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Policy and institutional dimensions of integrated river basin management: Broadening stakeholder participatory processes in the Inkomati River Basin of South Africa and the Pangani River Basin of Tanzania

by Claudious Chikozho

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**Centre for Applied Social Sciences
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Abbreviations and acronyms

AWARD	Association for Water and Rural Development
Campfire	Communal Areas Management Programme For Indigenous Resources
CBNRM	community-based natural resource management
CMA	catchment management agency
CPR	common property resources/ common pool resources
DWAF	Department of Water Affairs and Forestry
FAO	United Nations Food and Agriculture Organization
IUCN	World Conservation Union [formerly International Union for Conservation of Nature and Natural Resources]
IWRM	integrated water resources management
MOU	memorandum of understanding
NGO	non-governmental organisation
ODI	Overseas Development Institute
PRBWO	Pangani River Basin Water Office
SNV	SNV Netherlands Development Organisation [formerly Stichting Nederlandse Vrijwilligers]
Tanesco	Tanzania Electricity Supply Company
USAID	United States Agency for International Development
WMA	water management area
WUA	water user association
WSDP	Water Services Development Plan

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Abstract

In recent years, water governance has undergone a remarkable paradigm shift. Old notions of water resources management dominated by a supply-orientation and reliance on civil engineering science and technical solutions to water problems have been discarded in favour of a ‘softer’ governance regime that embraces stakeholder participatory processes. This new regime is strongly underpinned by neo-liberal approaches that emphasise, *inter alia*, decentralised management structures, a ‘rolling back of the state’ from the frontiers of management and development, and treating water as an ‘economic good’. Consequently, most countries (including Tanzania and South Africa) have initiated water sector reform programmes that stress comprehensive river basin management based on integrated water resources management (IWRM) principles, user involvement in management, cost recovery and sustainable resource use. Within this new paradigm, many elements of conventional community-based natural resources management (CBNRM) approaches are quite apparent. Drawing mainly from the assessment of secondary data, this paper uses case studies from the Inkomati River Basin of South Africa and the Pangani River Basin of Tanzania to scrutinise the IWRM paradigm and its relevance to the evolution of CBNRM. It questions the strength of policies and policy-making processes which have led to the emergence of IWRM as the dominant discourse in the water sector. It identifies critical factors for genuine stakeholder involvement in decision making at the basin level in order for more relevant and effective policies to be made. It focuses on conflict resolution as an important issue around which dialogue and negotiation platforms can revolve. Stakeholder participation in river basin management is depicted as a complex, socio-political process that must consider and reconcile a range of interests across sectors and users in the basin. This paper posits that while forums for dialogue are often presented as fair and inclusive, there is a need to note that when they are designed and controlled by those in positions of power, they may become artificial – including certain stakeholders, and excluding others.

1 Introduction

The last two to three decades have witnessed a remarkable paradigm shift in the discipline of water resources management. In recent years, water governance has undergone a remarkable paradigm shift. Old notions of water resources management dominated by a supply-orientation and reliance on civil engineering science and technical solutions to water problems have been discarded in favour of a 'softer' governance regime that embraces stakeholder participatory processes. This new regime is strongly underpinned by neo-liberal approaches that emphasise, *inter alia*, decentralised management structures, a 'rolling back of the state' from the frontiers of management and development, and treating water as an 'economic good'. The rapid and wide adoption of IWRM (through national water sector reforms) raises the question whether a new form of CBNRM is emerging and if that is so, to what extent it is more effective in resolving the serious problems and challenges facing rural communities in Southern Africa and the rest of the developing world. Most countries in the region (including Tanzania and South Africa) have initiated water sector reform programmes that stress comprehensive river basin management, stakeholder participation, cost recovery and technology to promote water use efficiency, and resource sustainability. The policy and institutional dimensions of the river basin as a management unit are still in their infancy and governance of the water sector remains problematic for most countries in the region. Using case studies from the Inkomati basin in South Africa and the Pangani basin in Tanzania, this paper explores these policy and institutional dimensions in order to come up with solutions to the gap between policy and practice. The key question addressed is: what are the institutional arrangements and policies at different scales that can create an enabling environment for genuine stakeholder involvement in river basin management and improve the livelihoods of water users?

It is important to note that the assumptions of scale, boundaries, appropriate institutions and procedures underlying river basin management models are not as self-evident as they seem, and this has a bearing on lessons that IWRM provides for CBNRM (Wester & Warner 2002). This paper explores in detail the processes and tensions faced in implementing IWRM and draws lessons for CBNRM. It relies mainly on the assessment of secondary data to explore emerging river basin management strategies in sub-Saharan Africa. The assessment includes reference to grey literature from presentations made during regional and international water conferences and workshops. This assessment is backed by insights from key informants in the Inkomati and Pangani river basins. The case studies demonstrate some of the interesting conflict mitigation strategies that can be applied where multiple conflicts and potential conflicts over the control, use and management of water, are a reality.

2 Interrogating IWRM discourses

Though the experience of CBNRM with wildlife management in Zimbabwe through the Communal Areas Management Programme For Indigenous Resources (Campfire) has had its critics, it has had a pervasive influence on natural resource management in the southern African region. The extent to which CBNRM is feasible in river basin management, however, remains a matter for debate and further research. Emerging water resources management discourses focus on IWRM as the relevant development paradigm. But close analysis shows that, in reality, IWRM is just a variant of CBNRM, even though the specific contexts in which IWRM is being implemented are vastly different. The two paradigms share philosophical similarities in their stated intentions to embrace the stakeholder participation through decentralisation processes, equitable resource use and allocation, efficient resource use and resource sustainability. Focus on IWRM has led to the emergence of the river basin as the preferred management unit in which new institutions (mainly constituted by users) are created to play a leading management role. It is assumed that the inclusion of different users on the new institutions provides a good platform for improved management practices, stakeholder negotiation, and conflict prevention and resolution. The stakeholder base arising from IWRM is clearly much wider than conventional CBNRM experiences have grappled with in previous years. It is oriented more towards sectoral representation whereas in CBNRM, the 'community' (not easily defined) is the main stakeholder base, even though other players may be involved.

Almost all countries in southern Africa have instituted water reform programmes in which decentralised catchment-oriented institutional structures are expected to play a major role in water governance. But if CBNRM raised hopes for sustainable resource management (in wildlife management programmes for instance), is this also possible for water resources management? In its current form, is IWRM paving the way for a new and more effective CBNRM design? The summary by Pollard and Du Toit (2005) is very insightful in answering this question. They point out that for the very reason that IWRM has emerged by way of critique, it faces many challenges that manifest themselves through some key tensions. There are tensions between establishing best-practice approaches on the one hand and, on the other, adapting them to specific contexts. There are questions about the significance of scale in determining what can and what cannot work. There are also tensions between emphasis on form and process in catchment management. There are tensions between more centralised catchment governance, and more participatory, decentralised approaches. There is a tension between catchment thinking and other narrower orientations to issues such as meeting the backlog of water supply demands. It is the contention of this paper that, given these evident tensions, there is need to revisit the policies and policy-making processes that guide IWRM. It is further argued here that successes in conventional CBNRM have the potential to inform IWRM frameworks.

Theorists on natural resource management have already been grappling with the difficult task of establishing why policies and environmental management programmes fail to succeed as envisaged. This has resulted in discourses and narratives concerning the need to pay more attention to the nature of policies put in place as well as the policy-making processes leading to such policies. Keely and Scoones (1999) contend that environmental policies in developing countries are increasingly criticised for being predicated on highly questionable assumptions. Illuminating in this regard is the argument made by Mehta (2000), in which she states that the current vision processes around water seek to place water firmly in the arena of international development concerns and this is only to be applauded. However, the global statements and visions concerning water tend to have a normative and prescriptive character, containing scenarios of best practice and of the worst possible outcomes. On what are the assumptions of these visions based?

