforded observer status pursuant to the ICPDR's rules of procedure (ICPDR, 1999) The rules stipulate that observer status will be granted to partners within the Danube River Basin that can evidence a strong interest, or demonstrate active engagement in Danube protection and water management issues; and partners outside the Danube River Basin with a strong interest and that are ready to stimulate and support the development of the ICPDR. Observers participate in ICPDR decision-making meetings and expert groups meetings.

4.1.2 Danube River Basin Strategy for Public Participation 2003-2009

In collaboration with the UNDP/GEF Danube Regional Project, the World Wildlife Fund and Global Water Partnership, ICPDR has developed a *Danube River Basin Strategy for Public Participation in River Basin Management Planning 2003-2009* (ICPDR, 2003). The Danube Basin is one of the first major international river basins to adopt such a strategy. The inspiration for the strategy was the recognised need to comply with the provisions relating to stakeholder consultation contained within the 2000 EU WFD. The objectives of the strategy are to:

- ensure public participation in the process of implementing the 2000 EU WFD, especially in the first instance concerning the development of the Danube River Basin Management Plan (DRBMP);
- facilitate the establishment of effective structures and mechanisms for public participation in the Danube River Basin that will continue to operate beyond the first cycle of River Basin Management Planning;
- provide guidance to national governments on how to comply with their obligations under the 2000 EU WFD by providing them with practical support and guidance in addressing public participation in River Basin Management Planning; and
- inform other key stakeholder about appropriate public participation activities and structures at the different levels, including the international, national, sub-basin and local.

Since the adoption of the Strategy in October 2003, an annual *Operational Plan* has been developed by the ICPDR (ICPDR, 2003). The ICPDR Operational Plan is broken down into a number of phases that correspond with the timelines established under the 2000 EU WFD. The initial phase of the plan focused on awareness raising,

informing the public about the EU WFD, ensuring organisational mechanism for public participation were in place, developing networks of public participation experts, and establishing an effective media network. More specific activities included conducting a stakeholder analysis, creating a network of public participation focal points within each of the Danube countries, producing an EU WFD brochure in English and all national languages, and enhancing the ICPDRs website.

A further key component of the Strategy was the *Danube River Basin Stakeholder Conference*, June 28-29, 2005, in Budapest, which gathered together over 100 stakeholders representing public administrations, various water users (water utilities, navigation, industry, energy production, tourism), and environmental NGOs. The main aims of the stakeholder conference were to provide information on activities of the ICPDR and to elicit comments from stakeholder groups, particular in regard to the implementation of the EU WFD within the Danube Basin. At the meeting, shortcomings in terms of stakeholder participation in the preparation of the Danube Analysis Report were voiced and it was generally agreed that effective stakeholder engagement in the development of a Danube River Basin Management plan would be a necessary but major challenge given both time and financial constraints. The delegates thus called upon the ICPDR to initiate more stakeholder meetings and seminars at both the international and national levels, establish and enhance stakeholder networks, better engage and support national focal points for public participation, and develop new strategies for funding and financing stakeholder activities (ICPDR, 2005d).

Another component of the Strategy was the launch of Danube Day, to take place on the 29th June every year. Danube Day is designed to increase awareness of the Danube as one river basin, provide a platform for communication with the public on ongoing water management processes, inspire and motivate actions to protect and enhance the Danube and its related ecosystems, promote the ICPDR and contracting parties, and improve transparency and acceptance of integrated river basin management. Danube Day 2005 saw over 400 organisations in 13 countries participate in over 300 events (Danube Day, 2005).

4.1.3 Guidelines for Business Cooperation

ICPDR has also established *Guidelines for Business Cooperation* as a means of developing cooperation with business and industry. Such guidelines paved the way to ICPDR signing a Memorandum of Understanding with Coca-Cola Company, and its largest European bottler Coca-cola Hellenic Bottling Company S.A., for the joint protection and preservation of the Danube River on the 1st June, 2005. Pursuant to the agreement a range of cooperative activities have been outlined, largely aimed at promoting public awareness and supporting conservation projects in six Danube countries where Coca Cola have operations. Through the MoU the parties agree to encourage participation of other leading companies, extending the Danube Day celebrations, and cooperating with governments, educational institutions and NGOS in hands-on projects within Bulgaria, Hungary, Romania, Serbia and Montenegro, Slovakia and Ukraine. A similar cooperative arrangement has been entered into with The Aloca Foundation, a leading producer of primary and fabricated aluminium. The Alcoa Foundation has donated a $100,000 grant to ICPDR towards technical equipment for water research institutions.

4.2 Danube Environmental Forum

A vital facilitating for co-ordinating the numerous international, national and local NGOs are active in the Danube Basin is the Danube Environmental Forum (hereafter: DEF) (DEF, 1999). DEF was established in 1999, and acts as a platform for NGOs and Non-profit organisations with a common interest in the protection of the Danube River. DEF is active in 13 Danube Basin States (Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Germany, Hungary, Moldova, Romania, Serbia and Montenegro, Slovakia, Slovenia and Ukraine). The forum plays a key role in:

- emphasising the importance of public participation in water protection and management;
- increasing public awareness in management and protection of water ecosystems;
- improving communication among all stakeholders;
- building capacities and strengthening skills of NGOs in water related issues.

DEF carries out its activities at various levels including at the basin, sub-basin, national and local levels.

4.3 UNDP/GEF Danube Regional Project

The UNDP/GEF Danube Regional Project (DRP) is part of a $US 95 million project encompassing the Danube and Black Sea. The main goal of DRP is to strengthen many of the structures and activities already in place in the basin, building on what is there and lessons learned, and facilitating a basin wide approach. Central to the latter goal is the strengthening of capacity within the ICPDR and Danube countries to fulfil their legally binding obligations under the 1994 Danube Convention and 2000 EU WFD. DRP was launched on 1st December, 2001 and around 80 projects aimed at improving water supply and other water services, strengthening agricultural policy, providing river basin management tools and protecting wetlands, are under way. The project also provides a unique opportunity in its links to the local level, including activities related to public participation, communications, local pilot demonstration activities and a grants programme for NGOs. Previous UNDP/GEF activities within the basin involved quantifying the sources and volume of pollution entering the Black Sea via the Danube and identifying future targets and concrete projects to reduce the pollution.

DRP projects have previously been criticised for focussing on developing capacity at the international and national level and not engaging citizens and NGOs in bottom-up process (Greenspall Bell & Jansky, 2005). In order to address this concern, DRP launched the component programme *Enhancing Access to Information and Public Participation in Environmental Decision Making* in September 2004. The objective of the programme is to strengthen public involvement in environmental decision making and reinforce community actions for pollution reduction and the protection of ecosystems. Support is provided to DEF at the central and national level, and opportunities for other NGOs to implement small sized local and regional projects is provided through a small grants programme.

5. Challenges to Stakeholder Participation

While significant strides have been made to develop a framework for stakeholder participation within the Danube Basin, a number of controversial large infrastructure projects exist. The case of the *Gabčíkovo-Nagymaros Dam system* is a well-documented illustration of both the influence of NGOs in raising environmental concerns, as well as the failure to conduct adequate stakeholder consultations in the design and implementation of large infrastructure projects (Greenspall Bell & Jansky, 2005). More recently, Ukraine's actions concerning the construction of the Bystroye Canal appears in marked contrast with many of the country's international commitments relating to environmental protection and stakeholder participation. The route of the canal cuts through the heart of the Ukrainian Danube Delta biosphere reserve, which is regarded as the most highly valuable part of the Delta. The digging of the Canal is seen by the Government of Ukraine as a solution to the unemployment problems in the closed Delta ports. At present, ships have to enter the Delta though the Sulina Canal in Romania at a cost of billions of dollars a year in fees. Digging of the canal started on the 16th May, 2004. However, the construction of the canal has proved to by very controversial amongst local environmental NGOs, and there have been numerous protests and campaigns. According to a survey conducted by a local NGO, 80 per cent of respondents, citizens of the area are against the construction of the canal through its current planned route (Rus, 2004). Opposition to various other dam projects in the Balkans and upgrading of the Trans-European Transport Network, are further examples of the diverse interests throughout the Danube Basin, and the strong need to promote legitimate, equitable and transparent methods for engage stakeholder in the decision making process. Establishing an effective process whereby diverging interests over such projects can be voiced and reconciled is a key challenge facing the Danube Basin States.

6. Conclusion

A study of stakeholder participation within the Danube River Basin offers a useful insight into how a group of fairly diverse Basin States have adopted a common strategy for stakeholder participation. A number of useful lessons and key challenges can be gleaned from the study.

EU WFD and other regional laws as a catalyst for stakeholder participation.
The study has shown that efforts to promote stakeholder participation have been significantly boosted by the adoption of the EU WFD and other regional laws. What is particularly interesting is the commitment by *all* the Danube Basin States to implement the fairly onerous provisions of the EU WFD regardless of whether or not they are EU Member States. A major challenge for the ICPDR and Basin States will be to ensure that stakeholders are fully engaged in the design, adoption and future revisions of the Danube basin management plan. In addition to the EU WFD, other EU and UN ECE laws have also had a major influence on how the laws have developed at the basin level. Such influence is therefore illustrative of the potential role for international and regional agreements in supporting and strengthening cooperative arrangements at the basin level.

Strengthened capacity at the international and national level.
While the Danube Basin States have shown a clear commitment to adopt regional laws within the Danube context, they will require significant support to ensure that the relevant provisions are transposed at the national level. Key challenges highlighted above include the need to adopt or strengthen relevant legislation relating to stakeholder participation, and enhancing capacity at the national level to accommodate stakeholders within the decision-making process. In addition, new funding strategies will be required to ensure that infrastructure for stakeholder participation is in place in time to meet the requirements of the EU WFD.

Central role for ICPDR in facilitating stakeholder participation at the basin level.
The study has shown the importance of having an active Basin Commission in place in order to coordinate activities throughout the basin. The ICPDR plays a central role in facilitating and co-ordinating stakeholder participation efforts throughout the basin. In particular, the ICPDR has facilitated stakeholder participation by allowing interested parties to apply for observer status within the commission, engaging business and industry in its activities, and adopting a basin strategy for public participation. While in its infancy the strategy in particular shows a clear determination to embed stakeholder participation within the activities of the ICPDR, and provides a number of useful examples of how that participation can be fostered.

Co-ordination of international, national and local NGO actions.
The Danube Basin study also provides a useful example of the need to coordinate NGO and donor activities throughout the Basin, and co-ordinate international, national and local efforts. Both the UNDP/GEF Danube Regional Project and the Danube Environmental Forum provide examples as to how such coordination can be achieved.

Need to engage stakeholders throughout the process.
Finally, the Danube Basin study shows that while significant commitments towards stakeholder participation have been undertaken at the international and national levels, a number of existing and planned large-scale infrastructure projects offer a stark reminder of the need to fully engage stakeholders within the planning process.

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Useful Websites

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Danube Environmental Forum – http://www.de-forum.org/

UNDP/GEF Danube Regional Project - http://www.undp-drp.org

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Public participation under the EU Water Framework Directive

By Daniel Malzbender[1]

1. Introduction

The Water Framework Directive (WFD) is the European Union's (EU) central piece of legislation concerning the management of water resources in EU member states. It represents a fundamental reform of EU water legislation, making integrated river basin planning and management compulsory for all member states (WWF: 2001). The WFD is applicable for all Community waters, i.e. surface waters, groundwaters including coastal waters. The Directive is aimed at improving the ecological quality of European freshwater and coastal water ecosystems, the reduction of water pollution, the mitigation of floods and droughts and improved sustainability of water use through more efficient water resource use and management. The ultimate goal is achieving "good status" of all Community water resources (WWF: 2001). As part of its objective to develop and implement River Basin Management Plans, the WFD provides for public participation processes during the implementation phase of the Directive. After providing some background on nature and content of the WFD, this case study illustrates the Directive's stakeholder participation requirements in more detail. Drawing on this discussion, possible lessons learnt for stakeholder participation in a southern African context will be identified.

2. Background to the WFD

The European Parliament and the Council of the European Union have adopted the WFD on 23 October 2000. It is applicable **to** all EU member states, including the new member states from the date of their accession to the Union. That said the Directive is not automatically applicable **in** members states. Of the three main instruments of EU law, guidelines, directives and ordinances, only the latter ones are automatically applicable (and enforceable) in members states. Directives and guidelines need to be implemented[2] into national law in order to come into force **in** member states. Unlike it is the case with guidelines, it is mandatory for member states to implement directives, including the WFD, into their respective national law. Hence, the WFD establishes a framework providing for a common approach and common objectives, principles, definitions and basic measures. The specific actions required to achieve "good status" are the responsibility of the competent authorities in member states in accordance with the

[1] African Centre for Water Research

[2] Some literature related to the WFD uses the term "transposition into national law". However, as "implementation into national law" is the common English terminology for the legal process in question, it is the terminology used in this case study.

respective domestic law (which, after implementation of the WFD into national law needs to reflect the elements provided for in the Directive) (EU et. al., 2001).

The WFD sets out a series of tasks towards achieving the ultimate objective of "good status". The practical resource document for implementing the EU Water Framework Directive (WWF, 2001) summarises the key tasks for implementing the WFD.

1. **Setting up of River Basin Districts as the fundamental unit for applying and coordinating the Directive's provisions**

   By the end of 2003 all river basins and coastal waters must be assigned to a River Basin District (RBD) and the competent authority for each RDB must be identified. In the case of river basins shared by two or more Member States, international RBDs must be established. If a river basin extends beyond Community territory, the relevant member state(s) must seek to establish appropriate coordination with the non-member state(s) concerned.

2. **Identifying and agreeing on key water management issues**

   Article 4 sets out the WFD's environmental objectives for surface- and ground-water bodies, including 'heavily modified waters'. This provides the context for identifying key water management issues. Article 5 requires that surface- and groundwaters within each RBD must be characterized in accordance with the procedure set out in Annex II of the WFD, requiring for each RBD a review of the environmental impacts arising from human activities. Article 5 also obliges Member States to carry out an economic analysis of water use in each RBD. Article 6 requires that a register of protected areas within each RBD be established. This is a complementary step to the characterization of RBDs, helping to identify those parts of the RBD that are especially sensitive to human activities and in need of special management approaches.

3. **Designing Programmes of Measures and developing River Basin Management Plans for their implementation**

   Article 11 requires Members States to establish by 2009 a Programme of Measures for each RBD, composed of both *basic* and *supplementary* measures for achieving and/or maintaining 'good status'. 'Basic' measures are compulsory and represent the minimum steps required to achieve 'good status'. 'Supplementary' measures are those needed in addition to basic measures if 'good status' is to be achieved; for example, wetland restoration and rehabilitation.

   Every Member State must ensure that a River Basin Management Plan (RBMP) is produced for each RBD wholly within its territory (Article 13). This effectively provides the delivery mechanism for the Programme of Measures to achieve 'good status'. In the case of transboundary river basins, the Member States concerned must work jointly, with the aim of producing a single International

RBMP. If a single plan is not produced, each Member State is responsible for preparing a RBMP for at least the portion of the RBD that lies in its territory. The Programmes of Measures included in these RBMPs must be fully operational by 2012, at which time a progress report on implementation must be submitted to the European Commission. The RBMPs have to be reviewed in 2015 and every six years thereafter.

