

Discussion on issues  
and a review of Sida projectsWater and  
Urban Conflict



# Contents

Acronyms .....	3
Introduction .....	4
Why Is It So Difficult to Talk About Conflict? .....	4
Structure of Study.....	5
Rationale for Study.....	5
Limitations of Study .....	5
Geographical focus .....	6
Definition of Conflict.....	7
Definition of Conflict.....	7
Intensity of Conflict .....	8
Definition of Conflict in the Context of the Study.....	8
Conflicts with Water Components .....	9
Water as a Conflict Element.....	10
Water Interventions Add Resources and Change Distribution Patterns.....	10
Conflict and the Role of the Donor.....	10
Does Conflict Breed Conflict?.....	11
Large Versus Smaller Cities .....	13
Typology of Urban Conflicts with Water Components.....	15
Types of Urban Conflicts; Causes .....	15
Limited Resources Conflicts.....	15
Distribution Control Conflicts .....	16
Quality Conflicts .....	18
Project Review .....	20
Criteria for Selection of Projects.....	20
General Observations on the Project Review .....	20
Review and Not Evaluation.....	20
Anonymity etc.....	21
Maji-na-Ufanisi Nairobi, Kenya: Sida Project 1998–00600 .....	22
Introduction .....	22
Conflict .....	22
Background of the Project and Review of the Project Documentation.....	23
First Stage of Project.....	23
Evaluation .....	24
Second Round of Financing.....	24
Conclusion .....	25
References to Sida Policies and Other Documents .....	25
Typology .....	26

Mutare Water Supply, Zimbabwe: Sida Project 1995–0027.....	27
Introduction.....	27
Observations.....	27
Conflicts.....	28
Positive Effects.....	30
References to Sida Tools.....	30
Conclusions.....	30
<b>Melamchi Valley Water Transfer Scheme, Nepal</b>	
Sida Project INEC-1996–0704.....	31
Introduction.....	31
Description of the Project.....	31
Observations.....	32
Conflicts.....	32
Conclusions.....	34
<b>Water for African Cities, Dar es Salaam: Sida Project 2002–04020....</b>	<b>35</b>
Introduction.....	35
The Sida Supported Project.....	36
Observations.....	36
Privatisation.....	37
Conflict Analysis Issues.....	37
Conflicts.....	38
Conclusions.....	39
<b>Sida Policies and Instruments .....</b>	<b>41</b>
Policy.....	41
Documents Relevant for Urban Water Projects.....	42
Conflict Analysis and Conflict Sensitivity.....	43
Commented Checklist.....	45
Policy Review Conclusions.....	47
<b>Conclusions .....</b>	<b>48</b>
Areas in Need of Further Study.....	50
<b>References &amp; Bibliography .....</b>	<b>51</b>
Sida and UD Documents.....	51
General Bibliography.....	53
<b>Annex 1: Checklist to Sida Strategy for Water Supply and Sanitation ...</b>	<b>58</b>
<b>Annex 2: Intensity of Conflict.....</b>	<b>60</b>

This document is a result of a Sida commissioned study but it does not necessarily represent Sida's viewpoints. The views expressed and the conclusions drawn are those of the authors and should not be attributed to Sida.

Published by Sida 2006

Department for Infrastructure and Economic Cooperation

Authors: George de Gooijer and Fredrik Thomasson

Printed by Edita Communication AB, 2006

Art. no.: SIDA28925en

This publication can be downloaded/ordered from [www.sida.se/publications](http://www.sida.se/publications)

# Acronyms

CBO	Community Based Organisation
CIDA	Canadian International Development Agency
DFID	Department for International Development (UK)
EIA	Environmental Impact Assessment
IGO	International Governmental Organisation
INEC	Department of Infrastructure and Economic Co-operation (Sida)
INGO	International Non Governmental Organisation
IWRM	Integrated Water Resources Management
MAR	Minorities at Risk Project
MDGs	Millennium Development Goals
MFA	Ministry of Foreign Affairs
MLD	Million litres per day
MnU	Maji na Ufanisi (Water and Development, Kenyan NGO)
NATUR	Department of Natural Resources and the Environment (Sida)
NBI	Nile Basin Initiative
NORAD	Norwegian Agency for Development Cooperation
ODA	Official development assistance
OECD	Organisation for Economic Co-operation and Development
PRSP	Poverty Reduction Strategy Paper
PSP	Private Sector Participation
Sida	Swedish International Development Cooperation Agency
ToR	Terms of References
UD	Utrikesdepartementet (Ministry of Foreign Affairs, Sweden)
VDC	Village Development Committee (administrative unit Nepal)
WDM	Water Demand Management
WAC	Water for African Cities

# Introduction

The Department of Infrastructure and Economic Co-operation (INEC) at the Swedish International Development Cooperation Agency (Sida) commissioned this study. INEC is currently focussing on the environmental and social effects of urban development. The department wants to investigate in what way urbanisation and urban development projects may result in water related conflicts and how such conflicts can be prevented or mitigated. The definition of conflict in this context is wide and not only restricted to armed conflict but also includes social tensions that are strong enough to impede the execution and success of interventions.

The study is meant to be a source of information in the process of understanding how INEC can design interventions to prevent or reduce conflicts with water components in an urban context, especially those financed directly by Sida or supported through international agencies. This irrespective of whether such conflicts are the result of development programs or expressions of already underlying tensions.