Winpenny (1994) states that, in recent years, a number of agencies, governments, and meetings of interested parties have expressed desiderata for water policy reforms (amongst others, the World

Bank 1993; FAO 1995). Embedded in these new institutional reforms are major international narratives on water resource governance, emerging largely out of neo-liberal development discourses. The discourses focus on the respective roles of government, civil society and the private sector. Many of the new policies and strategies make explicit reference to the changes in these roles brought about in large part by the decentralisation paradigm and the related question of user involvement in new decision-making structures. According to Dube and Swatuk (2001), one must recognise that structural adjustment conditionalities informed by global neo-liberal economic logic underpins the entire exercise. Why would a central state voluntarily devolve – not merely decentralise – power over a crucial resource if it was not both economically bankrupt and politically powerless to resist those pushing the ‘marketisation’ of water?

Questions of appropriate policies for developing country resource management regimes seem to be gaining more visibility now because, for many years, practitioners and theorists of public policy have assumed an independent domain within which policy is made. What happened beyond national borders was the preserve of foreign policy ministries and diplomats. The spread of public sector reforms across the globe (water included) indicates that such assumptions are no longer tenable. To a very significant extent, structural influence from beyond the boundaries of the nation state now encroach on, and determine, the policy processes in several sectors of the economies of ‘sovereign’ states and threaten to drastically alter power relations between policy-makers and the rest of the society. While the neo-liberals and public sector reformists are extending their influence to the rest of the world, questions with implications for CBNRM immediately arise:

- Does policy transfer across the North-South divide promote harmony and convergence or exacerbate contradictions and retrogressive tensions caused by dynamics at the nation-state and local levels?
- As expressed through water sector reforms, are we witnessing new and more effective designs in CBNRM discourses?

Empirical evidence from countries that have been implementing these reforms (Zimbabwe, Malawi and South Africa, among others) indicates that positive results from these reforms will be long in coming (that is, if they ever do). The similarity and standardisation of the prescriptions across different countries is undeniable. It is, however, inconceivable that the ‘one size fits all’ approach to the policy-making associated with these reforms will bear positive results, considering their obvious disregard for the prevailing social, cultural and institutional contexts in most of the countries involved. Equally important is the view that the construction of environmental policy is, to a large extent, ‘top-down’ and dominated by the decisions of elite groups of policy-makers while perceptions and preferences of ordinary citizens, particularly those from marginalised groups, are rarely prominent in the policy-making process (Holmes & Scoones 2000). These may partly explain the why the policies have been less than systematic.

The implication of neo-liberal philosophy (the ‘water is an economic good’ movement) is particularly interesting in southern Africa. One is justified to ask whether or not this signifies a deliberate shift of natural resources from common property regimes to private property regimes. It reflects the ‘commoditisation’ of common property to suit the market mechanism and competition for the available resource increases in a different, regulated, and more systematic way. Hunters now have to obtain licenses to hunt, farmers must obtain title deeds to the land, and water users must get water rights or permits. Those who do not get the required documents (licences and permits) are labelled ‘poachers’, ‘illegal settlers’ or ‘squatters’, and ‘water thieves’. The ‘uncaptured peasant’ (Hyden 1983) is thus ‘captured’ into the formal economic system. IWRM has emerged as a development strategy that embraces most of these concepts, deriving some of its basic elements from the CBNRM discourses and others from the neo-liberal economic discourses. The ‘water is an economic good’ concept and, by extension, the ‘user pays’ principle is quite controversial. While it is possible in wildlife community-based management programmes to charge hunters licence fees,

the reality is more complex in water resources management. Table 1 showing the prevailing matrix of water resources governance systems from a scarcity point of departure gives a good idea of some of the challenges water management practitioners and theorists have to confront.

Table 1: The prevailing water matrix in developing countries

Issue	Real scarcity	Artificial scarcity	Technical expertise/ Management style
Causes/ symptoms	Naturally dry climate; droughts; demand outstripping supply due to rapid population growth (in India for instance); intense competition for the little water available and sometimes real conflicts.	Selfishness (wanting or using too much for yourself or your sector only); increasing competition for water and potential conflicts; water leakages due to poor or outdated infrastructure.	Lack of infrastructure due to lack of finance and/or technical expertise; poor management strategies; frequent water shortages.
Solutions	Water harvesting for both domestic and supplementary irrigation; improving management strategies; CBNRM for small water bodies; conflict negotiation and dialogue platforms. ¹	Water demand management; closer monitoring of actual water use; improving managerial strategies; conflict negotiation and dialogue platforms. (See Pangani case study.)	Trying out new management strategies like IWRM but deriving useful lessons from CBNRM experiences; holistic management; water demand management; more funds allocated to the water sector; closer monitoring of actual water use; conflict negotiation and dialogue platforms. (See both Inkomati and Pangani cases.)

In the table, management cuts across all sections of the matrix, as do conflict and dialogue platforms. That is why the new IWRM paradigm emphasises all the three. Conventional CBNRM approaches are only easier in domestic or small water supply systems (for example during the water and sanitation decade, 1980–1990). These have been tried successfully in India and Zimbabwe, at least for managing small water points like boreholes and deep wells. It is not feasible to try the same thing in river basin management as the stakeholder base is much larger and the spatial and temporal scales more complex. Using water for extensive production processes (irrigation, for instance) requires construction of dams and weirs. This is an expensive exercise requiring a lot of capital. Even with the advantage of collective action, communities are often not in a position to raise the required capital. Large-scale productive use of water is also predicated on the availability of irrigable land within a reasonable distance from the water source and this is not always guaranteed. Therefore, communities often settle for small-scale water use (vegetable gardens) whose importance to livelihoods is not negligible though not as significant as commercial use in terms of the water quantities abstracted. Given this scenario, the reality of river basin management is that IWRM can only incorporate some elements of CBNRM.

To further illuminate philosophies guiding IWRM, it is worthwhile exploring discourses on social engineering and the reconfiguration of socio-economic structures in nation-states. Proponents of social engineering argue that social development cannot be left to take its own natural course. It can only be deliberative and experimental, planned and built up with particular objectives and with the aid of all available knowledge concerning the principles of social organisation. One of the early proponents of social engineering, Bertrand Russell (1976) saw the application of reform ideas, guided by the new and increasingly influential social sciences, as the way to transform inefficient social, political, and economic relationships, domestically and internationally, into systems that ran on modern lines. The multitude of water reform programmes being implemented in the developing

countries seems to indicate the re-emergence of 'social engineering' as a science-informing development policy. However, when confronted by realities on the ground, its success cannot be guaranteed. Schacter (2000) argues that a major factor contributing to the failure of most public sector reform efforts has been the 'technocratic' approach taken by donors. For too long, donors treated public sector reform as 'an engineering' problem, a phenomenon to be addressed through 'blueprint' or 'textbook' solutions. There is an assumption that public sector reform problems and their solutions could be fully specified in advance, and that projects could be fully defined at the outset and implemented on a predictable timetable, over a fixed period. Such approaches are backed by some economists who favour the 'big bang' approach, which tries to reap benefits using a number of harsh policies quickly implemented concurrently (see Rodrik 1994; Williamson 1994). In this way, social engineering provides governments with the opportunity to reconfigure socio-economic processes with a view to achieving rapid change. At the same time, it has consistently provided those who sponsor it (international donors and financiers) with a means to continue to influence key elements of the political, economic, and social direction of development paths in developing countries.

Despite the enduring role social engineering has earned in global affairs since the end of the Second World War, its success as a framework for community-based water resources management faces severe challenges, least of which is not its emphasis on the project approach to development. Most of the water reforms are usually initially funded by international donors or finance agencies, particularly the World Bank, the German, the Swedish, the Dutch and the British governments. Murphree (2004) argues that the focus of these interventions on conservation goals pursued through strategies that emphasise the role of residents in decision-making is generally a good start since it indicates a shift in the locus of decision-making from the centre to the periphery. But the location of these interventions in the international project mode creates problems. The project mode is generally short-term, time-bound and reductionist, assuming that the end can be defined and provided for at the beginning. A question that immediately arises is whether a project for resource conservation, externally defined and executed in a project mode, can be married to a communal approach? Murphree posits that certain pre-conditions must exist before these conservation efforts can succeed. Such conditions include (but are not limited to) the following:

1. The 'communal' is given form and substance in specified regimes of land and resource management.
2. Communal approaches and state management are understood as complementary rather than mutually exclusive alternatives when communal regimes are integrated into national systems of conservation planning and implementation.