4. **Establishing and maintaining appropriate monitoring networks**

   Article 8 requires Member States to put in place monitoring programmes "in order to establish a coherent and comprehensive overview of water status within each River Basin District". Such monitoring must cover both surface- and ground-water, and has to be operational by 2006. Three types of monitoring are required: 'surveillance', 'operational' and 'investigative', as detailed in WFD Annex V. Additional monitoring is needed for the protected areas (for habitats/species or drinking water abstraction) identified under WFD Annex VI.

5. **Identification and protection of water bodies used for drinking water abstraction**

   This is aimed at reducing the level of purification treatment required prior to supply for human consumption, and ensuring that the requirements of the Drinking Water Directive are met.

6. **Introduction of water pricing policies that provide adequate incentives for efficient use of water**

   This objective needs to be completed by 2010 and has to take into account the principle of 'cost recovery' for water services, including environmental and resource costs.

7. **Control of all pollutant emissions and discharges into surface waters**

   In order to achieve this objective, a 'combined approach' is to be used, based not only on the overall quantity of a given pollutant that is emitted or discharged, but also on its concentration in the receiving aquatic environment. The objective has to be achieved by 2012.

8. **Specific controls for certain higher risk pollutants**

   These controls have to be introduced on a priority basis, with progressive reduction, phasing out, and/or cessation of emissions, for the substances identified as priorities. The first phase-outs or cessations are expected within 20 years of adoption of relevant proposals by EU decision-making bodies.

(WWF, 2001).

The WFD imposes strict deadlines for achieving its objectives (see Figure 1 below for final deadlines for legal compliance as regards WFD implementation). It will therefore usually be necessary for member states and competent authorities respectively, to initiate tasks as early as possible and carry out different tasks in parallel.

Figure 1: WFD tasks with 'minimum compliance' deadlines

2000	End 2003	End 2004	End 2006	End 2009	End 2010	End 2012	End 2015
Adoption of WFD	WFD implemented into national legislation River Basin Districts identified	Analyses of pressures/ impacts and economic use completed	Monitoring programmes operational Public consultation on River Basin Management Plan (RBMP) components under way	RBMPs published	Pricing policies in place	Programme of measures operational	Environmental objectives achieved

Source: Adapted from WWF, 2001

3. The public participation requirements of the WFD

3.1 Forms of public participation

The Guidance on Public Participation in relation to the WFD (IWG, 2002) defines public participation as "allowing people to influence the outcome of plans and working processes". In this context the document identifies three different levels of participation with different levels of influence. These levels are:

- Information supply
- Consultation
- Active involvement

Information supply

Information supply is the form of participation with the lowest level of influence by the public. Yet, information supply to the public is the foundation for any form of public participation (IWG, 2002).

Consultation

The next level of participation is consultation, where administrative bodies consult people and interested parties (stakeholders) to learn from their knowledge, perceptions,

experiences and ideas. Although giving stakeholders (or the general public) the opportunity to influence decision-making through their comments and suggestions, consultation does not concede any share in decision-making, as there is no formal obligation to take the expressed views on board. Generally two types of consultation are distinguished, written and oral consultation, with the former one being the minimum requirement as stated in the Directive.

Active involvement

The third level of public participation, and the one with the highest degree of influence, is active involvement of the public. Within this category further sub-categories can be distinguished, each with a different level of influence on decision-making.

The first sub-category is the participation in the development and implementation of plans, where interested parties participate actively in the planning process by discussing issues and contributing to their solution.

The next category is shared decision-making where interested parties not only participate actively in the planning process, but also become partly responsible for the outcome (IWG, 2002). An example would be water use sectors being represented in river basin organisations.

The last sub-category is self-determination, which implies that (parts of) water management are handed over to the interested parties, e.g. by establishing water users' associations (IWG, 2002).

3.2 The legal requirements of Article 14 WFD

Reference to public participation is made in Preambles 14 and 46 to the WFD, which stress the importance of public participation for achieving the objectives of the WFD. The key public participation provision of the WFD is Article 14. In this provision the three levels of participation as described above are legally reflected.

Information supply

Article 14 (1), third sentence stipulates that “on request, access shall be given to background documents and information used for the development of the draft river basin management plan” (see section 2 above for RBMP as key tasks of WFD implementation). In legal terms the WFD thus only requires access to background information and no active dissemination of information. The latter is, however, essential to make the prescribed consultation and active involvement work (IWG, 2002).

Consultation

Consultation is required by **Article 14 (1), second sentence (a) (b) and (c)**, which reads as follows:

Member States shall ensure that, for each river basin district, they publish and make available for comments to the public, including users:

(a) a timetable and work programme for the production of the plan, including a statement of the consultation measures to be taken, at least three years before the beginning of the period to which the plan refers;
(b) an interim overview of the significant water management issues identified in the river basin, at least two years before the beginning of the period to which the plan refers;

(c) draft copies of the river basin management plan, at least one year before the beginning of the period to which the plan refers.

Hence, the WFD makes consultation mandatory on three key steps towards the RBMP, which will ultimately be the instrument laying out how the basin will be managed. Initially the public needs to be consulted in the process of developing a workplan for the RBMP itself and the required consultation measures. Furthermore consultation needs to take place with regards to the identification of significant water management issues, as the Programme of Measures and the RBMP will largely be based on this determination. Lastly, the public needs to be consulted on the draft RBMP once it has been produced.

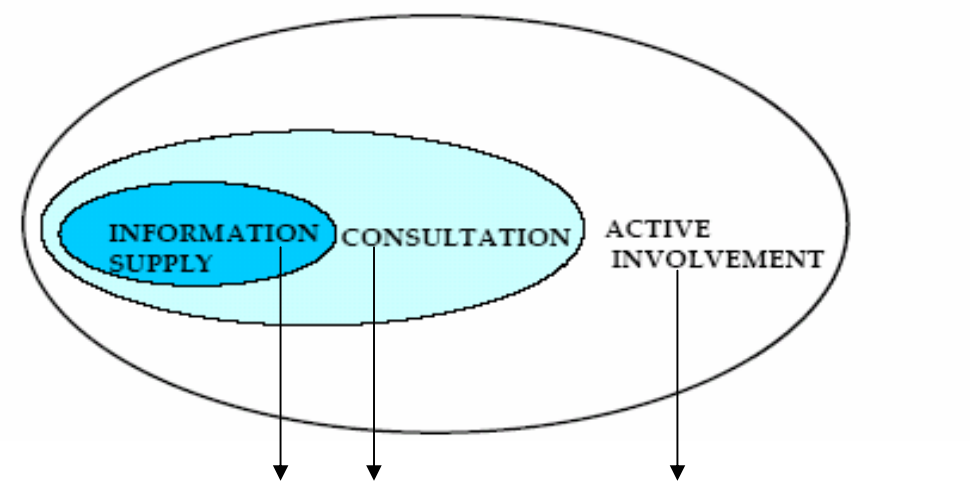
Active involvement

Active involvement is provided for in **Article 14 (1), first sentence**, which states that member states "shall encourage the active involvement of all interested parties in the implementation of this Directive, in particular in the production, review and updating of the river basin management plans". As far as active involvement is concerned, *participation in the development and implementation of plans* is considered the core requirement for active involvement, whereas *shared decision-making* and *self-determination* are not specifically required, but may often be considered best practice (IWG, 2002).

The three forms of public participation are not only required in the initial implementation phase of the Directive until 2015. Article 14 (3) stipulates that the same participation requirements are applicable for the subsequent update of the RBMPs in the sequential review phases after 2015.

In the light of the above, it needs to be emphasised, that the Directive makes only "access to information" and "consultation" mandatory in that Article 14 of the WFD stipulates that they shall be *ensured*. "Active involvement" is not made mandatory for specific steps, as it is for the other two forms of participation, since Article 14 of the WFD merely states that it shall be *encouraged.* However, clear efforts have to be made to promote and facilitate active involvement. The Guidance on Public Participation in relation to the WFD (IWG, 2002) recommends using "active involvement" wherever possible, since experience shows that this is the best means to develop sustainable water management solutions that get the buy-in of the public.

Figure 2: The public participation requirements under the WFD



Source: IWG, 2002

3.3 The practical implementation of public participation

Whereas Article 14 of the WFD stipulates the minimum legal requirements for public participation, it does not prescribe the practical implementation of it. In practice public participation has to be implemented in line with the respective domestic law (after the implementation of the WFD into domestic law). Water managers and other affected decision-makers need to develop a public participation strategy that is adapted to the given environment in the respective basin (or river basin district) and suits local conditions. The key reference document to assist them in this process is the Guidance on Public Participation in relation to the WFD (IWG, 2002). This document provides important background information on issues such as the rationale for public participation, stakeholder selection, timing, scale and type of involvement.

3.3.1 The rationale for public participation

It is useful for decision-makers to reflect on the rationale for public participation under the WFD as it helps them to better understand both the minimum requirements for participation as well as the most suitable form of participation in their specific basin or river basin district.

Public participation is a means to contribute to the end goal of compliance with the Directive, the achievement of good status for all Community waters. The contribution lies in helping to define the rationale, framework, outcomes and validity of decision-making processes (IWG, 2002). To do this, the main purpose of public participation is to improve decision-making, by ensuring that decisions are soundly based on shared knowledge,

experiences and scientific evidence, that decisions are influenced by the views and experience of those affected by them, that innovative and creative options are considered and that new arrangements are workable, and acceptable to the public (IWG, 2002). Potential benefits resulting form public participation are:

- increasing public awareness of environmental issues as well as the environmental situation in the related river basin district and local catchment
- making use of knowledge, experience and initiatives of the different stakeholders and thus improving the quality of plans, measures and river basin management
- public acceptance, commitment and support with regard to decision taking processes
- more transparent and more creative decision making
- less litigation, misunderstandings, fewer delays and more effective implementation
- social learning and experience resulting in constructive dialogue
- widely accepted long-term solutions for river basin planning
- avoidance/ reduction of conflicts resulting in fewer management problems and cost-savings

(IWG, 2002)

3.3.2 Who to involve

The nature of the different forms of participation - access to information, consultation and active involvement - requires a distinction in the target groups. With active involvement being far more resource-intensive and time-consuming, the target group for this type of participation cannot be as wide as this is possible for access to information and consultation. Consequently the Directive uses different terms for defining the target groups of the respective forms of participation.

With respect to access to information and consultation the WFD uses the term "the public[3]". This term is not defined in the Directive, but needs to be interpreted in line with Article 2 (4) of the Aarhus Convention[4] saying: "*One or more natural or legal persons, and, in accordance with national legislation or practice, their associations, organisations or groups*". The wording of Article 14 of the WFD makes no reservation, such as "the affected public", meaning that all access to information and consultation has to include all natural and legal persons, and, where national legislation makes provision for it, also their associations, organizations and groups. The spectrum of people that need to be informed of consulted can be this wide, because the forms of participation for which it applies, require fewer activities from the competent authorities than active involvement does. The competent authorities have to make the information available, and, in the case

[3] In preamble 14 and 46 the Directive also uses the phrases "public, including users" and "general public" respectively without any difference in meaning (IWG, 2002).

[4] UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters

of consultation, receive submissions, comments etc. from the public and appropriately consider them in the planning and decision-making process.

Active involvement on the other hand, implies that stakeholders are invited to contribute actively to the process and play a role in advising the competent authorities in one of the forms described above (see section 3.1) (IWG, 2002). This requires the competent authorities to embark on a range of measures that can include bilateral meetings, steering groups, advisory groups, workshops and many more. These means are time-consuming and costly. It is therefore only consequent that the target group cannot be the "public" as defined by the Aarhus Convention. Instead, the WFD uses the term "interested party" when it comes to active involvement as a form of public participation. Interested party can be interpreted as meaning any person, group or organisation with an interest or "stake" in an issue either because they will **be affected** or may have some **influence on its outcome**. Based on this definition, the Guidance on Public Participation in relation to the WFD (IWG, 2002) equalises the term "interested party" with "stakeholders".

Since it is for practical reasons impossible to actively involve all potential stakeholders, a selection will have to be made. Criteria for selection include[5]:

- the relation of the stakeholder to the water management issues concerned
- the scale and context at which they usually act, who they represent
- their involvement, being governor; user; expert and executer of measures
- their capacity for engagement
- the political, social, "environmental" context.

(IWG, 2002)

Stakeholders involved in water management can include:

- **Professionals** – public and private sector organisations, professional voluntary groups and professional NGOs (social, economic and environmental), statutory agencies, conservation groups, business, industry, insurance groups and academia.
- **Authorities, elected people** - government departments, statutory agencies, municipalities, local authorities
- **Local Groups- non-professional organised entities** operating at a local level. These are *Communities centred on place* – attachment centred on place, which includes groups like residents associations and local councils and *Communities centred on interest* – e.g. farmers' groups, fishermen, birdwatchers.
- **Individual citizens, farmers and companies** representing themselves. Key individual landowners for example or local individual residents.

(IWG, 2002)

[5] Annex I of the Guidance on Public Participation in relation to the WFD (IWG, 2002) presents a technique for selecting the relevant stakeholders by means of a stakeholder analysis and can be used as a reference document for practitioners.

3.3.3 Timing and Proportionality

Both timing and proportionality are important factors determining the success of public participation processes.

The reason for a specific participation process as well as the target groups, are largely influenced by the timing of the process. At different stages the process will have different objectives and involve different role-players, e.g. consultation on the identification of key water management issues will regularly be broader than active involvement in actual decision-making processes as part of basin management. The WFD clearly prescribes the timing for specific participation measures (consultation) only for the three steps listed in Article 14 (1), second sentence (a), (b) and (c) (see section 3.2 above) and Article 14 (1), third sentence for access to information.

Other than that, the timing of specific participation measures is to be determined by the competent authorities, particularly as active involvement is concerned. It can be argued that stakeholders should be involved as early as possible, before decisions are taken. This will enable the competent authorities to benefit optimally from the stakeholders insight, experience and knowledge and allow maximum involvement, influence and ultimate acceptance of eventual decisions (IWG, 2002). Ultimately, timing of public participation has to be assessed on a case-by-case basis and it should be explained to participants how their involvement will be used in order to avoid false expectations (IWG, 2002).

The issue of timing closely relates to the question of proportionality, which is the question whether or not the costs and energy put into the process is proportionate to the outcome. Only when the planning process is at a stage where public participation can benefit it, participation produce positive results and contribute meaningfully to the process. Again, this needs to be assessed on a case-by-case basis with the aim of finding a good balance between costs (time and money) and potential benefits. Questions that can assist in determining proportionality are:

- In which stage of the process do you want to apply public participation?
- What is the specific problem at this stage and what are the expected activities?
- Is the outcome of this stage still flexible and open-minded or determined and fixed?
- At what scale is the work being planned?
- What form of participation will be used?
- Which stakeholders are to be involved?
- What are the conditions regarding human, financial and time resources?
- What is the political context like with regard to the process (pro/contra/neutral)?
- What is the actual acceptance level towards public participation processes?
- Who will decide in the end?
- Who will be involved from your own organization in what way?
- Are there ongoing process/research of the same nature?
- How are you going to communicate?

- What results are to be expected? Is it likely that involvement of stakeholders can positively influence the results?
- What do you want to achieve with public participation? - ownership of problem by third parties, commitment of other parties, innovative solutions, acceptance of measures to be taken, raising awareness?

(IWG, 2002).

3.3.4 The scale at which to conduct public participation

The implementation of the Directive will, depending on the watercourse in question, require activities at many different scales, mainly river basin district, river basin, sub basin, national level, national part of an international river basin district, regional and local government level (IWG, 2002). This raises the question at which scale public participation should be organised.