## **Why Is It So Difficult to Talk About Conflict?**

This study is about conflict and how it relates to urban development work, specifically with water components. There is generally very little open reporting on conflicts in projects, whether or not such conflict is linked to the project or if external conflict affects the intervention.

But it is nevertheless clear that experience on conflict issues is collected by the actors during the course of projects. It is not very popular to report on “problems”. Even when there are signals of conflict in the project documentation these indications seldom seem to reach the next interface in the project cycle. It is impossible to say whether this is intentional or another sign of the structural incentives that promotes the continuation of projects. These issues are central to the entire development sector; our objective is only to highlight a small aspect in connection with water and urban development.<sup>1</sup>

Conflicts, and reporting on them, have been equalled to failure, something that does not have to be the case. Everyone who has experience of projects, and not only in developmental contexts, knows that

---

<sup>1</sup> All websites cited below were active as of 2005–06–30: A fascinating Sida commissioned study on the issues is Ostrom et al. 2002: Aid, Incentives, and Sustainability. See also Sida's management response: <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=11710>

some conflicts are prone to show up. This study is focussing on when such “problems” become so acute that they jeopardize the outcome of the project or of future interventions.

The reluctance of reporting on conflict may also be linked to the level of certainty that is often suggested from the very beginning of a project. If development is really about change-processes that means that many interventions comprise a high degree of uncertainty. But how do you formalise this uncertainty in contracts and agreements? The main “dialogue-part” is presently in project preparation, ToR-writing and inception. But how much flexibility remains after this? And how much of “informed debate” (Moench 2003) is taking place in the dialogues and the project preparation?

A well-grounded hypothesis is that experiences on conflicts and how they were or not were dealt with can be traced and documented. Such experiences can be made explicit and serve as a basis for learning how to avoid the same issues in future projects.

### **Structure of Study**

The study consists of a five main parts: an overview of conflicts in relation to water and urbanisation/urban issues, a typology of the potential conflicts related to urban water projects, and a review of experiences of and approaches to conflicts in Sida financed or supported projects. This is followed by an analysis of Sida policy and documentation relevant to urban water issues. The study ends with conclusions and recommendations for further action.

### **Rationale for Study**

There is a consensus that the water sector will receive more attention and funds in the near future, pending political decisions on levels of official development assistance (ODA). Water and sanitation are some of the prioritised sectors in the millennium development goals (MDGs). The fast rate of urbanisation in many developing countries will necessarily direct a fair amount of these resources to the urban water and sanitation sector.<sup>2</sup> Sida has by tradition been a predominately rural agency but during the last decade more focus has been put on urban issues in development.

It is also clear from experience, both in Sida supported and other projects that conflicts that arise over the use and allocation of water can jeopardize the outcome of the intervention. We do not take a stand on the causal relations between water and conflict; we only sustain that there are conflicts with water as a component.<sup>3</sup>

### **Limitations of Study**

It is important to underline that the present study has no pretension of presenting statistically valid conclusions. The aim is to investigate and discuss issues that most probably will be of importance as Sida and other donor agencies more and more move into the area of urban interventions. The study is not an evaluation and when conclusions are drawn from a fairly small number of samples the provisional status of these assumptions is underlined.

---

<sup>2</sup> Aid statistics is a generally difficult area, for a picture of recent water sector activity see OECD report: OECD (2003) *Creditor Reporting System on Aid Activities. Aid Activities in the Water Sector 1997/2002* Volume 2003 Issue 1. OECD Publishing.

<sup>3</sup> Hauge, Wenche and Tanja Ellingsen (1998) “Beyond Environmental Scarcity: Causal Pathways to Conflict” *Journal of Peace Research*, Vol. 35, no. 3, (May 1998) pp. 299–317

## Status of research

The role of water in conflict has predominately been studied in international contexts. More attention has recently been put on intra-state conflict in general considering the fact that the majority of violent conflict is domestic. So far water as a component in local conflict has not been sufficiently studied or investigated. The various projects and databases dealing with conflict have up to now not taken conflicts with water components in consideration. Hopefully this will change in the near future.

## Geographical focus

Initially the brief was to focus on Sub-Saharan Africa and to only use project examples from the continent. This direction was made difficult by the scarcity of African urban water projects in the Sida portfolio. Another geographical area has thus been introduced in the project review. Nevertheless, considering the fact that Africa is the least urbanised continent and that its rate of foreseen urbanisation<sup>4</sup> will be the world's highest in the coming decades the focus on Africa retains its relevance. Many parts of the discussions will retain Africa in the centre. Such a direction is also justified taking into account that poverty reduction is the overarching goal of Swedish development.

### Box 1: Water and sanitation as development objectives

Most indicators show that the resources dedicated to the water sector in the developing world will grow in the near future. The development of water and sanitation is also highlighted in objectives of the Millennium Development Goals as well as in the results of a process like the Copenhagen Consensus. If the millennium goals are to be met investments in urban water and infrastructure will have to be substantially increased.

#### Millennium Development Goals

Target 10	Halve, by 2015, the proportion of people without sustainable access to safe drinking water
Indicator 29	Proportion of population with sustainable access to an improved water source
Target 11	By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers
Indicator 30	Proportion of people with access to improved sanitation [Urban/rural disaggregation of several of the above indicators may be relevant for monitoring improvement in the lives of slum dwellers]

#### Copenhagen consensus

The results of the Copenhagen consensus\* project where development goals and projects were ranked according to their cost effectiveness also put a heavy focus on water and sanitation. Among the ten highest rated areas three were in water and sanitation.