This paper will argue that the second condition is of significant importance to IWRM and other community-based approaches to natural resource management.

One unnerving and contradictory feature of the spirit behind the development discourses emerging from both the neo-liberal and the IWRM paradigms and prescribed for African and other developing countries is the inherent assumption that these countries are unable to design and implement effective development programmes on their own (pessimistic diagnosis). At the same time, when reform prescriptions are implemented in the same countries, the bodies and other institutions that emerge from these are expected to suddenly assume roles that are beyond their capacity (optimistic prescriptions). What the neo-liberal economic reform prescriptions essentially do, therefore, is to ask the state to do what it does not have the capacity to do (see Mkandawire 2001). As the Pangani River Basin case study will demonstrate, there is a need to reconcile and establish some sense of balance between these two extreme positions if realistic development frameworks are to be designed for Africa. This reconciliation is only possible if policy analysts and practitioners first assess the realities of the African social, economic, and political condition before designing any intervention. More attention needs to be paid to the actual African condition as

opposed to the identification of brilliant models that have worked elsewhere (mostly in developed economies) and then confidently prescribing what developing country economies should strive to be. There is a need to approach development more as a continuum rather than as a once-off package that enables a nation or resource sector to radically transform from one 'bad' form to a 'good' one within a few years.

A focus on how policies and institutions in the water sector 'ought' to look like and operate has precluded the view of development as an experiential learning process where trial and error is embraced. Resource management is now re-defined (narrowly) as the rapid and complete overhaul of socio-economic institutions and other factors of production in order to attain specific targets within a specific time-span. But as Murphree (2000:12) points out, institutional evolution involves experiment. A chain of incremental learning is necessary which defines objectives, identifies options, selects and implements approaches, monitors results, and adapts objectives and action on the basis of these results in a continuous and iterative process. Experiences in many developing countries show that any attempt to fast-track the development process is futile.

Policies in favour of IWRM (as expressed through the water reform programmes) have neglected one vital physical characteristic of water, that is, it naturally flows in any direction following the path of least resistance. As a result, in many cases, rivers and streams tend to cut across administrative and political boundaries much more frequently than other common property resources (CPRs). This makes it absolutely necessary for upstream and downstream communities to manage rivers in co-operation with one another. Individuals or groups of individuals sharing water resources in common are thus connected in a social, political, economic, and ecological sense. Activities carried out upstream have the potential to affect other users downstream. Misuse of the water resource by one individual affects other users, both in terms of quality and quantity. It is this understanding of water, coupled with the need for equitable sharing of the resource, that works as a strong catalyst for collective action and stakeholder-based basin management approaches.

The same characteristic that makes collective action a necessity, however, makes the scenario more complex. When rivers cut across local and international geographical areas, issues of appropriate management, scale and boundaries become more complex and pronounced. It also broadens the stakeholder base that must be considered in designing management frameworks for the resource if conflict is to be minimised. Turner (2000) raises an interesting issue in CBNRM discourse when he states that the question is whether local governance structures have the capacity to contain, mediate and resolve conflict – or whether they are threatened, destabilised or destroyed by it. Typically, conflict resolution capacity has to be an important part of the institution-building task of emerging river basin authorities. It will be their task to initiate the bargaining and negotiation processes that enable dialogue to become a viable option for upstream and downstream stakeholder engagement.

CBNRM discourses have concerned themselves with the concept of dialogue for many years and IWRM practitioners at local levels are expressing similar interest in the concept (see the Pangani River Basin case study). In the IWRM paradigm and policy discourses at the global level, however, dialogue appears to be subsumed under the banner of 'stakeholder participation' even though the water sector reforms have so far not yielded positive results in establishing genuine and credible participation. It is assumed that once you decentralise water management responsibility to the river basin, sub-catchment, and to water user groups at the lowest levels, effective dialogue and participation will automatically occur. In Zimbabwe, the outcomes of these assumptions have been disappointing and policy options must be revisited (see Chikozho & Latham 2005).

It is encouraging that the importance of dialogue in the creation of an enabling environment for genuine stakeholder involvement in river basin management has recently gained recognition among policy theorists. It neatly dovetails with the decentralisation and 'development from below' lobby which emphasises recognition of the invaluable contribution that can be made by those who use and live most closely with the resource (see Stor & Taylor 1981). Neutral platforms for stakeholder

dialogue have to be identified (or created) if dialogue is to become a formal component of resource management systems. This does not take place overnight. It is usually the outcome of years of negotiation and less inclusive decision-making, and the terms of involvement are continuously re-evaluated and re-negotiated (see Wester et al. 2003).

3 Potential pitfalls of dialogue platforms

Based on CBNRM experiences in other resource sectors, some scholars have already suggested a need for caution in the glorification of multi-stakeholder dialogue processes. These suggestions bear important lessons for IWRM programmes. Edmunds & Wollenburg (2001) suggest that naive approaches to such forums can disadvantage weaker groups in a number of respects:

- They can create artificial neutral spaces for negotiation that do not match the reality of interactions between those with different degrees of power and authority and the need for long term, iterative processes of negotiation.
- They can rush towards consensus, patching over real grievances.
- They can lead to equal say by all stakeholders, in effect denying primacy of interests by those with a bigger claim to river basin resources.
- They can devalue or undermine other forms of negotiation.
- They can disempower those with less effective communication skills.

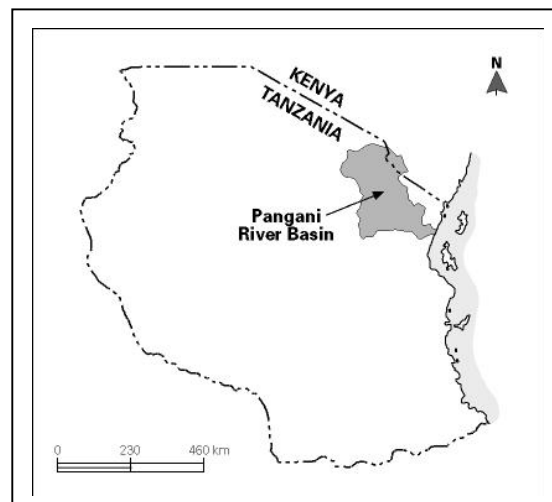
It is ironic that the same efforts made to create an enabling environment for genuine stakeholder involvement through dialogue platforms can become new points of debate and contestation. By appearing to have consulted and involved diverse groups, proponents of controversial projects sometimes claim consensus. The result of this deception is that there is often increasing reluctance by the disadvantaged groups to join such formal processes if they are thought to be co-optive. An appreciation of the diverse meanings of development and unequal power held by actors involved in community-based management programmes is crucial in understanding the process of dialogue (see Edmunds & Wollenburg 2001).

On the face of it, participatory platforms democratise water management by giving voice to a multiplicity of interested actors. But participation is not necessarily politics. It can institutionalise power differentials as the literate elite take on leadership roles and co-opt the weak, and structures may even prove to be empty shells when they have little mandate to change anything. Stakeholders may therefore find it more attractive to pull out of the process (Wester & Warner 2002). While dialogue is usually an available option, its potential pitfalls have to be taken into account when platforms are created for stakeholder participation. This issue is further pursued in the case studies.

4 Water conflicts in the Pangani River Basin, Tanzania

The Pangani River Basin (See Figure 1) is one of nine drainage basins in Tanzania. It extends from the northern highlands to the north-eastern coast of the country. While the principal watersheds of the basin are mountainous areas of high precipitation, the main river channel runs through the dry Maasai Steppe of northern Tanzania where rainfall rarely exceeds 500mm per annum. The mean annual flow of the Pangani River has decreased over the last four decades. An exercise in stakeholder analysis reveals that a host of different actors exploit the resources of the Pangani Basin. These include the cities of Moshi and Arusha as well as many smaller urban centres. As these cities grow, their demand for water has also been growing particularly for industrial and domestic use and waste disposal.