In terms of Article 14 of the Directive active involvement should be encouraged at all scales where activities take place to implement the Directive and including the areas the impact of the implemented measures may be felt. Furthermore the article prescribes consultation in the planning process for the river basin management plan and therefore at the scale of the river basin district or the national parts of an international river basin district. However, a public participation requirement at a specific scale does not mean that public participation must be organised at that scale (IWG, 2002). Since the effects of management will be felt most directly at the local level, there is good reason to organise public participation at that scale. This is likely to generate more responses from local stakeholders and ultimately leads to better buy-in of the people directly affected by the management decisions to be taken, as they have the opportunity to emphasise local problems and make recommendations from a local perspective. On the other hand, local level participation might not always be possible due to the necessary high human and financial resources as well as time needs. Also, the nature of certain management issues might make participation at a regional or basin level more appropriate.

The Guidance on Public Participation in relation to the WFD (IWG, 2002) identifies five steps to address the scale issue in public participation.

1. Determine which issues should be addressed at which level

Together with the main stakeholders the competent authorities in each river basin district have to define and analyse the main issues and their geographical scale. In large international river basin districts this requires international coordination. Where it is agreed that an issue should be addressed at the regional level, a similar exercise could be held at that level to determine which aspects of the pertinent issue can be addressed at the local level.

2. Determine what groups of the public or which stakeholders can make what types of contribution and what type of public participation is most appropriate for the public and possible contributions concerned.

3. Organise public participation as close to the public concerned as possible, given budgetary and staffing constraints

4. Communicate the (first) results as soon as possible across different scales and between relevant units at the same scale. This needs to take place at in three different ways. First, local information as well as concerns and solutions need to be incorporated into the river basin management plan for the river basin district ("scaling up"). Second, issues playing a role at a higher scale should be communicated to and discussed with the local level ("scaling down"). Third, local information, concerns and solutions may need to be communicated to upstream and downstream areas and to neighbouring areas outside of the basin ("horizontal communication").

5. Report on follow-up not only in the river basin management plan, but also at the level where public participation was organised.
(IWG, 2002).

In principle any level of public participation can be organised at any scale, even at the international river basin district scale. The challenge is to find the most appropriate way (scale, forms of participation and methods) to conduct stakeholder participation for the respective issues at hand.

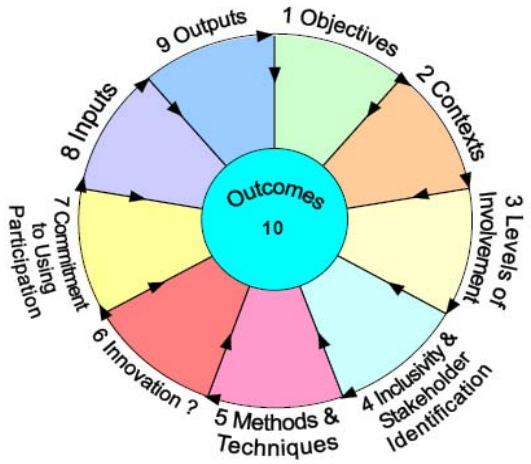
3.3.5 Reporting and Evaluation

Annex VII of the WFD requires reporting on the public participation process. The reporting must describe the whole process of participation, the way information is made accessible for stakeholders and the public and the effect of the participation process on the River Basin Management Plan. The reporting is directed at the European Commission, which fulfils a monitoring role regarding the implementation of the Directive. At the same time, an evaluation of the results that are reported back can help improve public participation in the next planning cycle (IWG, 2002). For these purposes reporting should not only be directed at the Commission but also to the participants that were part of the public participation process. Reporting brings transparency into the public participation process, and gives feedback to the participants on what has happened with their comments. It is therefore useful to report back not only at the end of a participative process, but also to provide direct feedback during the process and after specific participative activities. It is therefore recommended to take into account the reporting aspects beforehand, when designing the public participation process.

Over and above mere reporting, an evaluation of the public participation processes can improve their quality. Evaluation in this context is defined as "a process of assessment which identifies and analyses the nature and impact of processes and programmes" (IWG, 2002). The purpose of evaluation in the context of participatory processes is to assess what they have achieved. Achievement can be assessed against both qualitative and quantitative criteria. Ideally, both the competent authority as the organiser of the participation and the participants should be involved in the evaluation (IWG, 2002), in order to generate learning effects on both sides. The use of a common framework for

evaluation can help ease of comparison where participation has occurred in several places within a river basin (IWG, 2002). Figure 3 below illustrates a summary framework for evaluation of participation processes.

Figure 3: Summary framework for evaluation of participatory processes



Source: IWG, 2002

4. Conclusion and lessons learnt

With the entry into force of the WFD, public participation related to river basin management in Europe is largely driven by the legal requirements of the Directive. That is not to say that public participation did not happen prior to the promulgation of the WFD. However, there are now clear, uniform guidelines of how to conduct public participation. Furthermore, countries or basins, where public participation was not practised, are now required to implement public participation in line with the Directive.

Such uniform, legally binding framework for public participation does not exist in the southern African region. The key regional, legal instrument for water resource management, the SADC Protocol on Shared Watercourses, does not contain provisions referring to public participation. However, public (or usually called stakeholder participation) is strongly emphasised in the respective Chapter 10 of the SADC Regional Water Policy (SADC, 2005a) and the draft SADC Regional Water Strategy (SADC, 2005b). Generally there is high acceptance in the region that stakeholder participation is beneficial for sustainable water resource management. Hence, stakeholder participation processes are not driven by a legally binding instrument, but rather by the common understanding and acceptance of its benefits.

One could argue that mandatory processes, as provided for in the WFD would be useful to speed up the initiation of public participation processes in southern Africa. On the other hand, as said, there is no general objection or even scepticism towards public participation in the region. Where participation processes are not yet on the way, it is more often that not due to severe limitations in terms of financial and human resources. Therefore, it is arguably preferable, not to have a legally binding regional framework for public participation in place, as resource limitations in southern Africa differ to a much greater extent that it is the case in the European Union. The fact that even in parts of the European Union the implementation of the public participation requirements of the Directive is lagging behind (WWF, 2005), suggests that prescriptive framework as provided by the WFD would not adequately reflect southern African conditions.

That said, the three forms of public participation covered by the Directive, are likely to be the ones that would mostly be used in southern Africa. However, given that fewer people (than in Europe) have sufficient and regular access to information, active involvement is likely to play an even greater role than in Europe. This makes the selection of stakeholders in order to ensure adequate representation of affected people and interest groups particularly important. The guidelines for stakeholder selection and the implementation across different scales can be a useful reference for organisers of public presentation processes in southern Africa, provided they are adapted to the specific regional conditions.

With the region's strong reliance on transboundary rivers, the recommendations for the implementation of public participation in transboundary rivers deserve particular attention. The Guidance on Public Participation in relation to the Water Framework Directive (IWG, 2002) points out, that key to managing the scale issue in river basin management is communication and coordination across scales and between units at the same scale (e.g. upstream and downstream countries or regions). This is facilitated very much by building up formal and especially informal networks across scales and between units at the same scale. Staff members of one competent authority could attend meetings organised by the other relevant competent authorities and vice versa (IWG, 2002). Moreover, the establishment of a central clearinghouse in each river basin district for public participation could be considered for exchanging the results of and experiences with public participation (IWG, 2002). In basins where different languages are spoken sufficient funds for translating the most important documents need to be made available. Importantly, the document emphasizes, that public participation at the international river basin level encourages the participation process at lower scales within the basin (IWG, 2002). Hence, participation processes driven by international River Basin Organisations within SADC, can produce welcome spin-off effects for public participation at lower water management levels.

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Stakeholder participation in transboundary water management: the North American Great Lakes System

Joshua T. Newton[1]

1. Introduction

Stakeholder participation in transboundary water management: the North American Great Lakes system As the world's population grows and develops, and more stress is put on the planet's natural resources, it has become evident that intervention into the way human's interact with the earth is necessary in order to ensure that future generations will have access to those resources which are vital for our survival. For, at this moment, not all the world's population has access to these resources, but if we are to continue with our degrading of the environment, even less will have access in the future.

The result is that nations are attempting to address the issues that are harming the natural environments by creating initiatives under a legal framework to be carried out by institutions, in order to help mitigate the growing crisis. Added to the already complex situation is the fact that many of these problems cross political borders. Whether those boundaries are international, national, municipal, etc., many of these critical environmental concerns do not recognize the lines on maps.

One of the most crucial transboundary issues that exists today, because of how it is linked to our lives and livelihoods, is that of water. Without water, we cannot survive. And, because of increased use and the declining quality of water, worldwide, we are facing potentially crippling circumstances if we do not change behavior.

A mechanism that has proven to be valuable in making transboundary water projects more successful has been the inclusion of stakeholders in many aspects of management decision-making processes. The open, transparent nature of this participation helps reduce conflicts, create ownership and generally make these initiatives more effective.

An example of this is within the North American Great Lakes System. For decades, stakeholder participation has been a part of management practices within the region and has shown that there is value in including stakeholders in the processes managing transboundary waters. This chapter(?) will look at the history of stakeholder participation in the Great Lakes and provide lessons learned from their experiences and recommendations for future action.

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2. The North American Great Lakes System

Located between the United States and Canada, the North American Great Lakes System is the largest system of surface freshwater in the world. With over 244,000 km^2 of surface water, 520,000 km^2 of drainage area and a combined volume of almost 23,000 km^3 of water (MacDonagh-Dumler, 2003), the Great Lakes and its tributaries hold 20 percent of the world's surface freshwater supply and 95 percent of that of the United States (MacKenzie, 1996).

The system itself is made up of five large lakes, known as the Great Lakes: Superior, Michigan, Erie, Huron and Ontario, only Lake Michigan residing entirely in one country (United States) (see Map 1 below). The St. Lawrence River connects the Great Lakes to the Atlantic Ocean, stretching the system over 4,000 km in length (Jackson, 2005).

The Great Lakes region is home to over 34 million people, those on the United States side making up approximately 10 percent of its population (24 million) and 25 percent of Canada's population (10 million) (GLIN 2001). It is also important to note that over 350,000 indigenous peoples within the basin. The system is governed by eight U.S. States (Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania and Wisconsin), two Canadian Provinces (Ontario and Quebec) and over 110 First Nation or Tribal governments (Jackson, 2005).

Map 1: Great Lakes-St. Lawrence System (GLIN, 2003).

The Problem

The principal problem that affects the Great Lakes, and why there is a need for intervention on all levels by governments, institutions, etc., is that there is a large threat of water quality degradation. As determined by the United States and Canadian governments with guidelines outlined in the 1987 Great Lakes Water Quality Agreement (see more information below), there are 43 "Areas of Concern" (AOC), which are "*geographic areas that fail to meet the general or specific objectives of the agreement*

where such failure has caused or is likely to cause impairment of beneficial use of the area's ability to support aquatic life" (IJC 1987). Since the 43 AOCs were identified by the two governments, only two have been "delisted" and the other 41 have yet to be restored to the above-mentioned criteria (GLIN 2005).

Traditionally, the sources of pollution primarily came from "point source" discharges, direct discharges from residences, businesses and industries into the Great Lakes and their tributaries. After significant efforts by the United States and Canadian governments curved these pollutants in the 1970s through their own respective national Water Acts, "non-point source" pollution has become the main contaminator. In the Great Lakes region, these come from urban development and runoff, agricultural runoff, farmland conversion, sewerage overflow and contaminated sediments (MacDonagh-Dumler, 2003). These impacts are much harder to mitigate being that they are not discharged from a defined site.

3. Stakeholder Participation in the North American Great Lakes System

3.1 Stakeholder Participation in the Management of Transboundary Waters

It has become apparent that the inclusion of stakeholders in the decision-making processes made in transboundary water management is a vital part in carrying out effective cooperation from the international level down to the local level. Why is stakeholder participation so important? Just to outline briefly a few major points:

The benefits of including stakeholders in on discussions related to management are many. Foremost, it builds awareness amongst not only the stakeholders, but the governments as well. This allows for an improvement in the quality of decisions, because you are working with more complete information as often the governments who are negotiating are far away from the problem (Bruch, 2001) and local stakeholder information is crucial for a more accurate assessment of the problems (CTC-StP, 2005).

When stakeholders are involved, there tends to be early identification of potential conflicts. Without this available, an issue that could be avoided by early intervention and conflict mitigation through mediation or other mechanisms, could turn into a detrimental dispute between parties (CTC-StP, 2005).

Also to be considered is that with stakeholder inclusion, the amount of ownership increases within a project, thereby raising trust, credibility, effectiveness and accountability, and this, in turn, increases the sustainability of the initiative, making it endure through what it might have succumbed to without such involvement (Bruch, 2001).

By not including the public in the decision-making process, one risks not only leaving value on the table by possibly not maximizing potential benefits (CTC-StP, 2005), but

also may impede the entire process as often the public's support is required for effective, sustainable projects (Bruch, 2005).

3.2 Institutional Background of Stakeholder Participation in the Great Lakes Region

The North American Great Lakes System is different than many other transboundary water basins from around the world, because it has a long history in stakeholder participation in its management. Even though the early mechanisms were not as comprehensive as they are today, they set a precedent in the region that would help participation evolve into the more-inclusive methods that now exist. This plays a crucial role in that, according to Yosie and Herbst (1998), we often fail in capturing historical insights and transferring best practices when it comes to environmental decision-making.

3.2.1 Boundary Waters Treaty (1909)

The first instances of including the public in decision-making was incorporated into the 1909 Boundary Water Treaty, signed between the United States and Canada when the two nations began to worry about the allocation of water for the production of hydropower a decade earlier (Botts and Muldoon, 1996). The International Joint Commission was created as part of the treaty with the purpose of preventing and resolving disputes between the two nations with regards to water quality and quantity issues along their shared border (IJC, 2005a). While the first several decades following the treaty, the IJC's role remained quite the same, the new agreements that have been signed and the rapid changes that have taken place over the past several decades have forced it to deal with issues not foreseen by the 1909 agreement, as we will see in the sections to follow (Botts and Muldoon, 1996). This early treaty does not allow for stakeholders to partake in decision-making activities, but, on a more basic level, permits them to be heard and information made available to them.

In Article XII, it mentions that "…all parties interested shall be given convenient opportunity to be heard" when a dispute arises and the parties face the IJC to present evidence for either side (IJC, 1909).

Where there are more in-depth procedures is with regards to if there is an entity that wishes to "use, obstruction or diversion" of waters in which the IJC has been sought out for authorization. In this case, a notice is written up by the governments and:

> *"…as soon as practicable after the application is received, shall cause a notice to be published in the Canada Gazette and the Federal Register and once each week for three successive weeks in two newspapers published one in each country and circulated in or near the localities which, in the opinion of the Commission, are most likely to be affected by the proposed use, obstruction or diversion. Subject to paragraph (3) of this rule, the notice shall state that the application has been received, the nature and locality of the proposed use, obstruction or diversion, the time within which any person interested may present a statement in response to the Commission and that the Commission will hold a hearing or hearings at which all persons interested are entitled to be heard with respect thereto"* (IJC, 1909).