Project 6: Sanitation & Water	Small-scale water technology for livelihoods
Project 7: Sanitation & Water	Community-managed water supply and sanitation
Project 8: Sanitation & Water	Research on water productivity in food production

\*<http://www.copenhagenconsensus.com>

The final results at:

[http://www.copenhagenconsensus.com/Files/Filer/CC/Press/UK/copenhagen\\_consensus\\_result\\_FINAL.pdf](http://www.copenhagenconsensus.com/Files/Filer/CC/Press/UK/copenhagen_consensus_result_FINAL.pdf)

<sup>4</sup> UN (2002) World Urbanization Prospects: The 2001 Revision. Data Tables and Highlights. <http://www.un.org/esa/population/publications/wup2001/wup2001dh.pdf>



# Definition of Conflict

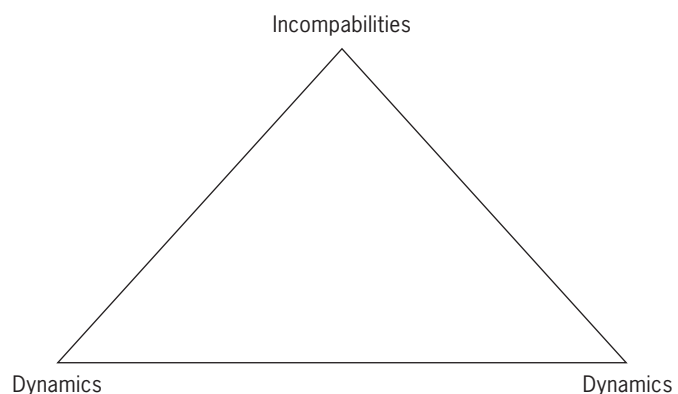
## Definition of Conflict

How do you define conflict? Should it include only violent confrontations? Is major tension enough? Do people have to be killed? If one group is excluded from access to water they may be forced to use low-quality water, leading to disease and death. Even if there were no violent deaths, people can still die as the result of conflicts with water elements.

One proposed definition of conflict is: “conflict [...] (is) a social situation in which a minimum of two actors (parties) strive to acquire at the same moment in time an available set of scarce resources. (Wallenstein 2002)

This definition, and varieties of it, seems to have gained some acceptance. It covers many aspects of what is commonly intended by “conflict”. This definition is often illustrated by the conflict triangle.

**Figure 1: The conflict triangle<sup>5</sup>**



A few issues are important to stress in this context. By resources are meant any kind of resources, material as well as political. The classic intra-state conflict is about territory and/or government, i.e. who or which groups shall access the political resource of governing a specific territory or the entire state. It is incompatibilities over resources that create grievances or conflicts.

<sup>5</sup> There are several versions of the triangle, Sida proposes one in Sida (2004) How to Conduct a Conflict Analysis. p. 36: <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=30780>

The parties can of course be more than two; in many intra-state conflicts or in situations of social conflict that turns violent, the actors are several. This underlines the importance of thoroughly investigating all possible actors in a conflict.

The “dynamics” are the actual expressions of the conflict, whether violent or not.

A first basic conflict analysis of any situation should as a minimum look at these three aspects.

### **Intensity of Conflict**

It would be helpful to develop a more elaborate typology as well as a scale of intensity for conflicts with water components. Scales have been developed for conflicts with various criteria for violence, such as the number of battle deaths etc. (see discussion on this issue in annex 2).

Such a scale could help policymakers and professionals working with water to evaluate situations, and understand the dynamics of such conflicts. Below we will try to formulate various types of conflicts and how they may be related to water.

### **Definition of Conflict in the Context of the Study**

By conflict in the context of this study we mean not only open armed conflict but also explicit social tensions that impede the possibility of reaching the goals of the project.<sup>6</sup> We also acknowledge that everything that mars projects is of course not attributable to such conflict.

Conflicts in this context could be for instance: sabotage of facilities, stepping out of treaties, agreements and contracts, less than peaceful demonstrations by parties involved or affected by the project, sometimes referred to as “water riots” (DIIS 2004a), grievances between rural and peri-urban groups that jeopardize the outcome of the intervention etc. Many such occurrences could be classified as conflict events in accordance with the intensity scales used by the Minorities at Risk project discussed in annex 2.

Several of the situations we discuss and exemplify from below could be defined as conflicts, but obviously not all. It is hard to define conflict in any stable quantitative or qualitative way, but most of us have an intuitive feeling of what it is when we encounter it. Obviously such a feeling is not enough to base future evaluations and appraisal of projects upon. A more comprehensive and nuanced definition of conflicts with water components, and in the larger context, conflicts related to natural resources in general, would be most useful.

### **Conflict is not inherently bad**

It is important to underline that conflict, at least when it is not violent, is not inherently negative. Change often means conflict and the main difference between how conflict evolves is based on the fact if there are institutions that can deal with these conflicts. We will not touch the concept of “governance” in this study, but the availability of institutions lies at heart in the issue of how to mitigate and resolve conflict. To deal with complex problems in a structured way it is necessary to develop functioning governance mechanisms. Such instruments should be inclusive and flexible in their response to a multitude of problems, including the issues of water and its relationship to society.

---

<sup>6</sup> Sida uses the term “violent conflict” and defines it “*violent conflict is a more inclusive term than armed conflict, as it includes genocide, violent confrontations and manifestations in society such as violent riots and massive crackdowns on protestors, which lead to casualties that are not battlefield-related and include civilian victims.*” Ibid, p. 35.