Figure 1: Pangani River Basin



Source: IUCN 2003

There are millions of subsistence farmers on the fertile slopes of the mountains, irrigators on the lower slopes, and pastoralists in the drier areas. Water extraction for small and large-scale irrigation has severely reduced the flow of the river and its tributaries. A study in 1991 showed that at least 2 092 extraction schemes, most of them unregulated, were extracting water from the river (IUCN 2003). Much traditional farming in the basin is supported by supplementary irrigation. Traditional irrigation furrows are highly inefficient, and may lose as much as 85% of water between the point of abstraction and its destination. There are also several large-scale farming interests in the river basin, including sugar cane estates, sisal and flower growers. Between 29 000ha and 40 000ha of the Tanzanian part of the basin are irrigated, consuming 400–480 million m³ of water annually (Pamoja et al. 2004). It is expected that, by 2015, urban water demand in the basin will reach 163 600 million m³ per day.

There are huge industrial interests, which include the Tanzania Electricity Supply Company (Tanesco). With a rapidly growing population, demand and pressure on the waters of the Pangani have been rising. There has been a corresponding increase in the number of water conflicts as water allocation becomes more and more difficult. The basin is also increasingly suffering from environmental problems that are threatening the water resources, the plant and animal diversity, and the people that depend upon these resources. Water hyacinth, for instance, is a pest in the lower reaches of the river, seriously reducing the amount of water available for aquatic biodiversity and such human uses as hydropower generation.

While there is a diversity of interests in the basin, wielding various degrees of power as they claim rights to the basin's resources, the needs of power generation and irrigation tend to dominate to the

extent that the mid-reach swamps of river are often denied what they need. These differences in power underlie the many conflicts that characterise natural resource exploitation within the basin. In response to the growing pressure on the available water, the Pangani River Basin Water Office (PRBWO) is working to improve management of water in the basin. It is also trying to improve both flows and quality of water in the system. Conflicts in the basin are varied and range from disagreements over the commercialisation of water, disputes over prioritisation of allocation amongst the sectors of hydropower, agriculture, pastoralists and others, and disputes over water allocation between upstream and downstream users. The conflicts in the basin are made more complex by the absence of a clear institutional setting that provides room for the multiple actors to participate meaningfully in the decision-making processes. The different actors are also not clear on the procedures for water rights application and land allocation in the basin. Sometimes one even finds village councils getting into administrative conflicts with water user groups or associations over who has the power to allocate water.

5 Pamoja's experiences in the Pangani basin

Pamoja is a non-governmental organisation (NGO) whose vision and mission were developed in a participative process through a series of workshops. It focuses on facilitating good local governance across several sectors that include water, education and health. 'Pamoja' is a Swahili term meaning 'together'. It works to bring together civil society, the private sector, and local government together in order for them to come up with strategies for improving the livelihoods of Tanzanians. Pamoja has taken advantage of the enabling environment created by the liberalisation of the Tanzanian social sphere to effectively engage with different key players. Liberalisation has opened up space for civil society engagement and created opportunities for independent associations and voices to play a more pronounced role in the country. Privatisation of the Tanzanian economy and the withdrawal of the state from the frontiers of development have also created opportunities for private entrepreneurship. A strong decentralisation policy has devolved power to district councils and opened avenues for proactive policy making at the local level. All these processes were initiated and driven from the centre, thus taking a long time to get to the district level. Thus, Pamoja's initial work mainly consisted of building capacities at the district level to effectively utilise opportunities offered by these policies. The approach is based on the insight that these opportunities cannot be grasped in isolation, but that they are inter-dependent. Vital synergies can be strengthened between a strong private sector at district level and a well-performing local authority.

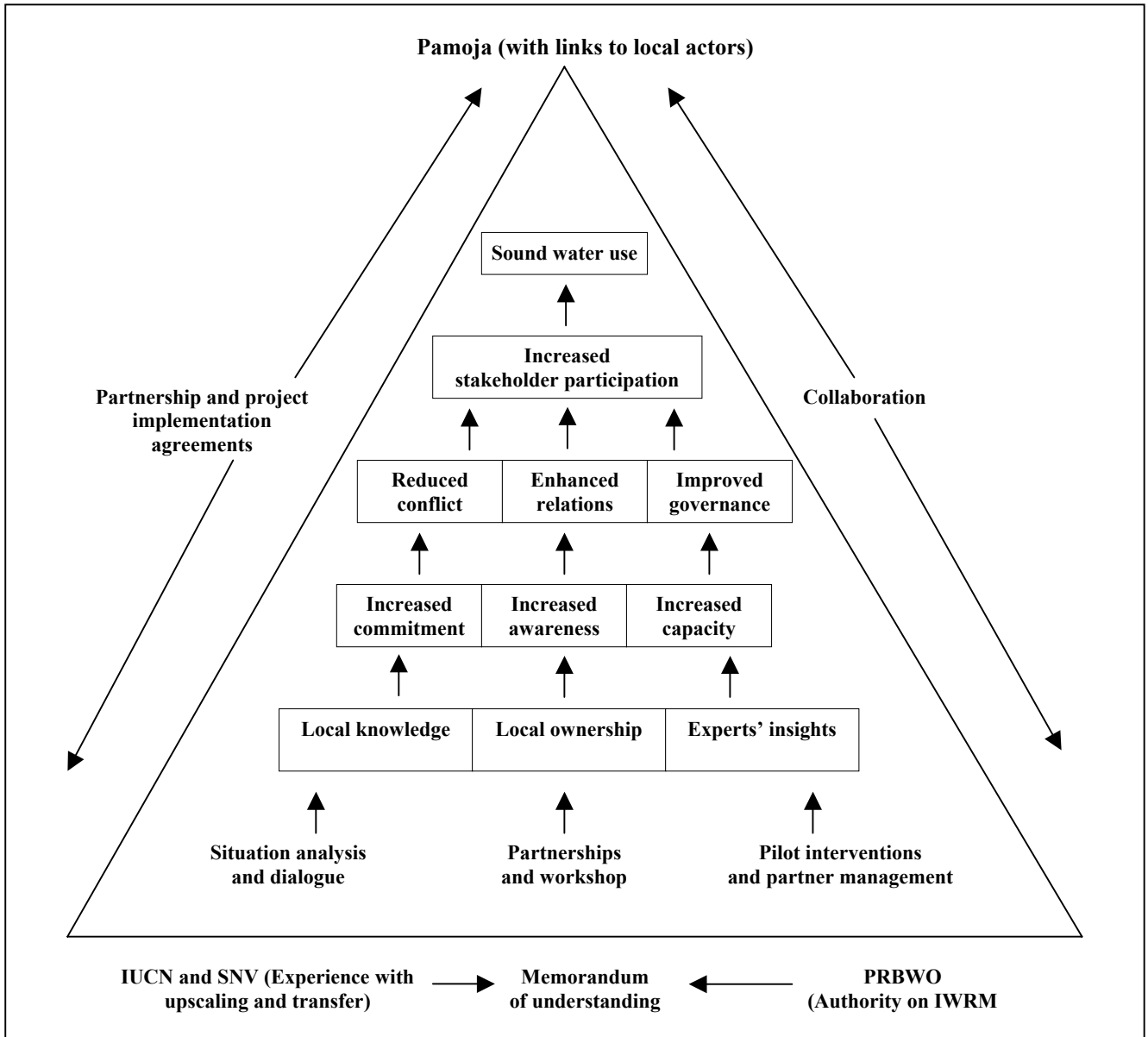
With the above in mind, Pamoja initiated a dialogue project that focuses on the nature of relationships between users of water in the Pangani Basin and the systems of water management that govern these relationships. The building blocks of the project's design are based on the underlying logic that if collaborative relationships among local stakeholders exist, good governance of water resources will prevail. The basic principle behind the model is that people's mindsets can be changed through persuasion so that they start co-operating and entering into dialogue with their rivals (or perceived rivals) to resolve water conflicts. In this way, the project is managing conflicts and building a sense of understanding between competing stakeholders. The approach provides good lessons for other CBNRM initiatives especially with regard to initiating credible stakeholder participation. The building blocks of the initiative are illustrated in Figure 2.