With regards to these hearings where the "persons interested are entitled to be heard with respect", these are all to be "shall be open to the public, unless other determined by the Commission". In these hearings:

> *"…the Governments and persons interested are entitled to present, in person or by counsel, oral and documentary evidence and argument that relevant and material to any matter that is within the published purpose of the hearing"* (IJC 1909).

Whereas these mechanisms for public inclusion are very rudimentary as stakeholders were just able to make their voices heard, it can be said that, for the early 1900s, this was remarkable and is more than can be said for many basins around the world today.

3.2.2 Great Lakes Water Quality Agreement, (1972, 1978 and 1987)

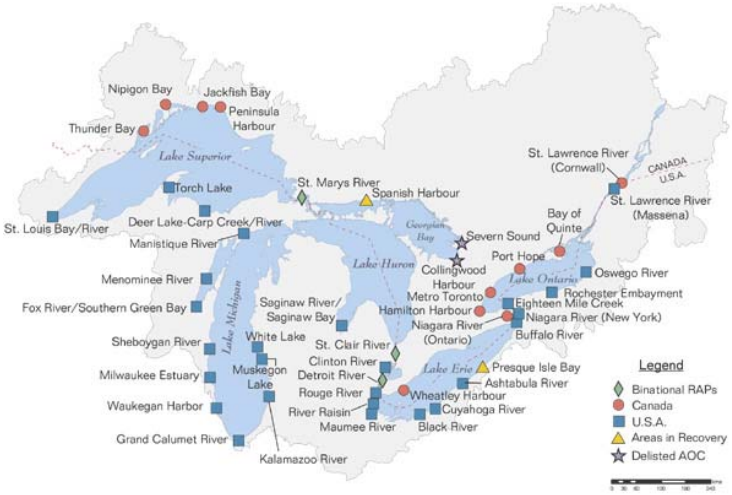
Despite the emergence of the Boundary Waters Treaty and the IJC early on in the 20th Century, these initiatives were not enough to address the increasing problem of water pollution in the Great Lakes. In 1964, the governments of the United States and Canada approached the IJC requesting that the organization ascertain whether the waters were polluted and what actions could be done to restore them. The IJC responded by saying that the two nations' legislative efforts on both sides were not prepared to deal with the water quality issues, because of the complex nature of the sub-national governments on each side of the border (eight states, two provinces and thousands of local governments). As a result of these interactions, the Great Lakes Water Quality Agreement (GLWQA) was signed in 1972 (MacDonagh-Dumler, 2003).

Whereas before the GLQWA, there had been only public hearings for people to voice their concerns over proposed projects, the GLQWA allowed for more opportunities and public involvement increased. One of the most significant efforts that took place during the initial stages of the 1972 GLQWA was the Pollution from Land Use Activities Reference Group (PLUARG). The PLUARG followed up on the IJC's Great Lakes study that led to the GLQWA and involved over 17 advisory panels that included hundreds of citizens and local officials (MacDonagh-Dumler, 2003). These panels, and the participation of the public, initiated a new era in stakeholder participation in the Great Lakes region.

In 1978, the GLQWA was renewed with more strict regulations on discharging pollutants into the Great Lakes waters committing the nations to virtually eliminating persistent toxic substances (Environment Canada, 2005a). At the same time, it was adopted that a more "ecosystem approach" would be taken in trying to restore the waters of the Great Lakes. One of the underpinnings of the ecosystem-based approach, looking at all the components of the ecosystem, is that interdisciplinary public participation be present in decision-making processes. Because of the complex, interdisciplinary nature of environmental problems, a diverse participation is required to come up with solutions (MacKenzie, 1996). This move plays a significant role in the direction the two governments were moving with regards to stakeholder participation.

In the new terms of the 1978 Agreement, the GLQWA was due for revision in 1987. While the first two versions of the GLQWA were done without participation of anyone outside the governments, the poor outcome of the Agreement, after 15 years of existence, caused various stakeholders to motivate and try to involve themselves in the process of the 1987 revision. Led by Great Lakes United, formed in 1982 with the goal of creating a basin-wide citizens' organization, a now 170+ strong coalition of community-based and regional organizations, the public was made aware of the revisiting of the GLQWA and was brought together through various hearings throughout the Great Lakes Region. After hundreds of presentations at these hearings, Great Lakes United (GLU) presented a report of their findings from the experience and presented it to the United States and Canadian governments. Realizing the importance of the public's point of view, GLU was allowed to review copies of the amendments of the GLQWA for comment and five representatives from environmental groups were given observer status during the negotiations over the revised Agreement. This allowed for members of the public to attend the negotiations and individual working groups, voice their concerns and give input (Jackson, 2005). In the end, stakeholders had a say in the negotiation of an international agreement, which, in 1987 was something quite new and would lead to further movement towards more comprehensive participation.

The amendments made to the GLQWA would also prove favorable to promoting stakeholders' participation in the management of the Great Lakes Basin System. It was in the 1987 amendment of the GLQWA that the characteristics of an Area of Concern (AOC), specific areas where pollution was so debilitating that aquatic life could not be supported there, were laid out (IJC, 1987). Under this criteria, 43 areas have been designated AOCs, 26 in the United States, 12 in Canada and 5 that are shared between the two nations (CIELAP 2004) (see Map 2). In the 18 years since the inception of this program, only 2 AOCs has been "delisted", those which have completed the Remedial



Map 2: Areas of Concern in the Great Lakes-St. Lawrence River Basin (Environment Canada, 2005)

Action Plan (RAP) process and have achieved the goals set out for the area's recovery. These two delisted AOCs are Collingwood Harbor and Severn Sound, both in Canada (Environment Canada, 2005b).

Alongside the RAP process, the 1987 amendments also developed the Lakewide Management Plan (LaMP) program. Instead of looking at specific areas of severe pollution, most of which are found in just one nation, the focus of LaMPs program is to look at the health of the individual lakes in the basin. The program not only includes the five Great Lakes, but, in 1999, also incorporated Lake St. Clair, a shared lake between the United States and Canada which resides within the Great Lakes basin (GLC, 2004).

3.3 Stakeholder Participation in the Great Lakes Region

3.3.1 Areas of Concern (AOC) and the Remedial Action Plan (RAP) Process

This AOC concept is important to understand, because they are one of the two linchpins of stakeholder participation in the Great Lakes Basin. The Remedial Action Plan (RAP) is a commitment, through the 1987 GLQWA amendments, by both the United States and Canadian governments to work with State and Provincial governments to carry out the clean-up of each AOC (EPA, 2003). The perception, at the outset of the RAPs' inception, was that the governments themselves were not being very effective at restoring the AOCs and that the local concern for pollution issues would be the driving force behind their cleanup (Beierle and Konisky, 1999).

As a result, the RAP process was born and stakeholder participation took on a new meaning in the Great Lakes. Each AOC is different and, because of this, each RAP is unique. They are designed with the needs and resources of the AOC in mind and encourage a broad range of stakeholders to participate in the process in order to find locally-based solutions for the existing water-quality issues (Hartig et al., 1997). States/Provinces manage the RAP process in different ways. Some are more "hands-on" in their approach while others allow local organizations from the AOC to do much of the work (EPA, 2003). The RAPs are supposed to reflect the requirements of the AOC.

The basis, in following with the initial aims of the 1978 GLQWA amendment, was to adhere to the ecosystem approach, including stakeholder participation, in the planning process and management strategy (MacKenzie, 1996). In order to do this, the Remedial Action Plans are carried out in three stages. The first stage is to identifies the seriousness and causes of the degradation that has taken place. The second stage is to determine what steps will be taken in order to mitigate the negative impacts and improve the health of the ecosystem. Once the steps have been identified, stage three is when these actions are implemented and then are monitored for progress. Once all of the stages have been completed, and the goals are maintained, an AOC can be delisted (Environment Canada, 2005b).

Stakeholder Participation within the RAP Process
With over 40 Areas of Concern, each with their own stakeholder involvement, it is difficult, in such a limited document, to include each and every one of the activities that is taking place. Instead, some of the overarching efforts that are being made will be presented in order to show the diversity and creativity of stakeholder involvement.

Stakeholder Advisory Committees and Public Advisory Councils
The most direct way that stakeholders have an impact on decision-making is through their involvement in stakeholder groups that are comprised of members from the Area of Concern itself. These groups have many names, but are generally called stakeholder advisory committees or public advisory councils. These are groups that are made up from 10-50 members (most commonly 20-30), appointed by the agency that oversees the RAP process or by a steering committee who has done a survey of relevant stakeholders. The members of the councils are a diverse group both based on interest and geography within the basin. They come from academia, environmental groups, local governments, public interest groups, community groups and businesses (Beierle and Konisky, 2001). Some of these groups have been in existence since the late 1980s, making them a significant part of the history of Area of Concern restoration.

The range of activities that a these councils carry out is extensive and vary depending on the Area of Concern they are a part of. As their name indicates, they do "advise" decision-makers with their input and expertise (Beierle and Konisky, 2001) and, when able, assists in the implementation of projects and programs. Others carry out surveys, carry out studies, information dissemination and partake in task forces and working groups (GLIN, 2005).

Public Awareness/Public Education
The most common way that RAPs refer to stakeholder involvement is through public awareness and public education. It is thought that by informing the public of the activities that are being carried out, and having the public comment on those initiatives, the more likelihood that these projects will have success as the public feels a certain ownership of them. Educating the public with regards to the lakes' restoration takes many forms.

One such way to inform the public is through printed documents/materials. Many of the AOCs have mailing lists that they send updates of activities to those who are interested in what is going on. Progress reports, new project information, educational brochures are sent to people throughout the basin in order to inform them.

Public meetings are another forum through which the public is made aware of what is occurring. Organized by government agencies, the regulatory bodies of the RAPs and stakeholder advisory committees, these act as a means where people within the Areas of Concern can attend, hear updates and new proposals and then give their input on what is being communicated. These comments are often drafted into reports and taken back for consideration by the convening authorities.

Some of the more grassroots-based initiatives that have emerged are programs that specifically target both students and teachers. Students are targeted, because they are the future decision-makers and if their understanding is to protect and preserve the lakes, then there is hope for greater involvement and action in the years to come. Teachers are involved in such activities, because they reach a wide range of students. They touch hundreds, not thousands, of students over their years of teaching and if they are able to bring a level of understanding about lake preservation into a student's mind, then this will spread. Programs vary widely, including field trips from school, contests, school programming and volunteer monitoring (see below) (GLIN, 2005).

Festivals/Clean-up Days

Many of the environmental/community groups within a given AOC, including stakeholder advisory committees, hold various festivals and clean-up days in order to educate the community and make them feel more responsible for the protection and preservation of the Areas of Concern while at the same time often collecting money to raise funds for use in other projects.

Celebrating a community's water brings people together around a common theme of which all care about. These tend to be informative and beneficial in that consciousness is raised about the issues that harming the AOC.

Clean-ups tend to have multiple positive affects on the community, not only enhancing awareness of the residents of the AOC, but also improving the health, safety and aesthetics of the area. These programs help create ownership over the bodies of water in the residents' community (GLIN, 2005).

Volunteer Monitoring

Financial resources being thin in many of these AOC, volunteer activities are commonplace in that sometimes this is the only way to advance toward the goals set out by the RAPs and stakeholder advisory committees. Many of the community-members of these AOC have skills and training that allow them to give hours of their time in order to benefit the restoration of these areas. Where people are not trained, some needed activities are basic enough where simple training can provide a person, even a young child, with the tools to help out.

Monitoring is where this is seen most often. In lacking people on the ground enough to monitor some of these large areas, volunteers from the community such as school groups, community groups, etc. are able to come out and be trained on how to monitor for biological inventory, chemicals and bacteria testing. NGOs are able to train and equip volunteers and this not only helps out the AOC, but also educates the public (GLIN, 2005).

3.3.2 Lakewide Management Plans (LaMPs)

Another product of the 1987 amendments to the Water Quality Agreement, was the emergence of the Lakewide Management Plans (LaMPs). Looking more lake-wide rather than the tight focus of the Areas of Concern, this program was designed to do much the

same as RAPs in that the goal is to identify those pollutants which are most hazardous to the health of each lake and provide recommendations and policy options so that those who use the lake can again maximize the benefits the lakes provide (GLC, 2004). The goal of each LaMP is to have federal, state/provincial and local partners work together in order to move towards "maintaining, restoring and enhancing" the Great Lakes for flora, fauna and human that depend on the lakes for their livelihoods (Ministry of the Environment, 2005). Each LaMP is updated every two years with new data and public input (GLC, 2004).

Of the five Great Lakes, Lake Huron is the only lake that does not currently have a LaMP. There has not been a comprehensive assessment of the negative impacts to Lake Huron's benefits, identification of critical pollutants and their sources or reports disseminated for comment. However, along different lines, there is an initiative through the Lake Huron Binational Partnership, which has an approach that takes into consideration what information they do have and confronts the areas they consider to be the most important: contaminants in fish and wildlife, biodiversity and ecosystem change and fish and wildlife habitat (Lake Huron Binational Partnership, 2004).

Stakeholder Participation within the LaMP Process

Each Great Lake has a different process by which it includes stakeholders in management of the lakes. In each of the LaMPs and the Lake Huron Binational Partnership, there is mention of how the public is involved in the greater discussion of improving the water quality of the lakes, which comes out in the biennial status report that each LaMP is required to complete, a process begun in 1999 (EPA, 2004). A synopsis of each LaMPs public involvement practices are included below:

Lake Superior

One of the principal goals of the Lake Superior LaMP is to involve the public in its efforts to restore the lake. There are two frameworks within the LaMP that aids in this process.

The first is the Communications/Public Involvement Committee. Made up of staff from the government agencies and its partners working on topics related to the lake, their primary goal is to expand the number of stakeholders participating in the lake's cleanup and increase outreach activities. Most of their actions take the form of informing the public of what the LaMP is carrying out through various mediums (i.e., documents, publicity, websites, materials, etc.) (Lake Superior LaMP, 2004).

The other arm of the public involvement effort is the Lake Superior Binational Forum, the stakeholder advisory committee for the Lake Superior Bi-national Program. The volunteer committee is made up of 24 stakeholders from the community, consisting of people from sectors such as academia, environmental groups, small businesses and indigenous groups. Their current projects revolve around building awareness within the communities surrounding the lake and giving stewardship awards acknowledging excellent efforts in trying to restore the lake (Lake Superior Binational Forum, 2005).

Lake Erie

Much like the Lake Superior LaMP's public involvement framework, the Lake Erie LaMP has two separate outreach mechanisms within its plan. The Public Involvement Subcommittee plays the key role in managing stakeholder activities within the LaMP itself. The Subcommittee has organized workshops which have brought together members of the community with government agency representatives to work jointly on developing the efforts of the Lake Erie LaMP. Activities also include information dissemination through public information sessions, mailings and reports

The Subcommittee has divided up the stakeholders in Lake Erie into three "Tiers" based on each tier's involvement. The first Tier is that of Lake Erie Binational Public Forum, the second Tier is the Lake Erie Network, those who are on mailing lists, and the last Tier is the general public. (Lake Erie LaMP, 2004).

Having the most interest in restoring the lake, the Lake Erie Binational Public Forum are the most active of the Tiers, working directly with working groups within the management committee of the LaMP. The early versions of the workshops, which took place in 1995, played a key role in forming the Forum. Again, the members of the Forum, come from a diversity of geographic locations around the lake and their sector backgrounds range from recreation to local governments and from public health to agriculture (Lake Erie Binational Public Forum, 2005). The group of 30 meets three times a year and is involved in such activities as partnering with the governments and their agencies in goal-setting and decision-making, assisting with draft LaMP reports and documents and providing advice to the LaMP (Lake Erie LaMP, 2004).