### **Conflict sensitive development aid**

The discussion of how to define conflict is present in the debate on how aid and humanitarian assistance relate to conflict, and how development actors can act in situations of conflict to mitigate or at least avoid exacerbating the situation. Sida has, as many other aid agencies, developed its own framework for addressing these issues. This will be commented upon below in the chapter on Sida policies and instruments.

---

### **Box 2: The debate on natural resource conflict and water**

The literature on natural resources and conflicts is growing fast.<sup>7</sup> The role of resource scarcity or abundance is ever present in the public discourse about the environmental factors in conflict, intra-state as well as international. A group of thinkers, often called Neo-Malthusians considering the similarity of their theories to those of Thomas Robert Malthus, point to the role of population growth and the physical limitations to growth, thus creating scarcities of resources worth fighting for. They also stress that the world's natural resources are finite. Others place greater emphasis on distributional issues, e.g. situations where a large part of the resources are being consumed by a small minority of the population.

The resource scarcity scenario has been challenged from at least three different perspectives: Technological optimists or "Cornucopians", argue that natural resources are usually quite abundant and, when they are not, can be traded, substituted through technological innovation, recycled, or rationed through the market mechanism. The "curse of resources" school argues that resource abundance is more important than resource scarcity in creating conflict. Groups start fighting over material resources, especially of the kind that are easily extracted and transported, such as diamonds, certain minerals, oil and timber etc. Liberal institutionalists argue that cooperation is a more common answer to resource scarcity than armed conflict, in the research on international shared water resources this is confirmed by the far greater number of cooperative treaties than of conflicts.

One of the important specificities of water is its low economic value, water is not a lootable resource, it has a low value per unit of weight and is hard to capture and transport. Water is thus less likely to give rise to abundance conflicts than other natural resources. Notwithstanding the difficulty of proving that water has been an important element in major conflict some authors still picture water as future factor of conflict.<sup>8</sup> Recent academic research tends to downplay the role of water as the central element of conflict. Especially international water relations are often identified as a field of cooperation and dialogue.<sup>9</sup>

---

### **Conflicts with Water Components**

As spelled out above the definition of conflict in the study is fairly wide. In the examples given below in connection of the different types of conflict we identify, a small number leads to violence and death. Conflicts with water components, especially in urban settings, usually do not lead to violent deaths. If it was possible to count the number of deaths related to the consequences of lack of access to, or the poor quality of water, numbers would certainly be higher.

An interesting definition of water conflict is found in the *Water Conflict Chronology* by Peter H. Gleick.<sup>10</sup> One of the categories he uses as "basis of conflicts" is "Development dispute". This is a wide category where probably most of the conflicts we are discussing would feature. The

---

<sup>7</sup> Two articles that serve as good introductions to the area and the debate are Gleditsch 1998 and Ross 2004.

<sup>8</sup> e.g. Shiva 2002.

<sup>9</sup> A good example of this view is the large UNESCO project: From Potential Conflict to Co-operation Potential: PC – CP: <http://www.unesco.org/water/wwap/pccp/index.shtml>

<sup>10</sup> Gleick 2004. <http://www.worldwater.org/conflict.htm>.

Discussion on methodology at: <http://www.worldwater.org/conflictIntro.htm>

definition is not very sharp but the list of cases makes for interesting reading.

### **Water as a Conflict Element**

Clear is that water can be an important element in a conflict, as a symbolic or material incompatibility. Granting or denying access to water has also been a common feature of warfare and conflict since pre-history.<sup>11</sup> History has shown that incompatibilities about symbolic issues are as common as competition for material resources. Many observers have recently remarked that the risk of water-related conflict is inversely related to scale, the smaller the setting, the greater the likelihood of conflict.<sup>12</sup> This is commonly referred to as a livelihood conflict; water for livestock or small-scale agriculture is of vital importance for the subsistence of local populations. A majority of reported intra-state conflicts with water elements are of this type.

There is a large body of research and debate around international water and conflict.<sup>13</sup> Most works deal with shared freshwater resources, especially in a river basin perspective.

In the group of intra-state conflict the most researched, and reported, internal conflicts seem to be rural incidents, especially between pastoralists and agriculturalists, or between different pastoral groups. Some of the problems arising on the outskirts of cities, often called peri-urban areas in the literature, often share several of the rural conflict's characteristics. The sources dedicated to urban water conflicts are to a high degree concentrating on the issues of service delivery, such as water pricing, privatisation of water distribution etc.

### **Water Interventions Add Resources and Change Distribution Patterns**

Even though it is difficult to establish causal links between water and conflict, or inversely the lack of such links at this stage of research, there seems to be a consensus on the fact that water interventions can create conflictual situations.

Any developmental project adds resources, and not only of a concrete material kind such as technical solutions, jobs in infrastructure projects, the power of distributing money etc. Power structures may be directly confronted in the project, a quest for equity can be distressing for many parties, gender mainstreaming may upset societal patterns and water demand management may force populations to change their way of living or make it necessary for them to seek other occupations.

As mentioned above the increased flow of resources to the sector may lead to spending demands. Recent Sida commissioned research (Ostrom et al. 2002) has indicated how additional inflow of resources may change programming and planning of developmental projects and lead to "accountability-in-terms-of-people-served" pressure. In a situation when increased resources are going to be distributed it is especially important to take the conflict perspective into account in the planning.

### **Conflict and the Role of the Donor**

It is natural to define conflict as "a conflict of interests". But it is important to consider that conflict also has a relational side. Parties may

---

<sup>11</sup> Ibid.