Using this 'building blocks' model as the foundation of a basic operational framework, Pamoja has successfully tested various tools for bringing stakeholders to the negotiating table and dialoguing in order to mitigate conflicts over water and land resources in the basin. A partnership consortium made up of the Pangani River Basin Water Office, Pamoja, SNV Netherlands Development Organisation and the World Conservation Union (IUCN) is leading the project. The partners are bound by memorandum of understanding (MOU) that clarify their roles. SNV and IUCN provide funding and technical support while Pamoja and the PRBWO implement the project. With the assistance of all key stakeholders, the partners examined sources of water conflict in the basin and identified equitable solutions in four pilot areas, namely, Hingilili, Rundugai, Himo/ Kahe and Ruvu. The main objectives of the pilot projects were to:

- profile and document the nature and history of water conflicts at several sites in the Pangani Basin
- contribute, by facilitating a process of negotiations, to the resolution of water conflicts
- learn from, document, and share these experiences in order to inform similar natural resource conflicts elsewhere (case studies and policy briefs have been prepared for sharing with a wider audience that includes politicians).

Based on consultations with the stakeholders, an in-depth analysis of the selected sites was done and a detailed situation analysis was prepared for each of these four case studies. The situation analysis concisely and impartially described the nature and history of water conflicts in the areas.

Figure 2: Dialogue project building blocks model: Pamoja (with links to local actors)



Source: IUCN 2004

It also summarised opinions and possible options for resolving some of the perceived and real conflicts. Management roles and the responsibilities of different institutions at the community level were teased out. Relationships among various institutions and individual farmers were also discussed. In each pilot area, conflicts of a different nature have been tackled head-on as the project seeks to empower stakeholders and ensure that this empowerment leads to active engagement and change. Pamoja empowers and capacitates communities by organising workshops during which stakeholders are not only encouraged to start engaging with one another and share their experiences and interests, but also to start critically analysing government policy on water resources management and identifying the strengths and weaknesses of the policy. They are also encouraged to start identifying the roles that they can play as stakeholders in order to improve the policies. It facilitates collaboration between local government, civil society and the private sector. It strives to transform mindsets and attitudes, based on the right of equal access to resources, in order to achieve people-centred (poverty-focused) development. It promotes the concept and practice of ‘joint

action' and participatory local governance at the community and district level across Tanzania, and of connecting these to similar international experiences.

Following the implementation of the dialogue intervention, stakeholders are now willing to negotiate equitable solutions to their conflicts over water in the basin. Communication between upstream and downstream water user groups has been strengthened significantly. Most of the key informants interviewed felt that the dialogue meetings and awareness creation workshops enabled different competing groups to understand the implications of not cooperating with one another on water resources management and conflict resolution. Some of the positive outcomes include:

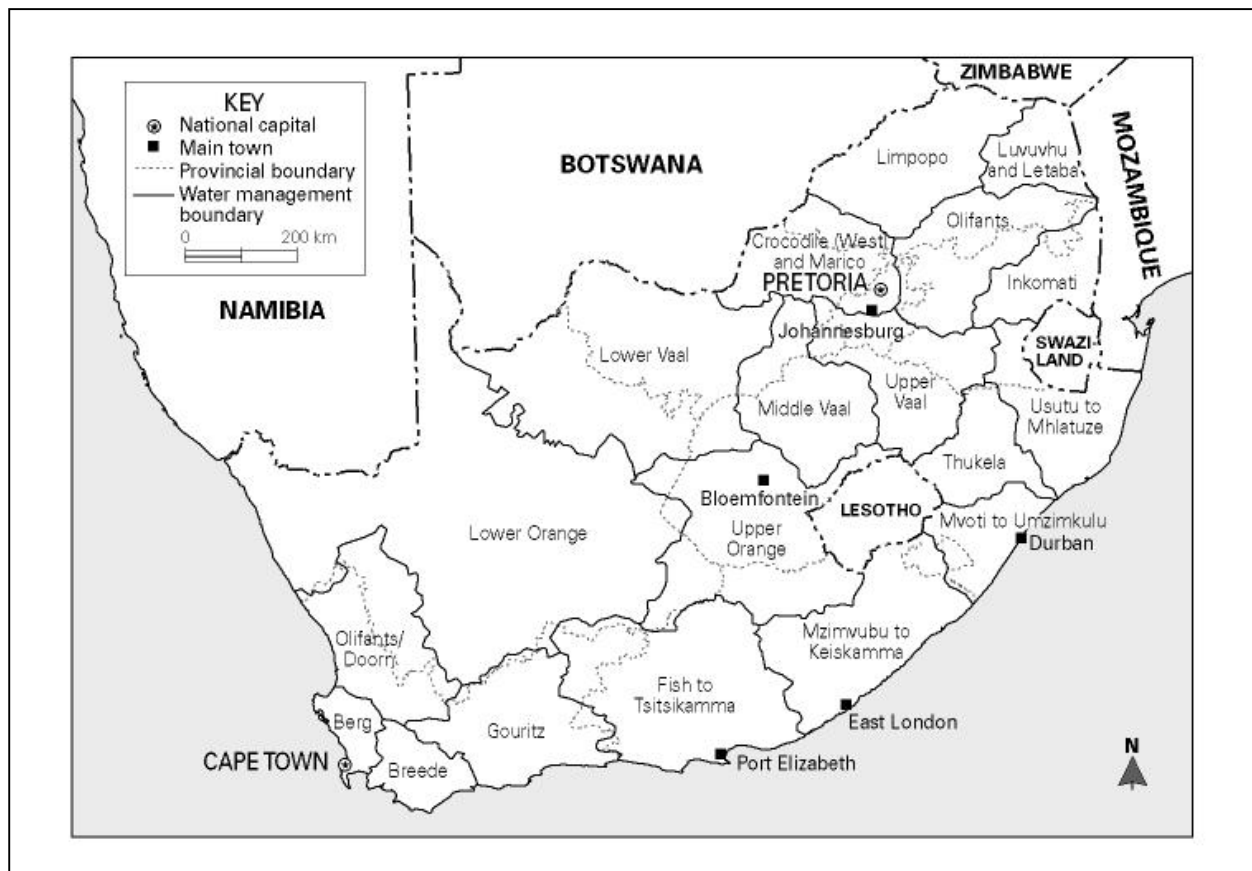
- the establishment (by local authorities in conjunction with user groups) of by-laws for water management in the pilot areas
- the development and implementation of an agreed calendar for water allocation and distribution
- marked reduction in selfishness and willingness to negotiate a catchment-wide water user association (WUA)
- respect between different user groups has improved as each group begins to understand and appreciate the problems and constraints of the other groups
- improved understanding among users of the whole basin's problems as opposed to an understanding of a small part of the basin that a group lives in
- improved linkages and communication between traditional authorities, local governance institutions and the stakeholders in the project pilot areas.

Pamoja and IUCN have also made it a point to learn from, document, and share these experiences so that they can inform similar natural resource conflicts elsewhere. Pamoja makes use of several local partnerships to implement the dialogue project. Technical experts are drawn from other organisations. These include agricultural extension officers, lecturers from technical colleges, NGOs, PRBWO, IUCN, and SNV. Pamoja also uses the media for delivering effective messages to the stakeholders. Today, the government of Tanzania recognises the work that Pamoja has been doing and has asked Pamoja to become part of a national commission to analyse and contribute to the reform of the country's water policy. The government has also formally requested Pamoja to replicate the dialogue work in another province. Pamoja has managed to gain the trust of most stakeholders, thereby enabling access to a number of actors who would otherwise have been invisible to the government and its agencies.

6 The Inkomati Water Management Area, South Africa

The Inkomati Catchment Management Agency (CMA) was the first to be established in South Africa since the promulgation of the National Water Act in 1998. Figure 3 shows the location of the Inkomati Water Management Area (WMA). The Inkomati WMA is situated in the north-eastern part of South Africa bordering Mozambique and Swaziland. The area consists of three sub-catchments, namely the Komati, the Sabie-Sand, and the Crocodile. As is the case in the Pangani Basin, the water environment in the Inkomati is an arena of political contestations, an arena where CBNRM institutions (represented by CMAs and WUAs) can play an important role in bringing the diverse parties to the negotiating table. According to Pegram & Bofilatos (2005), each CMA will be established to become the key water resources management body within a highly contested environment.