Lake Michigan

The Lake Michigan LaMP is making efforts to move forward beyond the stakeholder model, and its citizen groups, and move towards full collaboration with partners that are doing work within the basin. Two significant efforts have been made with this in mind.

In March of 2003, the Lake Michigan Watershed Academy was launched with the idea that the large-scale data and planning strategies that is important to the management of Lake Michigan needs to be "translated" to local governments. Through a consortium of regional planning commissions and Western Michigan University, conferences were held, tailored to local communities, showing how to plan and cooperate across borders for the effective conservation of the lake. The Watershed Academy aims to bring together agencies from the federal, state/provincial, local and tribal levels along with NGOs in order to share data, tools and experiences and create partnerships (Lake Michigan LaMP, 2004).

The second is much like that of Lake Erie and Lake Superior in that there is a well-developed Lake Michigan Forum. Within the Lake Michigan LaMP, it is stated that "every basin resident is a 'Lake Michigan Manager'" and the Forum is the LaMP's main venue for carrying out this vision. The Forum, meeting four times a year, is represented by just under 20 members from a diversity of interests throughout the basin. Their activities include the input and review of LaMP projects for completion and

implementation, local project identification, promoting the LaMP to the public, acting as a communication link between basin residents and the LaMP process and serving as a forum for discussion on issues and concerns of the public (Lake Michigan Forum, 2005).

Lake Ontario
The public involvement goals for the Lake Ontario LaMP are fourfold. They aim to 1) increase public understanding and awareness of the lake, 2) offer opportunities for meaningful public involvement, 3) promote actions beneficial to the environment and 4) build partnerships with others with the goal of preserving and protecting the lake.

There are many ways for stakeholders to provide input and keep aware of what is going on with the efforts to clean up Lake Ontario. The LaMP partners with others who are working on issues regarding the lake by attending their meetings or inviting them to attend LaMP meetings. A mailing network of over 1,500 contacts on both sides of the border, responding to requests for input on LaMP documents. LaMP also sets up public meeting and keeps the public aware of their activities through the local media and their website. Once a year, alternating between the United States and Canada, a public meeting is held providing updates on the Lake Ontario LaMP and the Niagara River Toxics Management Plan (Lake Ontario LaMP, 2004).

Lake Huron
Even though Lake Huron does not have a Lakewide Management Plan, the Binational Partnership Action Plan makes it clear that stakeholder involvement in its activities is important for the success of the restoration of the lake.

The Partnership itself is made up of several government entities including the EPA, Environment Canada, Michigan's Departments of Environmental Quality and Natural Resources and Ontario's Ministries of Environment and Natural Resources. These core agencies are joined by other government bodies, indigenous groups and NGOs on an issue-by-issue basis.

Public consultation also plays a role in the management process. When issues arise where there is a direct interest by the public, individuals and organizations are targeted to provide input for project guidance and implementation. The Partnership also disseminates information to the public through mailing lists to individuals, interest groups, municipal governments and other organizations (Lake Huron Binational Partnership, 2004).

3.4 Challenges

With 41 out of the original 43 AOCs still contaminated, and almost twenty years past since the introduction of the RAP process, there is still a long way to go with regards to delisting these targeted areas. It is agreed that within this process, stakeholder involvement is crucial. Without it, the governments would be even further behind than they already are. But, including the public in on decision-making processes is not always

easy and there are challenges to doing so. The North American Great Lakes Basin is no different.

3.4.1 Political Will

Even though environmental concerns have emerged to take more of a center stage in the past few decades on an international level, there still lacks an enormous amount of political will to push these issues to the forefront of people's agenda. The remediation of the Great Lakes pollution problems is not an exception.

It is often felt that there politicians do not demonstrate leadership when it comes to the cleanup of the Great Lakes. That competing interests are taking their focus away from making progress towards achieving the goals in the management plans. There is also a sense that many politicians don't believe as much in stakeholders having a say in decision-making as they might purport (Alliance for the Great Lakes, 2004).

3.4.2 Resources

As often is the case with initiatives that don't have the political will to move forward with action, there is a lack of resources. With the case of cleaning up the Great Lakes, it is not the first priority for either the United States or Canada. Constraints on budgets have trickled down to the local level where communities are not seeing as much funding as before. This lack of funds is prohibiting communities from partaking in many activities, especially the sharing of experiences (IJC, 2002a) as much of their funding comes from the governments themselves. Along with less money across the board, there are severe imbalances in power structures in community funding thus preventing many communities from participating in activities (Alliance for the Great Lakes, 2004). Many of the stakeholder advisory committees raise money themselves through various types of fundraisers (GLIN 2005). Also, being in such a large basin (4,000 km across), this requires significant funds for travel and time for those who are trying to coordinate activities basin-wide (Jackson, 2005).

3.4.3 Information and Public Apathy

With a significant amount of focus of the stakeholder participation focused on information dissemination and public education, as was shown above, it is apparent that there is a severe lack of information available to the public. Almost every stakeholder advisory committee, public advisory council and Lakewide Management Plan has it in their mission to get information out to their communities as a portion of their public involvement practices (GLIN, 2005).

Connected with the information issue and how aware people are of the issues is the public's sense of what the problems are. The phrase "out of sight, out of mind" is a good way to explain how disconnected people are from the reality of what the water quality situation. There is the perception that water quality issues are not a serious threat and there is no recognition of what conditions and benefits would be like if the situation were

different. Lack of information plays a role here in that people do not know why or how they should get involved (Alliance for the Great Lakes, 2004).

3.5 The Future

As the IJC moves forward towards the future, there are two initiatives taking place that will have a profound effect on stakeholder participation in the Great Lakes region, hopefully improving participation throughout the basin.

3.5.1 Great Lakes Water Quality Agreement Review

Pursuant to Art. X of the 1987 Great Lakes Water Quality Agreement, after every third biennial review that takes place of the Agreement, a comprehensive review will take place examining the "operation and effectiveness" of the Agreement (IJC, 1987). The process has begun where this is to take place and the IJC has made significant movement towards including the public in on the discussion of the review.

Over the months of October and November, 2005, the IJC held 14 public meetings, seven in the United States, seven in Canada where one or two IJC commissioners would be present. Anyone from the public was welcome to come and make presentations. After the public meetings, the presentations (recorded) will be synthesized into a report and both will be sent to the governments. Citizens are also welcome to submit their presentations by mail or fax, which the IJC will prepare for the United States and Canada.

In the beginning of 2006, the governments will begin the review of the Agreement. At that point, the Great Lakes Binational Executive Committee will set up an Agreement Review Board (ARC), which will be co-chaired by representatives from the EPA and Environment Canada. The ARC will work through the following four working groups: Article Review, Annex Review, The Role of the IJC as defined under the GLWQA and a Special Issues Working Group.

The Working Groups will be comprised of an equal number of U.S. and Canadian representatives. The most significant aspect of this process is that the membership of these representatives can be from not only the national governments, but representatives from municipal agencies, indigenous groups, NGOs, industries and academics. Stakeholders will have a say in this process (IJC, 2005b).

3.5.2 Call for Watershed Boards

In the late 1990s, there was a call by the United States and Canadian governments to the International Joint Commission to consider additional ways that could help them confront the environmental issues that they were facing. The IJC returned with the idea of international watershed boards.

These boards would **not** manage the shared basins, but would play a key role in identifying issues, studying them and creating a public forum for how to deal with them.

The ultimate goal would be to enhance local capacity. The reasons why this concept is being explored is because of the increasing amount of citizen participation, the downsizing of governments (and their capacity for taking on such issues) and the continued environmental stresses in the region. Studies are still being carried out as to the feasibility of this idea (IJC, 2002b).

4. Lessons Learned/Recommendations

It is apparent that, worldwide, we are not close to creating a perfect management system where everything functions smoothly, water is not being degraded and we have perfect agreement over shared freshwater resources. We are constantly looking to improve in our management of shared waters and every experience we can share moves us in that direction.

Within the North American Great Lakes, there are several lessons to be learned on a larger scale that may help us transfer these to other parts of the world where they can be applied. In many ways, these lessons may not be unique to the Great Lakes, because efforts at stakeholder participation have similar problems all over the world.

- *Historical precedence does make a difference*: The fact that the Great Lakes region has a history of stakeholder participation dating back almost a hundred years helps significantly towards making these types of involvement the norm. Even though the participation could be improved, considering the area the basin covers and the initiatives that have been forwarded over the years, it is quite impressive how much participation there is. There is over a thousand people participating on stakeholder advisory committees within the basin and thousands of people participating in activities all over the region. Public participation takes time to manifest and become the norm and this has happened in the Great Lakes. Using what has happened in the past with regards to stakeholder involvement can lead to learning what were the best practices, what should not be done and give impulse to creative thinking about what new possibilities are out there.

- *At the same time, no matter much history you have, you still need resources and political will*: The reality of the situation is that it costs money and you need to have political movers in order to further the goals of transboundary basin management. As funding for stakeholder participation only comes from government budgets and fundraising by the stakeholders themselves, it is very difficult to have progress on managing shared waters when governments are not motivated to do so. These processes are not run by stakeholders in their entirety, so political will is necessary. As is funding, which often comes from the politicians. Without money, certain activities will be limited, making stakeholder participation less effective. Basin residents must make compelling cases to politicians as to why they should fund these types of projects. It is important to take responsibility oneself and not point fingers at politicians, but to convince them why they *should* fund such enterprises.

- *But, even said, there is still a lot one can do without resources and political will*: Even though the Great Lakes region is lacking in funds to do what everyone wants with regards to stakeholder participation, there is still progress being made towards the cleanup of the lakes. A lot can be done with small amounts of funds if one is creative and has ambition. But, more importantly volunteerism runs rampant everywhere in the basin and this alone helps move the restoration of the Great Lakes forward. With members of civil society, who have practical skills for lake restoration, and local residents who just want to help, aiding in the cause of lake restoration, time put in to such an endeavor can go a long way for small improvements.

- *A need to be persistent with public outreach is key*: Without a motivated public to participate in stakeholder involvement, there is little that can be done. It is important maintain efforts to inform and educate the public as to what is going on in the basin. Basin residents need to be made aware of what the issues are and how they are being affected by them. When it is made more personal, to show how people, and their families, are going to be negatively impacted by practices, this will motivate people to act on behalf of their communities. There are "water champions" out there everywhere who will carry on the movement of ensuring safe and healthy bodies of water.

- *Sustained progress must be made in order to secure sustained commitments*: If stakeholders are to put effort into helping manage transboundary waters, it is necessary for sustained progress to be shown or there will be a high chance that they will lose motivation to continue. Even if small progress is shown, this gives satisfaction to those participating and makes them want to carry on, because they are seeing tangible results that are making a difference because of their efforts. While long-term goals are necessary, making short-term goals and moving incrementally is also important in order to ensure steady progress and retain participants (Hartig et al., 1998).

5. Conclusion

Stakeholder involvement has a long history in the North American Great Lakes region. This can be seen by how extensive it is throughout the basin and how it takes place on all levels of management, from the smallest Area of Concern to the review of the Great Lakes Water Quality Agreement. A culture of public participation has evolved and it is demonstrated through the number of activities of involvement that take place every year.

While the picture painted is one of widespread participation, the reality of the situation in the form of the levels of pollution that still exist in the lakes today, is one that shows a need of increased management efforts from all sectors. It is the only way we are going to be able to make progress towards the goal of restoring the lakes so that people, wildlife and the ecosystems themselves may benefit from them.

Stakeholder participation has proven that it can meet some of the needs that the governments are not able to achieve. It is important to harness these opportunities, promote them, finance them, and the chances of success will rise as people will take responsibility for cleaning up their backyards.

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Between Rhetoric and Reality – A Critical Account of Stakeholder Participation in Decision Making in the Mekong River Basin

By Pål Arne Davidsen[1]

"*The Mekong River has been a leader in promoting public involvement in international watercourse management*" (Bruch and Fried 2002:217).

"*MRC's decision-making structures and processes remain firmly rooted in the black box of high-level inter-governmental negotiation*" (Badenoch 2002:8). "*Historically there are significant examples of failure to involve affected local communities in development […] the Mekong demonstrates poorly developed participation processes*" (AMRC 2002a).

1. Introduction

In the area of water resource management there appears to be a broad discursive consensus with regards to the challenge of identifying and involving the relevant stakeholders in river basin decision making. As pointed out by Chomchai (2005), the concepts of stakeholder participation, public involvement, public participation and civil society engagement in decision making in large river systems have been incorporated and nicely packaged as integrated river basin management (IRBM), total catchment management (TCM) or integrated water resources management (IWRM). The underlying philosophy of these concepts have further materialized in a vast amount of research articles, books, seminars and conferences like the Earth Summit in Rio in 1992 and the World Summit on Sustainable Development in Johannesburg in 2002.

The Mekong River Basin (MRB) in South East Asia represents a significant resource for the 6 riparian states of China, Myanmar, Thailand, Vietnam, Cambodia and Laos. Developments initiated by the riparian states also have the ability to alter the ecological integrity of the river, which in turn can have positive or negative effects on the livelihoods of some 65 million people. In this regard, the importance of involving the public in river basin decision making has increasingly been acknowledged by national governments as well as regional institutions like the Mekong River Commission (MRC) and the Asian Development Bank (ADB).

In the MRB, national particularities relating to political, social, economic and cultural areas can work both as facilitators and impediments for public participation. Only by contextual investigation can one draw learning lessons, attempting to explain why some initiatives have been successful while others have not. On the one side, "participation" in river system development can easily institutionalize power disparities when following in the path of existing social patterns, as exemplified by local water management structures where women are excluded from decision making (Pantana et al 2001). On the other side, traditional or indigenous approaches can increase the likelihood of success of water management interventions by transcending problems of legitimacy which external actors and initiatives often have to face.

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When Non Governmental Organisations (NGOs) operating in the Mekong River Basin claim to represent certain groups as homogenizations of the diverse interests of different actors like "the grassroots", "the fisher folk" and "local people", they make strong assertions of legitimacy. This is also the case with national governments and regional institutions which, by including the concepts of stakeholder participation in policy documents, attempt to legitimize such policies by claiming that "the farmers" or "local people" were consulted. Ultimately, IRBM is a journey, not a destination, but the concept has tended to be packaged in such a way as to undermine this insight (Heathcote 1998 cited in Miller and Hirsch 2003).

This paper will address some of the implications of the current discourses on water in the context of the Mekong River Basin in South East Asia with specific reference to "stakeholder participation" in river basin management. The author will first give a brief introduction to the hydrological, institutional and political characteristics of the MRB before embarking on the process of assessing successes, failures and challenges when it comes to involving different stakeholders in river basin decision making. While there are or have been a vast number of public participation projects in the basin, the author has chosen to focus on some of those initiatives which display a substantial record of analysis and research.

1.1 - River basin characteristics

The Mekong River is, with its approximate distance of 4800 km from source to sea, the longest river in South East Asia. With a total area of 795 000 km² and an average annual discharge of 500 billion cubic meters, it constitutes one of Asia's most substantial water resources (Chomchai 2005:139). From its headwaters in China's Qinghai Province thousands of meters high on the Tibet Plateau, the river flows southeast through the Yunnan Province. Further downstream it forms the border between Myanmar and Laos, as well as most of the border between Laos and Thailand. It then crosses Cambodia and southern Vietnam, flows into a rich and diverse delta before emptying into the South China Sea (The Water Page 2000).