<sup>12</sup> Wolf, 2002; Ohlsson, 1999; Allan, Nicol, 1998; Baechler et al, 2002.

<sup>13</sup> Bibliographies in e.g. Mohamoda 2003; Tamas 2003; Turton et al 2002.

develop a distrust as part of the escalation of the conflict, or they may distrust each other because of events in the past. Sometimes the distrust is only based on stories of others. The distrust can still be there irrespective of the “truth” of such narratives. This trust side leads to speculations about the “bad intentions” of the other parties and to the inability to understand the position of the others. Lack of open communication about these speculations doesn’t help here either.

As a result of this none-understanding the parties start to play a zero-sum game: I win if you loose. Conflicts often remain stuck in this position, or they turn to worse levels of interaction.

In many cases it is possible to change the attitudes of the actors and transform the context in such a way that it becomes a positive-sum game. Conflict resolution theory deals with proposing and analysing such methods and strategies.

Mancur Olson proposes (Olson 1971) that it is only possible to arrive at a new stage in the conflict if there is one main player. Game theory and economics have had a major influence on this thinking.

As a donor in a (water) project, where a number of actors are involved, you may want to ask yourself: what is the power relationship in this group? Is there one party that could go on its own if it wanted, or do they need each other? If there is such a hegemonic party the option as a donor is to become an advisor and try to steer the parties in the directions of a positive-sum game.

In a situation where there is not one major player that decide the outcome, you may as a donor or donor-community propose to be a facilitator and try to change the attitudes of the parties from a zero-sum game situation to a positive-sum one. You can point the actors at the ineffectiveness of their choices, and the fact that they are opposing each other on the basis of past experience. Inviting them to look 10 years into the future may reveal shared interests. This approach has been used successfully during the shift from apartheid, where scenarios for a future South Africa were made in collaboration between the actors. The transformation of the attitudes of the actors in the scenarios makes positive-sum games possible. (Schwartz 1991)

An example of a situation where such thinking might have proven fruitful was a water project in Indonesia where the people of neighbouring villages simply could not agree on a mechanism to settle their disputes over shared water sources. (World Bank 2005)

### **Does Conflict Breed Conflict?**

An old adage in conflict and peace research sustains that the best indicator of future conflict is past conflict. The situations where water is cited as one of the central grievances in a violent conflict are often situations where a propensity for violent conflict already is present. In the case of the rural conflicts, in many of the areas there is a history of conflict in the relations between different groups. Several of the urban cases where violence erupted have already seen instances of violence. The highly politicised situation in Bolivia, property and rent battles in Kibera in Nairobi, criminality and gang violence in South-African townships etc. To establish causal relationships is of course difficult or impossible. The presence of violence, of any kind one might venture to say, should have a direct impact on the decision and planning of interventions. The present Bolivian situation is an example of how any resource in a highly politicised situation can become a contentious issue and an element in conflict.

### Dynamics and Solutions of conflicts

By concentrating on intra-state issues we do not assert that there is a fundamental difference in the dynamics between international and intra-state conflicts. Different conflicts obviously generate different “manifestations” but it is probably the methods of possible resolution that differ the most between international and intra-state conflict.

In conflicts at the national level it is more likely that there are institutions and legislation that have the means to deal with the conflict. Even if it is not the optimal solution, at least some overarching authority can take charge of the situation. In the transboundary cases this is less obvious considering the lack of international law covering water issues. On the other hand, international issues tend to get more attention and more easily attract both monetary and political support in resolving contentious issues. Most of the existing river basin bodies, e.g. the Mekong commission and the NBI (Nile Basin Initiative), are to a large extent financed by the international community.

#### Box 3: Reported intra-state conflicts with water components

A search on water and clashes/riots etc. in Internet news archives comes up with a variety of cases. Many different types are represented, from the well-known riots in Cochabamba, Bolivia to less publicised strife in Africa and South Asia. Not all of the situations below resulted in violent deaths, but all of them had a clear water component/s. The Mali/Mauritanian incident is obviously also international. Two European examples have been added, not surprisingly from dry Mediterranean areas.

It is safe to say that local water conflict is underreported. One may also suspect that such incidents, as internal conflict in general often go unreported in countries with less free media. To investigate the frequency and dynamics of water related intra-state conflict is an area for future research. In rural areas situations probably have to reach a certain level of conflict (deaths?) before getting picked up by local media and consequently by the international agencies. In urban areas the water component is more difficult to define. The issue of water privatisation (in various forms) is probably the most clear-cut.