Figure 2: South Africa's water management areas



Source: Government Gazette no. 20491, October 1999

The various stakeholders in the Inkomati area include players from the agricultural sector (both commercial and subsistence), forestry, mining, industry, tourism, recreational fishing, local and provincial government, traditional leaders, WMAs, water service providers, international water bodies, sector representative bodies, NGOs, community-based organisations and other interest groups. All these groups seek to influence the way in which water resources are managed. Irrigated agriculture is the most important economic activity and the main consumer of water in the basin (Woodhouse & Hassan 1999). Certain areas in the catchment, such as the Nkomazi region, are considered over-allocated and no more water allocation licences will be granted (Brown & Woodhouse 2004). Limited water supplies are therefore preventing socio-economic development and the expansion of commercial agriculture and water supplies for disadvantaged communities.

This makes water allocation a sensitive and politically-charged issue with the result that disputes and conflicts between sectors and users have been increasing in recent years.

After seven years of strategising at the national level, stakeholder engagement and political negotiations, the Inkomati CMA was finally established in March 2004. The process of drafting a water management proposal for the Inkomati area involved extensive public participation. It also required agreement on the structure and functions of the CMA. The participatory process faced many challenges because it needed to engage disadvantaged communities in complex decisions over scarce water resources. The negotiations involved dealing with more powerful and knowledgeable water users such as commercial farmers and other groups which could easily dominate the process (see Anderson 2005). The regional office of the Department of Water Affairs and Forestry (DWAFF) led the process with assistance from local consultants. The process was initially focused on establishing institutions that were representative of all water users but with the promulgation of the National Water Act, the process changed to focus on the development of a proposal for the establishment of the Inkomati CMA. Until October 1999 separate public participation processes were conducted in each of the three sub-catchments. The three groups were then brought together to form the Inkomati Reference Group. In September 2000, the reference group submitted a final proposal for the establishment of the Inkomati CMA to the Minister of Water Affairs and Forestry.

A board of 14 people has been proposed, to be composed of representatives from commercial agriculture (primarily growers of irrigated sugar cane and fruit in the Inkomati WMA); subsistence agriculture (primarily existing rural farmers, small-scale irrigators, as well as pastoralists); and potential agricultural water users. This last group is primarily composed of individuals with access to some land for agricultural production, particularly those engaged in dry-land farming or beneficiaries of the land reform programme, but who currently have no entitlement or access to water. Members of this group may require reallocation of water and/or local infrastructure development to enable small-scale irrigation farming. The important element of this representation is an understanding of the needs of relatively marginalised groups in the broader process of water resources planning, utilisation and development. Other representatives are from the forestry sector, industry, mining and power generation, tourism and recreation, game parks and conservancies, environmental civic groups, local government, provincial government, and traditional leaders.

While the process of establishing the Inkomati CMA is commendable, it faces several immediate challenges and these provide important lessons for CBNRM. The experiences from the seven-year participatory process indicate that getting genuine and legitimate representation from disadvantaged communities should not be taken for granted. Compared with established networks amongst white commercial farmers, disadvantaged communities have weaker networks of emerging commercial farmers and subsistence farmers, and have less knowledge and experience of water management (see Anderson 2005). Furthermore, representatives from networks such as the Mpumalanga African Farmers' Union do not have the capacity to feed information back to their sectors:

How do you expect a person without resources to feed back to people? To feed back to people, you need communication networks. ...First of all he has no car, how does he go to places, arrange meetings and call people together?

(Anderson 2005, quoting an Inkomati Reference Group Member).

In addition, some representatives attended meetings to obtain the transport compensation or free lunch provided by DWAFF:

Some will actually get to the meeting and from the start of the process up to the end, they never open their mouths to speak. They just go, sit, eat, claim money, and go home. And you wonder if these people actually represent the interests of the communities

(Inkomati Reference Group Member).

The Inkomati Reference Group has only nominated the *sectors* to be represented and not the individuals who will sit on the governing board. These nominations will come from the sectors themselves. The governing board calls for one individual to represent existing agriculture by historically disadvantaged individuals and one to represent historically disadvantaged potential agricultural water users (Pegram & Bofilatos 2005). Obtaining the right people to represent these sectors effectively is a huge challenge and will only be achieved if resources are invested in expanding the effectiveness and capacity of organisations such as the Mpumalanga African Farmers' Union. Additional resources are also required to expand and strengthen water user associations in the region (see Geldenhuys 1997). Some of the stakeholders have indicated that they are suffering from 'participation fatigue' and may not be willing to attend and participate in more discussions on the CMA. Engaging these stakeholders will require additional effort and resources (Anderson 2005). The concept of 'participation fatigue' has not yet been widely discussed in CBNRM literature and may require further attention. The stakeholders in the Inkomati have participated for over seven years and what seems important is the amount of direct tangible benefits the previously disadvantaged get from the process. This paper posits that the longer people participate without realising any tangible benefits, the faster they are likely to grow weary of the participatory process.

Despite several years of stakeholder engagement, indications are that public awareness programmes in the Inkomati CMA process were not fully effective. For instance, in a recent survey of CMA awareness commissioned by DWAF, involving ten focus groups each comprising 6–8 representatives from urban and rural black populations, respondents had no knowledge of the CMA (Brown & Woodhouse 2004). For CBNRM programmes to be effective, they should include all the affected parties. More resources should be committed to the design and implementation of awareness-raising programmes if all parties are to be taken on board right from the beginning. Some of the effective options include media and outreach campaigns to inform the general public and to assist in obtaining a body that fairly represents all water users.

Getting the diverse parties to the negotiating table is one thing, but getting them to fully and meaningfully participate is something else. Effective representation means much more than one's presence in meetings. Effective participation from previously disadvantaged groups requires special skills to facilitate their participation, to empower and engage them in the discussions. The use of highly technical terms during the stakeholder meetings, for instance, often disempowered stakeholders from poorer, less informed, backgrounds:

Sometimes they will put figures and calculations on the screen and black communities will go out without understanding anything. Even other communities will go out without understanding anything and then people just get frustrated
(Inkomati Reference Group Member).

Many times, the meetings consisted of presentations from consultants and DWAF officials, with opportunity for discussions and feedback on the concepts in the draft CMA proposal. The meetings did not provide enough opportunity for two-way communication from consultants to stakeholders. One tribal authority member felt that they 'did not have permission to speak', while an emerging commercial farmer complained that 'they did not have time to listen to stories. ... If they come to us they bring their own agenda' (Anderson 2005). Similar experiences with stakeholder consultation processes have been cited from the Mazowe catchment planning process under the Zimbabwean water sector reform programme (see Sithole 2000; Chikozho & Latham 2005). The important lesson for CBNRM is that facilitation of collective action activities has to be very sensitive to the background and origin of different stakeholders. There is need to bridge gaps between and among different cultures. Conventional, formal, Western-type meetings may not meet the needs of all sectors, and opportunities must be created to discuss issues in a more informal space. Short of this,

the process becomes highly abstract, artificial, and of little value to some of the previously disadvantaged groups.

Another challenge relates to the need to share vital data and information such as statistics on quantities of available water for allocation in the basin. Lack of transparency on such issues during the Inkomati CMA establishment process created tensions among stakeholders as each sector blamed the other for water scarcity and over-allocations. Since 2000, DWAF has confirmed that there is a negative water balance in all sub-catchments except the Sabie-Sand and that no more water licences will be issued in the area because it is considered a 'closed' catchment (Brown & Woodhouse 2004). Unfortunately, there is still a lack of transparency on actual water scarcity in areas like the Nkomazi district. Lack of transparency leads to lack of trust and, without trust, collective action (and indeed any CBNRM initiative) can easily fail.

In any CBNRM process, the correct information needs to be given to the diverse partners so that you do not raise expectations too high. During the process in the Inkomati, it appears as if DWAF gave stakeholders from disadvantaged communities the impression that the CMA establishment process was going to improve their access to water and, therefore, the delays experienced in implementation were also delaying their ability to access water. Members from the rural areas, for instance, may already have developed unrealistic expectations of how the CMA will meet their needs and could easily become impatient in the process of developing a catchment management strategy. Balancing the importance of long-term planning for water management with the need to address the urgent, and understandably impatient, concerns of the poor will be a significant challenge for a pro-poor governing board (see Anderson 2005). There is need to minimise and correct most misconceptions if CBNRM programmes are to succeed.