Describing the diversity of the Mekong River Basin, the river, on its journey to the sea, flows through six distinct geographical regions with characteristic features of topography, hydrology and biology (MRC 2005b). The river supports an equally diverse range of economic activities like irrigation, fisheries, transportation and power generation, industrial and domestic consumption. The biodiversity is equal to that of the Congo and Amazon Rivers (MRC 2004) and the myriads of plants and animals provide materials, medicines and food (MRC 2005b). A special feature of the Mekong River is the Tônlé Sap, a shallow lake in Western Cambodia fed by a number of streams. During the dry season it drains into the Tônlé Sap River that confluences with the Mekong close to Phnom Penh, but during the monsoon the flow of the Mekong reverses into the Tônlé Sap River and increases the size of the lake from 2 600 to 10 400 km² (The Water Page 2000). This annual mechanism is important not only for providing fresh water into the Mekong Delta in Vietnam during the dry season, but is also a crucial contributor to inland capture fisheries valued at USD 1.45 billion per year (MRC 2005b).

Map 1: The Mekong River Basin

Source: Mekong River Commission Secretariat 1995

1.2 - Legal and institutional background

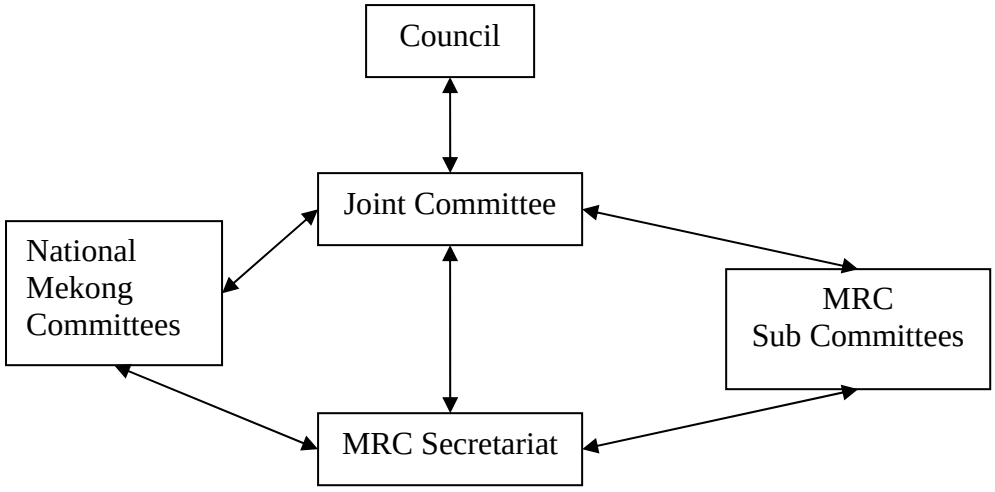
The Mekong River is often regarded as a symbol of the Mainland South East Asia (MSEA) region's transboundary environmental challenges, as all six countries in the region are riparians (Badenoch 2002:3). The way these challenges have been addressed is evident in the various cooperative efforts between the basin states. Among these the most significant has been the Mekong River Commission (MRC) compromising Thailand, Cambodia, Vietnam and Laos. The cooperative effort was initially set up in 1957 as the Mekong Committee with a mandate oriented towards planning and development of the considerable hydroelectric potential of the Lower Mekong (Ershammar 2001:33). As the Committee was already crippled by the prevailing political climate in Indochina after decades of conflict, its work stalled when the Khmer Rouge took power in Cambodia in 1975. However, it was re-established as the Interim Mekong Committee in 1978. The negotiations following the signing of the Cambodian Peace Agreement in 1991 were contributing factors to the establishment of the MRC in its current form in 1995. The 1995 Agreement also represented a significant expansion of the mandate of the Commission (Badenoch 2002:8).

The MRC is an intergovernmental organisation consisting of three divisions: *The Council* is the political decision making body with one member from each country. The *Joint Committee* implements decisions and supervises the Secretariat and the *Secretariat* provides administrative and technical services to the two other branches (Ershammar 2001). The MRC is supported by National Mekong Committees (NMC) which formulate and coordinate national policies in each of the member states (MRC 2004). The two upper riparians China and Myanmar are not members of the MRC (Chenoweth et al 2002); something which arguably renders the Commission much less potent than it could be (Tarr 2001). Even so, the two countries have limited interaction with the MRC through their status as "dialogue partners" (Badenoch 2002).

The MRC has initiated a "holistic approach to river basin management" where three core programs represent the priorities of the 1995 Agreement (MRC 2004): the *Water Utilization Program* (WUP) develops rules and procedures for sharing water. The *Basin Development*

Plan (BDP) identifies transboundary development opportunities while the *Environment Program* functions as an information base for decision making in the WUP and BDP. The MRC is also engaged in other sectors like fisheries, irrigation, infrastructure and hydropower[2] (Novak 2002).

Figure 1: Organisational Structure of the Mekong River Commission



Source: adapted from Linn and Bailey, 2002

2. Public Participation in River Basin Management

The global debate on environmental governance was to a large extent initiated by the Rio Declaration in 1992, which set forth principles of access to information, participation in

[2] In addition to the three core programs, there are five sector programs (Water Resources Management; Agriculture, Irrigation and Forestry; Fisheries; Navigation and Tourism) and one support program (Capacity Building)

decision making and accountability in environmental matters as prescriptions for combating environmental problems (Badenoch 2002:15). The concept of Integrated River Basin Management (IRBM), which forms much of the discursive backdrop, has been interpreted as representing a paradigm shift in society's approach to water (Miller and Hirsch 2003:6). Public participation, civil society involvement and stakeholder engagement are some of the concepts used by actors in this water governance discourse.

Bruch and Fried (2002) note that acknowledgment and norms on public involvement in water management decision making are not only emerging but also rapidly crystallizing. The rationale behind this is multifaceted as involving the public in the management of watercourses builds awareness that can improve the quality of decisions. Public involvement can also identify and address potential problems at an early stage as well as improve the credibility, accountability and legitimacy of governmental decisions (Bruch and Fried 2002:216). Miller and Hirsch (2003) see evidence of a more vital role being played by civil society in river basin decision making, which has challenged the power base of professionals, technocrats and engineers traditionally dominating the field. Lack of public participation can sometimes turn into negative reactions from those marginalized, leading to large and perhaps violent protests which can impede implementation of policies. Lack of or insufficient public participation in water management can also affect the overall legitimacy of decisions made as the public may feel a lack ownership with regards to processes or projects they have had limited possibilities to alter.

A number of river basin organisations have directly or indirectly endorsed the concept of "participation" in policy papers and working documents and it is regarded as the cornerstone of the country water sector strategies of the Asian Development Bank (ADB 2000).

However, the concept of participatory development has also triggered a number of critiques: As pointed out by Arnstein (1969), many tend to miss the fact that there are significant gradations of public participation. Also, attempts to mechanically adopt participatory approaches from one context to another will not necessarily yield the desired outcomes and can sometimes release sentiments of new colonialism. A more radical critique challenges the very discursive structure of the concept by claiming that it could lead to political cooptation (Laungaramsri 2002, Worby 2003). As put forward by Daoroung (2002:4):

> *"Co-optation appears to be the result of participation in the consultation exercises of …institutions to an extent that this participation is allowing these institutions to justify their plans and projects – and doing so without having been in the least bit influenced by these participating actors from civil society."*

This critique is important to take into account when evaluating participatory mechanisms as it separates "stage managed participation" from participation where people actually have had the power to alter decisions. It is also often the case that even if well intended participatory mechanisms are in place, these do not by any means act as panacea benefiting those the mechanisms intend to benefit, but might even reinforce existing social inequalities by following traditional patterns of participation which include some by excluding others.

2.1 Public participation in river basin management: The Mekong

In Mainland South East Asia, differences in history, politics, culture and ethnicity are variables that can function as facilitators as well as impediments for participatory processes

across the region as well as within countries in the Mekong River Basin. Just as a number of different terms are used to describe types of public involvement in decision making in general (Arnstein 1969), so it is equally difficult to arrive at an unproblematic and common notion of public participation in the Mekong. Worby (2003) observes that development projects in the basin create new local and regional boundaries so that spaces of manoeuvrability for local people become blurred and more complex as they are affected by regional environmental impacts without necessarily having the ability to take action. Hence, in transboundary environmental governance it is necessary to "create avenues of action for local communities to participate in decision making" (Worby 2003:1).

According to Kaosa-ard et al (1998:19) the spirit behind the idea of public participation has been embodied in Asian culture for centuries, existing in a symbiosis with a "green" ideology derived from Hindu and Buddhist principles on non-violence towards nature (Chomchai 2005:140). In Northern Thailand and Lao PDR a vast number of small scale irrigation systems managed by farmers have evolved for many centuries. Allocation of water and rules for maintenance of these systems have been established and enforced by the respective irrigation muang-fai, that is, People's Irrigation communities (Kaosa-ard et al 1998:44). The structure of a muang-fai typically consists of a committee chaired by a chief responsible for the functioning of the whole project. If deemed necessary the leader mediates or settles disputes regarding water allocation (Rayanakorn and Kongsiri 1998). The muang-fai chief also has assistants to ensure that water is distributed to each village. An equally important position in these hierarchical communities is made up by the water messenger or Lam Nam who is responsible for directing messages from the chief to the system's members (Rayanakorn and Kongsiri 1998). A crucial factor in the efficient functioning of most systems has been the participation of community members in maintenance work; however, recent social and economic changes related to urban development expansion have attracted new members who increasingly fail to comply with such communal obligations (Rayanakorn and Kongsiri 1998:158).

According to White (1998a), Vietnam has a long history of public participation which dates back almost 4000 years. Irrigation schemes in the Upland and highlands have been managed by local communities. Irrigation practices in Cambodia have a history going back to the beginning of the 19th century when farmers constructed canals through river beds to make sure water reached their fields. The practice, known as colmotage, was traditionally undertaken by families or communities and managed on a collective basis (White 1998b). In present times a participatory approach to rural development has been termed as a main strategy for achieving the goals of the country's Socioeconomic Development Plans (Kaosa-ard et al 1998).

There are no specific laws on public participation in Cambodia, however, the 1996 Law on Environmental Protection and Natural Resource Management states that the relevant ministry shall provide information on its activities and encourage public participation in natural resource management (White 1998b). Institutional provisions for public participation in Vietnam are linked to the 1992 Constitution which states that citizens have the right to participate in the administration of the State and the management of society, to discuss problems, to send petitions to state organs and vote in state organised referendums (White 1998a). Arguably, Thailand has the most open and participatory civil society of all the Mekong countries and also the most active opposition challenging the dominant discourse on water management (AMRC 2002a). The 1997 Constitution gives recognition to a number of rights related to public participation such as right to information and right to express views

through public hearings (Rayanakorn and Kongsiri 1998). With regards to developments in the irrigation sector, the Lao PDR government has promotion of small scale and community irrigation projects as well as encouragement of farmer and private sector participation as main policies (Cheong and Somphone 1998:130). Summarized, it appears that all four above mentioned countries possess previous traditions of public involvement in the water sector (Kaosa-ard et al 1998) and the necessity of such is also to various degrees recognized in legal frameworks. Nevertheless, public participation initiatives have been and still are hampered by a number of structural factors:

In Cambodia the term 'public participation' was used by the Khmer Rouge to gather villagers in coercive activities and it is necessary to overcome this legacy if trust is to be re-established (White 1998b:98).

Lao PDR is characterised by the one party rule of the Lao People's Revolutionary Party (LPRP) and spaces for participation have to be defined within this framework (Cheong and Somphone 1998). While the term public involvement has gained some acceptance due to its neutrality, local NGOs have, by the government, not been allowed to be established. Instead, participation has occurred either through international NGOs or various mass organisations like the Women's Union (Mekong Update & Dialogue 2002). Some studies have also revealed that women are not represented in water user groups considered male domains and that the lack of representation by women[3] is symptomatic of their lack of direct participation in other institutions whether related to water or not (Cheong and Somphone 1998:138).

According to Chantawong (2002:2), government approaches to river basin management in Thailand continue to exclude popular participation, or limit it to "staged participation" as represented by the Thai idiom "suk ao phao kin", which means hasty and superficial process. Under the provision of the 1997 Constitution, exceptions from public participation are still stipulated where information involves state security or public safety, hence the real meaning of the term is ultimately defined by those whose traditional power structures and vested interests are maintained. Different value systems and development ideologies between government and NGOs have resulted in miscommunication, further antagonised by the technical and bureaucratic language of the dominating government discourse which is disliked by some local actors (Rayanakorn and Kongsiri 1998).

Vietnam is a single party state where the Communist Party is the dominant political institution (White 1998a). Domestic NGOs are literally non-existent in the country and civil society is made up of state sponsored mass organisations and international NGOs. Similar to the situation in Lao PDR, the latter appear to be constrained by the fact that they are forced to operate under government regulations.

The Lower Mekong countries are also faced with severe limitations with respect to possible options for communication between institutions and communities in the basin (Chenoweth et al 2002). Notwithstanding that the exchange of information via newspapers, television and radio, mostly owned by state apparatus, to various degrees is monitored by the respective governments in Lao PDR and Vietnam[4]. Literacy rates differ between countries as well as

[3] This is consistent with the findings of Kaosa-ard et al (1998) who claim that women have much lower literacy rates than men in some regions and that women are end users of water resources, but are underrepresented in water resource management decisions.

[4] Not to say the degree of censorship applied by the governments of the two upper riparians in the Mekong; China and Myanmar.

between ethnic groups and gender, with women in Cambodia probably being the worst off (Chenoweth et al 1998:505). While an important measure for the exchange of information between the educated elite in the Mekong, internet is not available for the great majority of local people in the basin[5]. Hence, promotion of the internet as a way of publishing information may even contribute to a further broadening of the information gap.

2.2 National public participation initiatives

While public involvement appears to be an important part of the emerging discourse on "good water governance" in the Lower Mekong Basin countries, there are many issues that make it very difficult to achieve. Some initiatives have, however, been taken and it is only by learning from these that previous mistakes and failures can be corrected.

2.2.1 Gender issues in traditional water management institutions in Thailand

Pantana et al (2001) conducted a case study that assessed participatory processes in the context of the ADB's technical assistance towards capacity building in Thailand's water resource sector. The following section is to a large extent based on findings from this study.

Participatory processes were examined at different levels of interaction in three villages of the Upper Ping River Basin in northern Thailand. Approximately 85 % of the total water supply in the basin is used for agricultural purposes. The Wang Hi irrigation dam was built on the Ping River to supply water to these villages which consisted of about 250 households in total. While the dam was built in the late 19th century, the Wang Hi Irrigation Committee or muang-fai was formed in the 1940s to manage the irrigation system connected to the three villages. Lately, the chairman of the Committee has been elected for four years at the time. No women have ever been elected chair. Once elected the chairman chooses men from the villages to make up the Committee, one of these acting as his assistant. The Committee is a very powerful group responsible for maintenance of the system, allocation of water and enforcement of the agreement.

There is an annual muang-fai meeting where each household has to send at least one representative to avoid a fine. Issues discussed at these meetings can range from previous year's account, repairs needed and proliferation of alien invasive species. Pantana et al (2001) note that the muang-fai is to a large extent composed of elite members of the villages with good access to both land and water. Women have traditionally not been recognized as caretakers of irrigation facilities, as evident by their low representation at the annual Committee meetings[6].