---

Athens rubbish dump row hots up <a href="http://news.bbc.co.uk/2/hi/europe/4118776.stm">http://news.bbc.co.uk/2/hi/europe/4118776.stm</a>	BBC News 05-06-22
KENYA: Struggling against drought in Turkana <a href="http://www.irinnews.org/report.asp?ReportID=47464&amp;SelectRegion=East_Africa&amp;SelectCountry=KENYA">http://www.irinnews.org/report.asp?ReportID=47464&amp;SelectRegion=East_Africa&amp;SelectCountry=KENYA</a>	IRIN News 05-06-03
SOUTH AFRICA: Rising pressure on govt to deliver quicker <a href="http://www.irinnews.org/report.asp?reportid=47366&amp;SelectRegion=Southern_Africa&amp;SelectCountry=South_Africa">http://www.irinnews.org/report.asp?reportid=47366&amp;SelectRegion=Southern_Africa&amp;SelectCountry=South_Africa</a>	IRIN News 05-05-27
Thousands flee Kenyan water clash. <a href="http://news.bbc.co.uk/1/hi/world/africa/4201483.stm">http://news.bbc.co.uk/1/hi/world/africa/4201483.stm</a>	BBC News 05-01-24
Herdsmen flee Ethiopia's drought. <a href="http://news.bbc.co.uk/1/hi/world/africa/2607839.stm">http://news.bbc.co.uk/1/hi/world/africa/2607839.stm</a>	BBC News 02-12-26
India: Recriminations flow as Cauvery stops. <a href="http://news.bbc.co.uk/1/hi/world/south_asia/2322387.stm">http://news.bbc.co.uk/1/hi/world/south_asia/2322387.stm</a>	BBC News 02-10-14
Algerians riot over water shortages. <a href="http://news.bbc.co.uk/1/hi/world/middle_east/2127885.stm">http://news.bbc.co.uk/1/hi/world/middle_east/2127885.stm</a>	BBC News 02-07-14
Italy: Torna la guerriglia urbana nella Palermo senz'acqua. (The urban guerrilla is back in Palermo without water) <a href="http://www.r.epubblica.it/online/cronaca/siccipa/torna/torna.html">http://www.r.epubblica.it/online/cronaca/siccipa/torna/torna.html</a>	La Repubblica.it 02-06-04

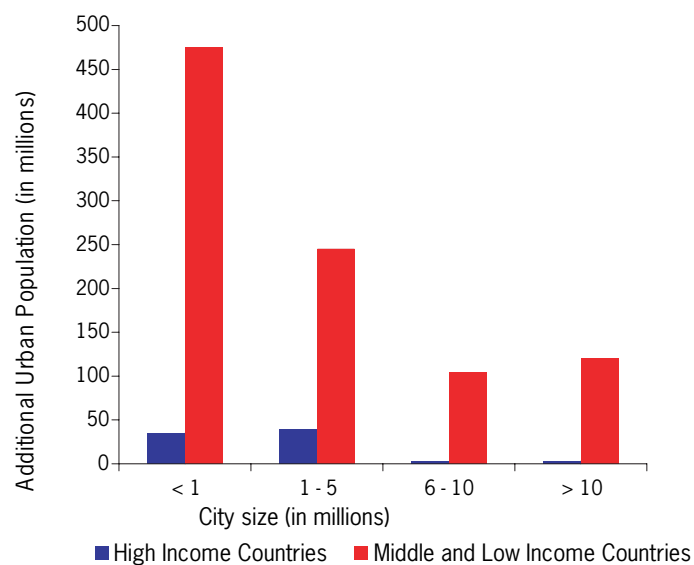
---

Mexican clash kills 26. <a href="http://news.bbc.co.uk/1/hi/world/americas/2021312.stm">http://news.bbc.co.uk/1/hi/world/americas/2021312.stm</a>	BBC News 02-06-02
Fresh land clashes in Kenya. <a href="http://news.bbc.co.uk/1/hi/world/africa/1697529.stm">http://news.bbc.co.uk/1/hi/world/africa/1697529.stm</a>	BBC News 01-12-07
Violence erupts in Bolivia. <a href="http://news.bbc.co.uk/1/hi/world/americas/706770.stm">http://news.bbc.co.uk/1/hi/world/americas/706770.stm</a>	BBC News 00-04-08
Twenty killed in Somalia clashes. <a href="http://news.bbc.co.uk/1/hi/world/africa/685638.stm">http://news.bbc.co.uk/1/hi/world/africa/685638.stm</a>	BBC News 00-03-21
Mali/Mauritanian clashes <a href="http://news.bbc.co.uk/1/hi/world/africa/381558.stm">http://news.bbc.co.uk/1/hi/world/africa/381558.stm</a>	BBC News 99-06-30
Panama riot police clash with students. <a href="http://news.bbc.co.uk/1/hi/world/americas/232123.stm">http://news.bbc.co.uk/1/hi/world/americas/232123.stm</a>	BBC News 98-12-10
Self-immolation by Indian villager highlights water protest <a href="http://news.bbc.co.uk/1/hi/world/south_asia/192408.stm">http://news.bbc.co.uk/1/hi/world/south_asia/192408.stm</a>	BBC News 98-10-13

### Large Versus Smaller Cities

When discussing urban issues the discussion is often slanted towards the big cities and the challenges they face, both in general terms and in the area of water and sanitation. Most of these cities are so far found in Asia and the Americas. Still, research and projections on population growth and urbanisation in middle and low-income countries underline that it is the smaller cities that will grow the most, in number as well as in population. The graph below illustrates the fact that growth will take place in cities of poor countries and especially in their smaller cities and urban centres.

**Figure 2: Projected urbanisation in smaller cities in middle and low-income countries 2000-2030<sup>14</sup>**



<sup>14</sup> World Bank 2003 conference paper <http://www.worldbank.org/data/conference/7a.ppt#4>

### Smaller cities mean different issues?

The number of so-called mega cities is so far low in Africa. Cairo, the Johannesburg Metropolitan area, Lagos and Kinshasa are the only urban areas that could qualify as mega cities. Africa's rate of urbanisation is presently the highest of all continents with an annual growth rate of 4.87%, albeit starting from a low level of urban dwellers; in 1999, 37.3% of the African population was living in urban areas.<sup>15</sup>

Large cities often need to "import" water from afar, thus extending the area for potential conflicts. Some urban water provision schemes are also of a transboundary character, a large-scale example is the Lesotho Highlands Project that furnishes the Johannesburg area with water from Lesotho. Smaller ones as the provision of water to Mutare town in Zimbabwe affects downstream users in Mozambique.