Each of the three sub-basins of the Inkomati is a separate hydrological unit within South Africa, with different socio-political contexts and economic drivers. Representation on the CMA is based on socio-economic sectors and not on geographical regions. A big challenge will be to encourage the representatives to see the big picture (the whole basin) beyond their sectoral interests. Reaching consensus under such circumstances can be a daunting task. This is a challenge that any CBNRM initiative can easily face as the diverse stakeholders fail to have a holistic conceptual view of the resource. They only see their small piece of the cake (the part that they are riparian to) and integrated management becomes difficult.

Although the CMA provides a strong voice for the previously disadvantaged communities, their lack of knowledge about IWRM principles (compared to large-scale commercial farmers, for instance) creates considerable power imbalances amongst the stakeholders when it comes to debating and deliberating on fundamental basin management issues. As Brown and Woodhouse (2004) point out, commercial farmers and irrigation boards are in a potentially strong negotiating position to influence the future direction of CMAs because they possess the most detailed knowledge of water use by agriculture. Debates regarding water pricing for instance have generally been dominated by the better-informed commercial farmers while community representatives could not contribute much. Therefore, in river basin management and other CBNRM programmes, it is essential to find ways for all stakeholders to contribute to the decision-making process. The starting point is an analysis of the power dynamics among the different actors in order to gauge the potential imbalances. Without inclusiveness, the potential for conflict increases significantly.

Another interesting observation with direct implications for water reforms in developing countries and CBNRM discourses in general, is that the new water governance vision in South Africa aims at promoting widespread stakeholder participation in water management. At the same time, it places more emphasis on formalised IWRM institutional processes. Within this paradigm, the state maintains (through government departments and agencies) centralised control over the management of the resource. According to Goldin et al. (2005), participatory governance and formalised government structures based on statutory law do not necessarily contradict each other, but in many

rural areas, formalised water management institutions do not promote widespread stakeholder participation and in some instances, contradict the central premise of widespread stakeholder participation by excluding the rural poor. The problem in these areas is that weak government structures are not replaced by alternative forms of water tenure, and consequent mismanagement of the resource can have negative consequences for sustainable resource management. In some regions of South Africa (and indeed in other southern African countries), customary water management structures that operate outside the framework of statutory law are able to fill the void caused by inefficient government structures. The role of CMAs as institutions for collective action diminishes. It would not be surprising if they end up playing a more pronounced role in monitoring and enforcement than in any of the other key functions.

While the CMA establishment process is an interesting area of study, equally interesting is that in the same WMA (Inkomati), a separate parallel stakeholder dialogue process has been initiated by the Association for Water and Rural Development (AWARD) in the Sand River catchment, a sub-basin of the Inkomati. This process is very similar to the one initiated by Pamoja in the Pangani. The Sand River Catchment, not unlike a number of other river basins in South Africa, has been subjected to a number of development activities that have compromised ecological integrity, productivity and water resources over a number of decades. This in turn has precipitated a suite of socio-economic and environmental consequences that threaten the livelihoods of the basin's population. The situation is exacerbated by the homeland legacies of Gazankulu and Lebowa, evident in extremely high densities of people with limited access to arable land and water resources. Gross inequalities exist in the access to water by the rural poor and by other sectors, such as tourism, agriculture and forestry.

Catalysed by intense water resource constraints and the crippling drought of 1992, government and other stakeholders supported the development of a catchment management plan for the Sand sub-catchment to mitigate the problems of water resource constraints and associated land-uses (see Pollard et al. 1998; Pollard 2002). The implementation of various measures is being undertaken by a range of partners under the banner of the Save the Sand Project which is co-ordinated by AWARD, a locally-based NGO. The project sets out to facilitate the participatory development and implementation of the management of the Sand Catchment. AWARD is facilitating dialogue amongst a number of actors who have a critical role to play in the implementation of IWRM principles in the Sand Catchment. Some of the parties involved include local government, traditional leaders, water committees, DWAF, extension officers, the Bushbuckridge Water Board, community development forums, and schools. Each group is given the opportunity to articulate their own vision and practice in relation to river basin management. They are encouraged to reflect on their vision and its implications for IWRM. The project aims at enhancing the negotiation capacities of the beneficiaries, and strengthening the overall negotiation process by bringing diverse groups into the process, to enhance participation and empowerment of the communities. AWARD is convinced that the biggest challenge facing the 'Save the Sand Project' is enhancing stakeholder participation.

Taking the above into consideration, a key component of the programme has been that of public awareness-raising. In this case, AWARD has focused its efforts principally on developing the capacity of local-level stakeholders in terms of understanding the new water legislation. This has also entailed assisting local government to play a stronger and more informed role in IWRM in the catchment. Part of the process has been to raise awareness of the need to incorporate sound water management principles, including those of efficient, equitable, affordable and sustainable water supply into the planning instruments such as the integrated development plans and the Water Services Development Plan (WSDP) for the Bushbuckridge Local Municipality.

There are plans to replicate the ‘Save the Sand’ project if it proves highly successful. Its successes and failures will become clearer as time goes on. At least for now, the lessons learned from the Sand pilot project have already started to be fed into the national water policy reform process and other IWRM programmes in the country.

7 Learning points from the cases

Water is a politically-contested resource and this aspect has to be reflected in the policies and institutions developed to tackle management issues. Closing the gap between policy and stakeholders on the ground is vital as it establishes the link between policy and realities on the ground. This is not easily achieved through wholesale adoption of policy prescriptions from developed countries. The successful engagement of local stakeholders coming out of the Pamoja and AWARD experiences demonstrate what can be achieved when local solutions are married to wider global management paradigms. The need for dialogue, for instance, is becoming an accepted broad global concept, but how you introduce it in river basin management has to take the local interests and realities into account. Pamoja and AWARD have managed to gain the trust of most stakeholders and connect them to the decision-making process, thereby enabling access to a number of actors who would otherwise have been invisible to the government and its agencies. The slow experiential and experimental mode builds trust between the facilitators of the process and the intended beneficiaries. You can then build on your experiences to upscale, out-scale, and replicate the successes in wider geographical areas. In the absence of trust between stakeholders, some may find the process questionable or unfair and withdraw. Building participation is a lengthy and costly process that can only bear fruit in the long run. There is evidence that a lot of resources and time must be committed to these processes (for example, substantial IUCN funding was required for the Pangani process, and DWAF invested at least seven years in the Inkomati process). This is also the process that DWAF and other national agencies in other countries are engaged in as they establish CMAs. It remains to be seen whether they will be able to achieve the same level of impartiality and trust elsewhere.

The case studies show that there is a very real need for institutional structures that co-ordinate resource management and bring conflicting parties to the negotiating table at the local level. The Pamoja and AWARD experiences indicate that this agency does not necessarily have to be a state agency. With support from the formal state machinery, these NGOs have been able to acknowledge and take advantage of the power of collective action and achieve objectives that any other basin management agency would envy. In this way, the basin management agency (government or NGO) is able to connect the individual to the state, and local communities to higher corridors of power (policy-making). What policy-makers in the region can do is to adjust the implementation strategies in such a way that interests and realities on the ground are embraced, even belatedly. The Inkomati CMA establishment process demonstrates attempts to deal with these inclusion-exclusion discourses in policy-making, taking into consideration the historical realities of the skewed economic regime established during the apartheid era (and this generally represents the African condition across the continent). The lengthy consultation process is revealing in this regard. While people may criticise the process for being too slow (and indeed some have already been doing so), the DWAF officials argue (and rightly too) that there is a need for caution in CBNRM programmes where multiple interests are at stake. If you rush the process, you may end up only serving the interests of fewer and more powerful stakeholder groups.

While stakeholder participation is a vital part of institution-building practices and conflict resolution mechanisms in community-based resource management approaches, certain preconditions must exist before platforms for dialogue can function effectively. Both the Pangani and Inkomati experiences demonstrate the need for comprehensive stakeholder identification and analysis, meaningful and accountable representation of distinctive groups (through umbrella organisations like WUAs) and the creation of a voice for marginalised groups. Participation has the advantage that it brings about organisation, collective action and conflict resolution, leading to establishing commonly agreed rights, roles and responsibilities over the resource.