Throughout the year both men and women hire out their labour for rice or hard cash. Nevertheless, during intense farming periods men rely on their wives to engage in reciprocal labour so that they can sell their own labour power, which allows work on the fields to continue undisrupted while the men earn a wage, work on the dam or repair the irrigation canals. Hence, if problems occur in the irrigation system, women would have to do farm work or hire others. The latter means that they would have to repay hired labour with terms

[5] Access to internet differs somewhat between countries with 2.0% in Thailand, 0.12 % in Vietnam, 0.038 % in Laos and 0.0011 % in Myanmar. This is neither broken down to urban and rural areas, nor do these numbers say anything about national restrictions and censorship with regards to what people can access (ITU 2000).

[6] Pantana et al (2001:6) note that of the 165 people who attended the 2001 meeting, only 21 were women, these represented their absent husbands.

equivalent to their own labour. When a female farmer wants to use irrigated water she has to hire male labour as her contribution to maintenance and repair of the dam structure. The consequence is often that when men have to work on the irrigation system, women's unpaid labour is intensified in farm work.

In such cases women are not only excluded when it comes to water resource management at the community level, but their participation in public spaces within the same community is also very restricted (Pantana et al 2001:7). Previously pointed out by Worby (2003), the challenge is to create avenues of action, in this case for women, to participate in decision making. The only such space for women in the villages is the Housewives Association, however, with so little political clout that even women themselves refrain from elections to head the organisation.

This patriarchal structure has also found its way into River Basin Committees (RBC) in the Ping River Basin. The RBCs and sub-district working groups largely consist of male members recruited among muang-fai chiefs or village headmen which speak a technical management language which most women are unfamiliar with. A local consultant group was commissioned to conduct stakeholder consultations in river basins throughout Thailand (Pantana et al 2001:10), but meetings were mostly with male stakeholders as processes for establishing contact with stakeholders largely followed referral systems dominated by existing patriarchal networks. The politics of consensus was applied as a mechanism for reaching agreements, which blurred differences by only relying on the number of people who actively participated.

Even so, the muang-fai systems in Northern Thailand represent several advantages in the field of irrigation management (Mase 2005):

i) *Simple technology* – the structure of the irrigation facilities are made up of local materials that are easily accessible to the farmers.
ii) *Mobilization of resources* – there are two resources; labour and materials, where the former plays an important role in maintenance of the system.
iii) *No irrigation fee* – there is no actual irrigation fee, but usually an agreement which states that some type of payment should be provided to the muang-fai chiefs for their services.
iv) *Sanya* – is an agreement between the leader and the beneficiary farmers in which they agree to work together in order to solve common problems
v) *Fair share* – there are three kinds of sharing in the muang-fai system; water distribution, sharing of materials and provision of labour.

Part of the success of the muang-fai in providing food security for local people can also be explained by the relatively small size of each project, which in turn creates intangible bonds such as shared experiences and traditions in the community (Mase 2005).

The lesson from this case suggests that for meaningful public participation to take place, a sophisticated approach which sufficiently takes into considerations local political social and cultural values should be combined with internationally recognized principles of stakeholder participation in river basin management. On the one side, the elevation of "the local community" and "local traditions" to a common and universal good is certainly not desirable as these entities can conceal power disparities and inequalities (Mehta 2000), but on the other side natural resource governance initiatives that do not involve local actors are likely to fall short of meeting their objectives (Badenoch 2002).

2.2.2 - The role of emblematic events and the Se San River Protection Community Network

According to the AMRC (2002b), Environmental Impact Assessments (EIA) in the Mekong River Basin have consistently failed to consider the full downstream impacts of water resource development projects[7]. Perhaps the most disastrous consequence of this was the Yali Falls incident in 2000. The Yali Falls Dam is located in Vietnam on the Se San River approximately 70 km above the Cambodian border where the river flows into the Sre Kong River which confluences with the Mekong (Chomchai 2005:145). The hydropower potential of the Se San River has made it a target for large scale interventions since the 1950s and five dams, Yali Falls excluded, are planned by Vietnam relatively close to and upstream of the Cambodian border (Hirsch and Wyatt 2004:54).

Since the commencement of power generation at Yali Falls in 1998, irregular releases of water have drastically changed the hydrological regime and water quality of the Se San River (Chomchai 2005:145)[8]. On March 4, 2000, the water level in the Se San River suddenly rose dramatically due to a release of water from the dam. The release destroyed crops, homes and livestock and killed 5 people in Cambodia (Oxfam 2005). Following the tragic incident local communities and NGOs in Cambodia brought forward details of the damages, attempting to inform national and international actors about the negative implications of the Yali Falls Dam (Badenoch 2002). The flow of information between the two involved countries after the disaster was minimal, but further examinations by the Mekong River Commission concluded that the tragic incident was caused by a failure, during the planning process of the dam, to draw attention to the social and environmental impacts downstream in Cambodia (Badenoch 2002). This is evident by the fact that the EIA conducted in 1993 assessed the downstream implications to extend no further than 8 km downstream of the dam, hence excluding any possible impacts in Cambodia (Hirsch and Wyatt 2004:55).

A month prior to the Yali Falls incident, a coalition of international and local NGOs formed the Se San Working Group (SWG) to coordinate investigations on widespread flooding in the Ratanakiri Province in Cambodia (Hirsch and Wyatt 2004:55). Some of the founding members were the Non-Timber Forests Products Project (NTFP) and Oxfam America East Asia Regional Office. Impact studies were conducted and concluded that as many as 50 000 people had, in various ways, been affected by the dam (Hirsch and Wyatt 2004:59). Due to inaction by the Cambodian National Mekong Committee (CNMC), the Vietnamese National Mekong Committee (VNMC) and the MRC in addressing the negative impacts of the dam on local communities, the SWG together with district and provincial governments and NGOs set up a proposal to establish the Se San River Protection Community Network, or SPN (Hirsch and Wyatt 2004:60). The SPN was officially launched in December 2001, also establishing the Se San Steering Committee and the Secretariat. The Network consists of a grouping of communities affected by upstream hydropower developments, supported by an informal coalition of local and international NGOs which conduct research and document the effects of the Yali Falls Dam on local livelihoods (AMRC 2005).

[7] Badenoch (2002:14) claims that virtually no examples of transboundary EIAs can be found in the MSEA region and that basic EIA practices are not well established at any level. This is contrary to the findings of Kaosa-ard et al (1998) who assert that such practices are more or less in place in all the Lower Mekong River Basin riparian countries. The EIA for the Se San 3 in Vietnam which was drafted in 2000 has been withheld from any public scrutiny by the Vietnamese Government (Hirsch and Wyatt 2004).

[8] Some of the consequences have been severe flooding, flash flooding, low water levels, forced evacuation, human and livestock illness and death due to contaminated water and declining fish stocks (Chomchai 2005).

To facilitate coordination between the members, an Advisory Board consisting of local people, academics and NGOs was also set up to provide network opportunities and meeting avenues for the Se San River Protection Community Network. As the activities have largely been based on, and emerged from, community involvement, the SPN represents a legitimate channel of expression in the eyes of these communities (Hirsch and Wyatt 2004:60). Increased legitimacy can also be said to stem from sensitivity by actors such as Oxfam, which supports the SPN by building capacity for communities to negotiate for themselves, not for Oxfam to negotiate on behalf of the communities (AMRC 2005).

The Network has rallied provincial authorities in order to get the problem on to the national agenda and participating organisations have conducted extensive research to verify and analyse the claims of the affected people. Some local tribes and religious groupings continue to believe that irregular floods are caused by angry spirits (AMRC 2005), but crucially, these communities have increasingly been educated on the reasons for changes in the river system (Oxfam 2005). The Network has also organised field visits and excursions to exchange information and experiences with Pak Mun River communities in Thailand as well as encouraged gender equity by attempting to involve at least one woman from each village to partake in the committee (AMRC 2005)[9].

The case displays the tremendous challenge of addressing the transboundary environmental impacts of water infrastructure projects and the consequent lack of channels for direct communication between involved stakeholders, which can be said to be part of a larger problem of access to information and accountability (Badenoch 2002:2). The incident also displays the role of events or disasters in releasing the efforts and commitment necessary to set up institutional mechanisms to cope with environmental insecurity.

The MRC and most donor institutions had limited influence in the planning process of the Yali Falls Dam and Vietnam's announcement of the construction of Se San 3 came as a surprise to Cambodia (AMRC 2005). No compensation has been given to the affected communities in Cambodia and the governor of the Ratanakiri Province in Cambodia has termed the Se San River "a hot issue that we all have to focus on together" (Kheoun 2002). The issue appeared shortly after what Badenoch (2002) claims to be the advent of a much more open MRC, dedicating time and energy to the integration of environmental as well as socioeconomic, ethnic and gender concerns into policies. However, the Yali Falls release was still said to be "out of the hands" of the Chief Executive of the MRC at that time which displays a failure by the MRC to deal with the issue, even if the 1995 Agreement explicitly established a dispute resolution process (Hirsch and Wyatt 2004:62).

Consequently, the perspectives and knowledge of the affected communities in Cambodia have been systematically negated as unscientific and unverifiable (Hirsch and Wyatt 2004). Considerations should also be made towards the hegemonic power constellations in the basin where Cambodia is dependent on food aid from Vietnam; hence, the CNMC is reluctant to make a further case out of the compensation issue.

[9] On a more technical level the Cambodian government replaced the existing facsimile system of notification with a radio system in 2002. Formerly, information regarding water releases from the dam was faxed from VNMC to its counterpart in Cambodia, which notified provincial governments, then local governments and lastly local villages. Although not without problems of maintenance and use, the new mechanism is regarded as more viable than the previous system (AMRC 2002a).

2.3 The advent of regional institutions and inter basin exchange initiatives

Millington (2002) refers to previous concerns in institutions like the World Bank and the Asian Development Bank with regards to how integrated water resources management was being practiced in developing countries. The concerns stemmed, partly, from the fact that major investments in the water sector failed to achieve sustainable and desirable outcomes and, partly, from poor institutional management and application of the IRBM principles in transboundary river basins. From this discourse emerged an increased focus on and awareness of the challenges of integrating different stakeholders in decision making in river basins as well as an increased interest in and attention paid to the international transfer of river basin experiences between different jurisdictional contexts.

According to Miller and Hirsch (2003:8), there appears to be a tension between more participatory and decentralized approaches to decision making in international river basins, and the parallel increase in holistic institutional approaches on the basin level. When top-down and centralized decision making structures have been established without considering pre-existing social and cultural patterns of resource use and decision making, the result has often been the disengagement and marginalization of the local sphere, where, further, rural communities and villages have most often been the victims. A related trend is traceable between applying sensitivity towards local and traditional practices while at the same time and increasingly drawing upon practices and models of "good governance" from other contexts. The following section will assess public participation initiatives under the MRC and then take a brief look at the exchange network between the Mekong River Basin and the Murray Darling River Basin in South East Australia.

2.3.1Emerging measures under the MRC

The MRC has acknowledged the importance of public participation in the management of the Mekong River basin since the signing of the 1995 Agreement (Chenoweth et al 2002:504). A policy document titled "Public Participation in the Context of the MRC" was endorsed by the Joint Committee in 1999 (MRCS 1999), but this gives scant attention to the nature of challenges for meaningfully involving stakeholders in decision making in the basin[10]. Chenoweth et al (2002) claim that the document fails to tackle, or even acknowledge, any of the more problematic issues relating to public participation in the basin as it does not deal with the challenges of public involvement across borders, neither does it mention how public consultation can be usefully incorporated into projects or decision making processes. The definition of public participation set forth by the 1999 policy paper is:

> *"…a process through which the key stakeholders gain influence and take part in decision making in the planning, implementation, monitoring, and evaluation of MRC programs and projects".*

Novak (2002) states that the MRC Council and Joint Committee agreed in 2001, in principle, that partner civil society organisations may participate as observers at their meetings. The process of initiating to formulate a Public Participation Strategy (PPS) was embarked on in 2002, bringing together representatives of the NMCs and the MRC Secretariat. Each NMC also carried out national consultations, by inviting representatives from mass organisations and civil society, who gave their consent to the PPS (Novak 2002).

[10] A draft policy was submitted to the Joint Committee in 1998, but failed to achieve the necessary consensus partly due to a perceived failure to adequately address the differences between the political, social and institutional settings in each member country (Chenoweth and Bird 2000:4).

The PPS identified a need to strengthen existing mechanisms and explore additional means to promote consultations and exchange of information among *key internal stakeholders*[11]; the Secretariat and NMCs, and recognized the importance of greater contact and dialogue with a range of *external stakeholders*[12] like civil society and donor institutions (Novak 2002). All MRC activities will include the network of internal stakeholders as the primary stakeholders, but such activities may also include external stakeholders, depending on national policies (Novak 2002).

Since 1985 the MRC has also undertaken baseline studies of water quality in the basin through its Water Quality Monitoring Network. Consisting of 103 measuring stations from 1999 onwards, information with regards to discharge, sedimentation and flow has been made publicly available in various media and reports (Bruch 2002:220). On a more general basis, the Public Relations and Co-ordination Unit of the MRC has played an important role in information dissemination through media activities (Kaosa-ard et al 1998:11).

Tarr (2001:1) claims that the MRC is dominated by staff with technical backgrounds, but that a shift occurred around 1999 where the MRC announced broader and more systematic consideration of gender issues, ethnic awareness and public participation, as evident in measures like the Basin Development Plan (BDP) and the Environment Program (EP)[13]. Participatory processes around the BDP, which was officially started in 2002, have focused on involving a broad range of both internal and external stakeholders through working groups and distribution of working papers, reports and audio visual materials (Novak 2002). Public participation has also been a key component of the EP initiated in 2001, which is engaged in the development of an environmental assessment system for the MRC. Challenges have occurred due to the great diversity in the nature of public participation in the member countries, as well as a lack of resources for implementation (Novak 2002). The former Chief Executive of the MRC, Joern Kristensen, reveals the challenges for achieving public participation in the management of the Mekong basin by referring to the fact that the MRC has previously focused on a too narrow range of expertise, mainly in engineering and economics (Kristensen 2002). Public participation in planning has been suboptimal in the Lower Mekong Basin in the past, but the recent core programs of the MRC have now incorporated such approaches (Kristensen 2002).

However, public involvement in the MRC has been constrained by structural and capacity factors in the Secretariat and the fact that consultations with local communities are left for the NMC to deal with, and, as previously elaborated on, there is significant diversity between the riparian countries when it comes to issues of public participation and consultation. National governments have the ultimate authority over which programs are developed, who has access to information and what voices are heard in decision making. The MRC is also dependent upon national governments to provide for sufficient channels of information down to and up from the local level, however, this exchange is often blocked since most NMCs are relatively

[11] Internal stakeholders are defined by the 1995 Agreement and include the MRC Secretariat, the NMCs and principal line agencies in each member country (Novak).
[12] External stakeholders potentially include a broad range of individuals and groups outside the immediate MRC network like mass organisations, national and international civil society, donor agencies, business interests, academics and affected people (Novak).
[13]Though, Badenoch (2002) warns against an overemphasize on the changes as the MRCs “decision-making structures and processes remain firmly rooted in the black box of high-level inter-governmental negotiation”.

marginalized from relevant national decision-making processes, hence, local communities have virtually no way of influencing the MRC (Badenoch 2002:20).