Smaller cities interact and compete with the surrounding agricultural areas for water in different ways than large cities. This creates different kinds of issues when extending and changing the water supply to such cities.

The African cities on the list of the 388 cities with more than one million inhabitants in 2000 underline the relative lack of very large cities on the continent.

**Table 1: African cities with more than one million inhabitants in 2000<sup>16</sup>**

Rank	City, Country	Inh.	Rank	City, Country	Inh.
20	Cairo Egypt	9.462	174	Accra Ghana	1.868
23	Lagos Nigeria	8.665	180	Harare Zimbabwe	1.791
39	Kinshasa DRC	5.054	188	Tripoli Libya	1.733
62	Abidjan Côte d'Ivoire	3.790	202	Lusaka Zambia	1.653
69	Alexandria Egypt	3.506	203	Douala Cameroon	1.642
74	Casablanca Morocco	3.357	208	Rabat Morocco	1.616
95	Johannesburg SA	2.950	212	Antananarivo Madagascar	1.603
97	Capetown SA	2.930	216	Pretoria SA	1.590
101	Algiers Algeria	2.761	220	East Rand South Africa	1.552
103	Khartoum Sudan	2.742	243	Yaoundé Cameroon	1.420
108	Luanda Angola	2.697	284	Brazzaville Congo	1.306
114	Addis Ababa Ethiopia	2.645	302	Conakry Guinea	1.232
128	Durban SA	2.391	307	Kampala Uganda	1.213
138	Nairobi Kenya	2.233	324	Mogadishu Somalia	1.157
147	Dar es Salaam Tanzania	2.115	342	Bamako Mali	1.114
151	Dakar Senegal	2.078	350	Maputo Mozambique	1.094
171	Tunis Tunisia	1.892	388	Port Elizabeth SA	1.006

<sup>15</sup> Statistics from UN-HABITAT, see for instance Urbanization: Facts and Figures at: <http://www.un-habitat.org/mediacentre/backgrounders.asp>

<sup>16</sup> UNESCO 2003. *Water for people, Water for Life. The United Nations World Water Development Report.*



# Typology of Urban Conflicts with Water Components

To talk of strictly urban conflicts in connection with water is to a certain extent an artificial definition. Many of the identified conflicts are in the zone of interaction between cities and countryside. A few cases are also transboundary, especially the water supply of large urban areas.

Some of the issues in towns are of a distinct rural character, like the urban agriculture issues. As discussed above there are also differences between the problems afflicting large and small cities.

The different categories listed below are often overlapping. Nevertheless we believe that a categorisation can serve a purpose by identifying different aspects and serve as a base for further analysis.

## **Types of Urban Conflicts; Causes**

There are different types of conflicts, relating to a few fundamental causes:

- conflicts over a limited resource: the resource is already used by one or more parties, and the growing urban use reduces or makes such use impossible
- conflicts over the control of the distribution: controlling water means (economic) power, here we find for instance the conflicts on water privatisation vs. publicly owned water companies
- conflicts over the quality of the resource: by discharging wastewater or industrial/process waste on land or in a downstream river the use of such areas can be seriously impaired, groundwater can be polluted or salinated

It is important to recognise that “limited” does not have to mean that the resource is scarce, only that there is competition or an “incompatibility” over the use of the resource.

## **Limited Resources Conflicts**

### **Inter-Catchment Conflict**

Water from one catchment is transferred to another. In the case of growing cities this can be seen in many cases. Typical examples are Dakar, Mutare and Kathmandu. Mutare and many other cases (e.g. the Lesotho Highlands project) are clearly transboundary, i.e. affecting actors in more than one country. The people in the catchment where

water is extracted is typically not compensated for the loss of their resource which leads to grievances and conflicts.

*Dakar (Senegal); High quality water is brought from the Lac de Guiers to the town through 200 km a canal. The original supply is no longer able to cover the demand of the rapidly increasing population. The city aquifer is suffering from salt-water intrusion and is polluted by pit latrines. The result is a number of conflicts. One serious problem is the grievances of the people living along the canal. They want to be able to use a part of the water.*

### **Economic Sector Conflict**

In many cases several economic sectors are competing for the same resource. The commercial, large-scale agricultural sector often has problems with the industrial sector, commercial forestry or urban development. Water demand management has been proposed as one of the key solutions to such competition. As we note in the projects reviews water demand management is rarely used in situations of economic sector conflict. There are also often conflicts between large-scale agriculture and smaller farmers.

### **Rural – Urban Conflicts**

Typical rural – urban conflicts occur when a town is extending and starts consuming more of the water in its surroundings. The people living in the town develop their water supply by drilling shallow wells and deep wells, resulting in a dropping water table. Sources around the town are developed either for piped supply, or are used for loading tankers.

Varieties of rural – urban conflicts are probably among the most frequent water related conflicts. These are often similar to the livelihood conflicts that generate serious violence in rural areas.