However, the substance of participation must be clearly defined particularly with reference to:

- who is participating?
- in what way?
- what are the outcomes of the process?
- are there any improvements that need to be made to the process?

These questions must be addressed if platforms that only benefit more powerful interests are to be avoided. In the Pangani, there are strong indications that powerful organisations like the hydro-power utility Tanesco have dominated water-sharing arrangements for many years and may continue doing so if their power is not checked. Commercial irrigation interests are also very well represented and they have a bigger voice than other stakeholders. A similar situation prevails in the Inkomati basin, where white commercial farmer networks are very well-established while disadvantaged communities have weaker networks of emerging small-scale commercial farmers and subsistence farmers who have less knowledge and experience of water management.

The case studies have demonstrated the need for a neutral mediator to initiate the dialogue process and around whom the programme revolves, at least in the beginning. Policy and institutional researchers and practitioners need to start conceptualising situations where outside players do not play a more crucial role than local players. The Campfire experience in Zimbabwe was driven, to a large extent, by USAID development initiatives. In case studies presented in this paper, NGOs and other development agencies have been playing a leading role in building neutral stakeholder platforms. It would be interesting to explore the options available to developing countries in situations where these financially powerful players do not drive the process.

The case studies have also re-affirmed the importance of effective information dissemination in CBNRM programmes. Pamoja and AWARD held various awareness-raising and training programmes to capacitate and inform stakeholders about the dialogue platforms. In the Inkomati CMA establishment process, it has become clear that, despite over seven years of consultation, quite a number of key stakeholders are still unaware of the process. This is a challenge that DWAF must eventually overcome, and the simple lesson for IWRM is that unless the participants are well-informed and have the capacity to participate, their participation becomes an artificial exercise that can easily lose credibility. Experiences in the Zimbabwe water sector reform also bear testimony to this. Where there are capacity constraints to genuine involvement, training needs must be identified and training provided. It is only when the stakeholders are well informed and capacitated that they can meaningfully dialogue with one another and understand different points of view (see Chikozho & Latham 2005).

Dialogue processes encourage stakeholders to start engaging with one another and share their experiences and interests. They also start critically analysing government policy on water resources management and identify the strengths and weaknesses of the policy. This is already happening in the Pangani and Inkomati basins as AWARD and Pamoja encourage stakeholders to start questioning water policies and feed into the policy-making process. The old adage of there being strength in numbers is replayed as the stakeholders gain more confidence and begin to question the established order. The case studies also show that collaboration between local government, civil society and the private sector is a viable option in community-based management. Pamoja and AWARD have been able to bring together various actors from these sectors into collaborative relationships in order to achieve IWRM. What is required is that the different actors to understand one another's position and negotiate amicably.

From the case studies, one big question remains unanswered. This relates to the fact that NGOs are leading the stakeholder participation processes in the two river basins. The question that immediately arises concerns who should be given the mandate to facilitate stakeholder negotiations. Who is best suited for the task? Government departments like DWAF, who have the backing of the

responsible ministries (finance and otherwise), or NGOs and other civic organisations who are likely to be more impartial since they do not have government interests to protect? While this is a question for further debate, what is very clear is that NGOs and other development agencies are beginning to demand more participatory forms of river basin management. Both theory and practice in water resources management is now emphasising that no technical or institutional fix will be effective unless the underlying causes of water mismanagement and inequitable access patterns are addressed simultaneously. The importance of finding strategies for linking the needs, visions and demands of local communities to the policy-makers is increasing. But at the same time, proponents of IWRM must acknowledge that what they are asking developing countries to do is to significantly reconfigure resource allocation and distribution regimes. This is a difficult process with serious political ramifications. Because it is likely to reinforce existing power configurations in the water sectors of these countries, there is likely to be resistance.

Linking policy to realities on the ground is going to be more important in the Inkomati and other basins of South Africa. Elsewhere, debate has already been raging with regard to the neo-liberal 'water is an economic good' principle (see Derman et al. 2000; Serageldin 1995; World Bank 1993; Widstrand 1980). In its general sense, there is now much more widespread acceptance of market mechanisms and disciplines in the water sector, though resistance to charging for water like a commodity remains (Winpenny 1994). Yet it is common knowledge that, for many years in South Africa, certain sections of the population (like communal area residents) were disadvantaged by colonial policies of dual development and that this state of affairs has not yet significantly changed. How then are the poorer groups in society going to participate in a market-oriented water sector when their socio-economic position generally disadvantages their access to the resource? The irrationality of the economists' view which underlies the official reform processes is quite apparent in rural areas where the majority of the people do not have water rights in the legal sense of the term and are unlikely to get them just because of the reforms. What they have are primary and customary use rights which enable them to use water for a variety of purposes without paying (see Derman et al. 2000).

The principle of 'user pays' only applies to 'commercial' water users who constitute a very small section of the society. The difficult question concerns the dividing line between commercial and non-commercial water-use. It is a debate with the potential to arouse feelings of resentment and resistance from the poorer rural and small-scale commercial farmers who have been using water without permits for a long time. These farmers are unlikely to be willing participants if they suddenly find themselves being required by law to pay for water. In any case, the social value of water as a basic need with religious and spiritual connotations (in Africa) cannot be underrated. Therefore, it would be inappropriate to apply pure economic principles to the allocation of such a resource. Neo-liberals would, of course, want us to believe otherwise.

8 Prospects for stakeholder participation in IWRM

This paper has demonstrated that while IWRM has become the paradigm of the day in the water sector, the choice of the river basin as the appropriate institutional scale is still a matter for assessment and debate. The institutional complexities apparent in IWRM can be partly addressed through carefully designed and implemented stakeholder involvement programmes. Stakeholder participation leads to improved understanding among users of issues pertinent to other stakeholders with whom they can engage through neutral dialogue platforms. This contributes to IWRM in that the stakeholders begin to appreciate the whole basin's problems as opposed to an understanding of only a small part of the basin that they live in. The presence of conflict (or potential conflict) when natural resources are used in common is often inevitable, particularly between those concerned to maintain and improve livelihoods based on environmental resources and those intent on commercialising the natural resources. The potential for conflict becomes very real when two mutually exclusive needs must be satisfied simultaneously. However, the presence of conflict must be considered as an opportunity for constructive dialogue among stakeholders that can lead to more sustainable resource management regimes. The dialogue process requires the transformation of mindsets and attitudes from adversarial to co-operative. This transformation should go beyond the stakeholder and reach the policy-makers as well so that they shed their officious attitude and become facilitators of development rather than 'know-it-all' technical experts. It is only when mindsets are transformed that fruitful partnerships can be established among different user-groups and policy implementing agencies. Development agencies (government or otherwise) can lead this transformation process as long as they create the necessary credibility in the eyes of key stakeholders.

The nature and operational framework of IWRM programmes has to be determined by the prevailing social, economic and political circumstances in a particular geographical area. These realities provide an important lesson for IWRM and other CBNRM programmes, that is, policy processes are often as important as the goals being pursued. Getting the diverse parties to the negotiating table is one thing, but getting them to fully and meaningfully participate is another. Effective participation from previously disadvantaged groups requires special skills to facilitate their participation, to empower and engage them in the discussions. Therefore, the recipe for success in facilitating collective action includes sensitivity to the background and origin of different stakeholders, as well as bridging gaps between and among different cultures. Any form of exclusion can undermine the legitimacy of the dialogue platforms and create conditions of conflict in the long term. When this is taken into consideration, strong bridges can be built between the policy-makers and the diverse local levels. More empirical research is needed to identify opportunities for linking local interests to national policy-making interests and to ensure that the basic needs of basin communities are taken into consideration and their livelihoods improve. Such research should be conceptually grounded on the notion that water resources (and other natural resources as well) are politically contested and that water management institutions and policies should be a reflection of these political realities.

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Endnote

ⁱ There are interesting case studies available from India and Zimbabwe about this, but these fall outside the scope of this paper.