The term *key stakeholder* in the MRC policy paper on public participation has occurred to be problematic for a range of actors: It has become a loaded term when imprinted upon diverse political landscapes and community interests (Worby 2003) as deciding who is a key stakeholder remains in the hands of those with vested interests and decision making power over the process and substance of river basin development (Chantawong 2002). Where a political system claims to be participatory in its nature, the introduction of separate spheres for policies and practices relating to public participation is problematic as it may be interpreted as implying that the existing system is not sufficiently grass roots based (Chenoweth and Bird 2000:5).

2.3.2 The Murray Darling-Mekong Strategic Liaison Program

The Mekong River Commission was modelled to a certain extent on the Murray-Darling Basin Commission (MDBC) in Australia (Linn and Bailey 2002) and the Tennessee Valley Authority (TVA) in the US (Miller and Hirsch 2003). As the New South Wales Department of Water Resources in Australia established strong linkages with senior government officials in the four Lower Mekong countries during the late 1980s, the final MRC Agreement of 1995 reflects quite a few aspects of the MDBC (Millington 2002). A twinning initiative, the MDBC-MRC Strategic Liaison Program (or Joint Cooperation Program) was established in 1996 with funding from AusAid and has developed through two phases since its inception. The goal of the program, which is administered by the MDBC office in Canberra, has been to support the MRC and the NMC in the management of the Mekong River Basin. The specific objectives sketched out during the design phase were linked to three areas, the latter area being a key component of the program (Kemp 2002:4):

i) MRC Organisational Capacity
ii) MRC Technical Capacity
iii) Engagement of the Community

The program has assisted the MRC in developing its public participation strategies through joint study tours, workshops and training programs. During a study trip to Australia in 2001 the MRC Joint Committee observed how issues of public participation had been addressed in the MDBC through the operations of the Community Advisory Committee, or CAC (Linn and Bailey 2002:14). Community involvement has been an integral part in the management of the Murray-Darling River Basin (MDRB) since the late 1980s and the CAC was created in 1986 in order to facilitate communication between the Ministerial Council of the MDRB and the different communities in the basin (Chenoweth et al 2002:500).

The CAC has direct access to the Council and can raise issues with its representatives, just as the Council can ask the CAC for advice. The CAC consists of 21 state representatives chosen on a catchment basis and four additional members representing Aborigines among others (Chenoweth et al 2002:500).

The CAC is viewed as an appropriate body for public participation in the basin and is believed to have been very successful as a community representative mechanism, as it has the ability to raise its own concerns with regards to the management of the basin and functioning of the MDBC (Linn and Bailey 2002:14). The permission by the CAC to comment on

development strategies at an early stage has also been important in aiding a feeling of ownership of management initiatives (Chenoweth and Bird 2000). However, concerns and criticism have been raised due to the domination of membership by state government representatives and some actors fear this could lead to uncritical assessments of government policies and further negligence of the views of local communities (Chenoweth et al 2002:500).

In addition to the CAC, a Communications and Consultations Unit (CCU) was created by the Ministerial Council in 1989 with the aim of improving access to the MDBC (Chenoweth et al 2002:501). The main objectives of the unit have been to raise public awareness of management issues relating to the basin, to provide technical support to the MDBC and to respond to community requests for information as concerns have previously been raised due to a general lack of understanding of the role and objectives of the MDBC (Chenoweth et al 2002:503).

The relative success of the Strategic Liaison Program can be explained by the fact that it has managed to spend sufficient time and resources in examining the social, economic, institutional and ecological background variables in the receiving basin, the Lower Mekong River Basin (Miller and Hirsch 2003). Even so, there are several inherent risks in the transfer of river basin experience especially from the western world to developing countries and particularly with regards to public participation approaches. Consensus can be assumed or even forced from above when apparently unified "packages" or "models" are exported to different contexts, as is often evident in the context of international aid where negotiations between international and national water experts have created communities of experts (Miller and Hirsch 2003:15). Goodwill among the hydropolitical elite, often high level government officials, might be desirable and important in creating trust on a nation to nation level, but should nonetheless be sensitive, due to issues of accountability and legitimacy, towards voices from "below". These issues are crucial to take into account in a donor-dependent river basin like the Mekong.

As stressed by Hirsch (2002:1), exporting models is not, and should not be, the main objective of sharing river basin experience. This is also emphasised by Millington (2002:5) who states that "we are not specifically promoting the MDBC model, as some think, but the principles and attributes of good IRBM with an illustration, both good and bad, how these issues have been and are addressed in the MDBC"[14].

3. Learning Lessons

The Mekong River Basin hosts a large number of stakeholders who display a tremendous diversity of social, economic and cultural backgrounds. Principles of good governance related to IRBM stresses that stakeholder participation in river basin decision making is of great importance for achieving desired outcomes of development processes or projects. What lessons can be drawn from the case studies?

[14] Infact, the challenge of how NGO's could be more effectively brought into the program had not been dealt with, at least not before 2002 (Millington 2002).

3.1 Lacking aspects of legitimacy facing the Mekong River Commission

This case has shown that principles of public participation or public involvement are, at least in theory, acknowledged by the Mekong River Commission and all the national governments of the Lower Mekong. Few would disagree that efforts should be directed towards strengthening the Mekong River Commission as the legitimate, basin-wide coordinator of developments initiatives in the Mekong region. However, past and current limitations in the MRC governance structure in terms of its ability to respond to non-governmental concerns, have negatively affected the legitimacy of the Commission in the eyes of several civil society groupings.

The Commission acknowledges that previous programs and projects have not sufficiently addressed these issues, but claims that public participation is now an integral and important part of all its core and sector programs. The MRC approach has been to involve stakeholders in projects and programs, though, to various degrees and always dependent on the context and nature of the respective initiatives.

However, a greater sensitivity should be directed towards those role players that do not share all the visions of the Commission. The MRC public participation objectives for 2005 stress the importance of encouraging "greater participation of external stakeholders and those in civil society who *share* the MRC's strategic objectives for sustainable development in the Mekong River Basin" (MRC 2005). Likewise, previous policy papers emphasise that *selected* civil society organisations like the IUCN and WWF have, since 2001, been invited to MRC Council and Joint Committee meetings as observers. Truly, the legitimacy of the MRC in the eyes of those perhaps more vocal NGOs and civil society actors that have not been invited to such partnerships is a matter of concern.

The way in which consensus is sought in MRC programs has led many NGOs in the Mekong Region to refrain from or be very sceptical towards participating under the MRC umbrella, which is clearly not desirable. This unwillingness stems to a certain extent from a fear of co-optation; where governments, regional and international institutions like the Asian Development Bank and the World Bank attempt to legitimise their policies by claiming to have consulted and been given consent by civil society groups and NGOs, without the latter having had any influence on these policies. In the Mekong River Basin it is necessary to create networks where those disarticulated voices can be heard, believed and being given the opportunity to influence decisions that affect their lives. Failure of inclusion can lead to the adaptation of increasingly undemocratic and perhaps violent approaches by those who feel they are not being heard.

3.2 Local ownership and the Se San River Protection Community Network

Miller and Hirsch (2003) note that a growing awareness of the critical nature of environmental problems in the Murray-Darling was a catalyst for a range of stakeholder initiatives in the basin. In the Mekong region, the Se San River Protection Community Network (SPN) demonstrates how environmental insecurity can be the driving force for mutually beneficial and peaceful cooperation and joint research among different actors. Upstream–downstream compensation is a crucial issue in the Mekong basin in general and in the Se San River in particular. Without compensation and some sort of incentive mechanisms, local people can hardly be convinced to participate in processes of which they have no say. Since politically contested issues are often outside the scope of river basin commissions, the

MRC has had limited opportunities to influence Vietnam with regards to the subject of compensation.

The SPN has taken up this mission and has, since its establishment in 2001, made significant achievements not only in bringing a broad range of stakeholders together, but also by lobbying the Cambodian government to put pressure on Vietnam, conducting research and enabling affected people to raise their concerns. Part of the success can be explained by the tangible nature of the issue where upstream infrastructure affected downstream communities, hence a cause and effect relationship could easily be established. The delineation of affected people was relatively easy, or at least these groups were located within the borders of one country while the negative environmental impacts came from another.

On a general basis, there is unequal distribution of and lack of scientific capacity among stakeholders in the Mekong region. The case is often that communities rely on NGOs to raise their concerns, however, relatively few NGOs have scientific training and appeals put forward even with help of NGOs have often failed to comply with requirements of scientific evidence in order to convince policy makers. Crucially, to cope with this challenge the SPN has managed to involve international NGOs, together with a broad range of national and local stakeholders in its work, which again exhibits the importance of legitimacy in environmental matters. Local communities have been empowered to operate as lead actors working within the network and, as a consequence, these communities have established a sense of personal ownership to the project. The outcome has been a further strengthening of the network, which is viewed as a legitimate platform for participation in the eyes of local people. Hence, the Yali Falls incident proposes that local government structures, if provided with greater authority to facilitate communication and interaction with regards to transboundary environmental issues, could play a crucial role in aiding a smooth flow of information and provide a local perspective on the implications of environmental decision-making (Badenoch 2002).

The SPN can arguably also have been a contributing factor when the Cambodian government set up the new early warning system for water releases in 2002. As previously discussed, the new radio system has several advantages, but may still not be able to reach all relevant communities in time. Thus, to make better use of the new system, it is important to further strengthen consultation and dialogue with local people. In this regard, the SPN could function as a viable platform for involving the relevant stakeholders.

3.3 The Murray Darling-Mekong Strategic Liaison Program and the challenges of transferring river basin experience between contexts

A basic assumption behind the transfer of river basin management experience is that approaches, infrastructure or sets of institutions in one context are appropriate in another context. Phase Two of the Strategic Liaison Program has dealt specifically with community engagement between the two basins and assessed how NGOs could be more effectively brought into the program. When importing participatory experiences into the Mekong Basin, be it from the Murray Darling Basin or from other river basins, it is reason to warn against technical and apparent “value-free” assistance packages that have been stripped of all contested contents.

Likewise, the discourse on transfer of river basin experiences must not become a solely elite dominated matter reserved to high level negotiations between government representatives, but should rather be open, inclusive and transparent. Further, a useful lesson in order to increase

the legitimacy of the imported policy elements in the eyes of stakeholders in the receiving basin is to ask whose perspectives and values dominate the relationship and process of transfer. On the one side, effective civil society participation in river basin management like in the Murray Darling has historically come about, more or less, as a negotiation between different stakeholders in society (Miller and Hirsch 2003). On the other side, internationalisation will often imply to universalize and generalize: processes which can both blur differences by de-politicizing something that should be a matter of choice. Hence, even the relatively successful Community Advisory Committee (CAC) in the Murray Darling Basin has it shortcomings and it is by no means consensus among all actors in the basin that the CAC approach to public participation is the most appropriate.

There are significant differences between civil society in the Mekong and the Murray Darling basin, which question the appropriateness of transfer of experiences. For instance, in Thailand there is, among many NGOs, a strong opposition towards water pricing on equity grounds, while many civil society groups in Australia lobby for full cost water pricing. The differences in demographic structure is also relevant as the agricultural sector in the Mekong Basin is largely made up of small scale farms, while the Murray Darling basin mainly consists of large, industrial farms. The rural peasant population of the Mekong is very likely to display different aspirations and interests than their counter parts in Australia. Ultimately, the issue is not so much whether or not international experience is relevant, but rather of what is relevant: packages and models, or processes and principles (Miller and Hirsch 2003). As such, the participatory model of the Murray Darling Basin Commission can be highly relevant to the Mekong River Basin, provided it is adapted to suit local socio-economic conditions and that policy makers are aware of the general pitfalls of transferring experiences between two very different contexts.

3.4 The challenge of making traditional water management institutions inclusive

Incorporating traditional or indigenous practices in river basin management are important measures in order to increase the legitimacy of the final policy outcomes. However, it is important to have in mind that such practices can be used as a definition of exclusion as well as inclusion (Cleaver 1999). The case study from the Ping River Basin shows that traditional irrigation structures have excluded women in practically all levels of consultation and participation.

Hence, national governments and donor dollar recipients often face a twofold dilemma: on the one side they are faced with requirements of good governance and IRBM which see local traditions as important measures for achieving such ideals. On the other side there are requirements which state that women among other groups should be involved in all aspects of water management.

Pantana et al (2001) suggest that in order to redress the exclusion of women in river basin commissions (RBC), teams could be created which may draw attention to the impacts of decisions made on both men and women in the villages. The Housewives' Associations could be a starting point for gender awareness-raising and technical education and the same procedures could later be implemented among muang-fai members as well. Consultation with women should take place separately in their own defined spaces. Even if women are present in institutions like the RBC, their participation within such structures may often be predetermined by male agendas and priorities.

The traditional irrigation structures in northern Thailand have, according to Mase (2005) been largely successful due to a number of accounts like the use of simple technology and efficient mobilisation of labour. To change the structure and contents of such traditional mechanisms will most likely take a long time, but raised awareness among national governments as well as donor institutions may be a first step in making them more inclusive.

4. Conclusion – Between Rhetoric and Reality

Public participation in river basin decision making has become orthodoxy for policy makers in river basins around the world. However, in the Mekong region as elsewhere it is neither sufficient to launch a project on public participation, nor to write fancy objectives in project documents.

Nonetheless, participation strategies in the Lower Mekong River Basin have enabled hitherto marginalized people to be heard, but not in a uniform way across the basin. The degree of representation depends by and large on the space of civil society in each riparian country. Participatory approaches are slowly evolving within the structures of the Mekong River Commission, but successful public participation in river basin decision-making has mainly been confined to issue specific events like the Yali Falls and lobbyism against dam building.

A common thread through the case studies is the difficulty in constructing or re-establishing opportunities or venues for more effective interactions between government or regional institutions on the one side and civil society and local people on the other. The gaps identified relate to issues of legitimacy in governmental structures and NGOs, insufficient transparency and provision of information, low levels of participation where actors have really had the power to change decisions and virtually non-existent mechanisms for downward and, literally, downstream accountability. Acknowledgment is often the first step towards change, but in the Mekong River Basin the gap between rhetoric and reality is still immense.

List of Acronyms

Asian Development Bank – ADB
Australian Agency of International Development – AusAid
Australian Mekong Resource Centre – AMRC
Basin Development Plan – BDP
Cambodian National Mekong Committee – CNMC
Communication and Consultations Unit – CCU
Community Advisory Committee – CAC
Environment Program – EP
Environmental Impact Assessment – EIA
Integrated River Basin Management - IRBM
Integrated Water Resources Management - IWRM
Lao People's Revolutionary Party – LPRP
Mainland South East Asia – MSEA
Mekong River Basin – MRB
Mekong River Commission - MRC
Murray-Darling Basin Commission – MDBC
Murray-Darling River Basin – MDRB
National Mekong Committee – NMC
Non Governmental Organisation – NGO
Non-Timber Forests Products Project – NTFP
Public Participation Strategy – PPS
River Basin Committee – RBC
Se San River Protection Community Network – SPN
Se San Working Group – SWG
Tennessee Valley Authority – TVA
Total Catchment Management - TCM
Vietnamese National Mekong Committee – VNMC
Water Utilization Program – WUP
World Bank – WB
World Conservation Union – IUCN
World Wildlife Fund - WWF

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