*Chennai (India); Like in many urban centres in the South the old colonial water distribution system is slowly falling apart for lack of maintenance and investment. It is not able to service a population that is ten times bigger than what the system was designed for. The first stop-gap solution was to use the aquifer under the city, but this turned salty quickly, the town being on the coast. This only left the water from the surrounding area for supplying the population. The water company started extracting water from the surrounding countryside. Although the extraction was illegal, the farmers trying to block them were arrested.*

*There was another major conflict in the same area because farmers tried to stop the selling of water from their village. In this case some local land-owners were selling to water vendors (tankers) because that was bringing them more income than using it for agriculture. A typical “tragedy of the commons” situation.*

*Amman (Jordan); The fast growth of the city leads to substantial shortages and diversion from agricultural to urban use. It is the official policy of the Jordanian government to shift water from rural irrigation to the city. The surrounding rural population’s livelihood is affected and they have to seek other means of income.*

### **Distribution Control Conflicts**

The discussion on service delivery and privatisation of water has spread far outside the water community and has become one of the emblematic discussions in the globalisation debate. Many of the issues discussed are not specifically geared to water and touch large quandaries on the

relations between both First and Third World and the internal conditions of each country. Political mobilisation has made service delivery issue the most violence prone of all contemporary urban water issues.

It should be recognised that conflicts around the distribution of water can have other actors than the public or private water companies, such as local water vendors and community based organisations in the Nairobi case reviewed below.

### **Unequal distribution conflicts**

In certain cases municipalities use the public water system to generate income without making necessary investments or maintenance. (Gumbo, Van der Zaag 2001; UN-HABITAT, 2003) Parts of the population are not served by the water companies (public or private) and they will have to get water through other means. There can be a large market in the non-piped areas, where the right to sell water can be either distributed through corrupted or criminal practices, or “spontaneously” filled by individual water entrepreneurs. Shortages, with often large seasonal variations, create a complex market creating opportunities for private water vendors or community based organisations.

Different social classes in an urban area usually have different types of access to water and sanitation. This may sometimes lead to open threats or conflict.

*See Maja-na-Ufanisi project review.*

*Nairobi (Kenya); A slum area had a large water duct through the area to supply the richer parts of the city. Local people threatened to blast the pipe if no water was delivered to them too. The poor areas get water from vendors at a (much) higher price per litre than the rich areas are paying.*

### **Privatisation conflicts**

Among the most publicised conflicts of any kind in urban areas have been the privatisation conflicts which to a large extent are connected to the issue of unequal distribution. These conflicts have the same basic ingredients all over the world. Private companies are contracted to manage and deliver water in predominately urban areas. It is very seldom a question of actually privatising neither the supply nor the infrastructure. The companies are given long leases where they are bound to maintain and expand infrastructure and deliver water. These contracts are structured in various ways, such as service, management, lease, and concessionaire contracts.

Companies operate and sometimes improve the water system, but also formalize the water market. In some cases this might lead to additional exclusion of poor people. These groups might not have been served by the former water utilities but could anyway often get access to water by “informal” connections. (ActionAid 2004) Another often made objection is that the projects tend to not deal with water provision in the poorest areas, thus the situation of the poorest inhabitants remains more or less unchanged.

There are abundant sources on the results and consequences of PSP (private sector participation) projects but it is nevertheless difficult to draw conclusions. What is safe to say is that such projects generate conflicts in a manner that is unprecedented in the water sector.

#### Box 4: Principles for privatisation

---

In a review of water privatisation, Meena Palaniappan, Peter H. Gleick, Catherine Hunt and Veena Srinivasan (Palaniappan et al., 2004) suggest an elaboration of three principles they consider essential for any privatisation of a public water supply:

---

##### **Manage water as a social good**

Meet basic human needs for water. All residents in a service area should be guaranteed a basic water quantity under any privatization agreement

Meet basic ecosystem needs for water. Natural ecosystems should be guaranteed a basic water requirement under any privatization agreement

The basic water requirement for users should be provided at subsidized rates when necessary for reasons of poverty

---

##### **Use sound economics in Water Management**

Water and water services should be provided at fair and reasonable rates

Whenever possible, link proposed rate increases with agreed-upon improvements in service

Subsidies, if necessary, should be economically and socially sound

Private companies should be required to demonstrate that new water supply projects are less expensive than projects to improve water conservation and water-use efficiency before they are permitted to invest and raise water rates to repay the investment

---

##### **Maintain strong government regulation and public oversight**

Governments should retain or establish public ownership or control of water sources

Public agencies and water service providers should monitor water quality. Governments should define and enforce water quality laws

Contracts that specify the responsibility of each partner are a prerequisite for the success of any privatization

Clear dispute resolution procedures should be developed prior to privatization

Independent technical assistance and contract review should be standard

Decision making in the water sector should be open, transparent, and include all affected stakeholders. Negotiations over privatization contracts should be open, transparent, and include all affected stakeholders

---

## Quality Conflicts

Conflict can also arise because of pollution. Most of these cases concern sanitation rather than water supply. The disposal of wastewater generates substantial problems not only in the Third World. Water supply tends to generate more conflicts in poor countries, while conflicts on pollution are more common in richer and environmentally conscious countries.

*Khartoum (Sudan); The large city of Khartoum, including its twin city Umdurman, has hardly any proper sanitation. The public water supply is used for both domestic use and industrial use, with no clear distinction between them. This leads to uncontrollable shortages. The alternative of groundwater is obviously dangerous because of the absence of sanitation. The aquifer is also threatened by the discharge of industrial wastewater in soak pits.*

*Athens (Greece); Riots broke out when local populations didn't accept the dumping of sewerage sludge in their neighbourhood.*

*Illinois (USA); The Illinois River originates in Arkansas and flows into Oklahoma where it forms the Lake Tenkiller reservoir and then empties into the Arkansas River. It is designated by the State of Oklahoma as a scenic river. A dispute between the states over water quality in the Illinois River reached the U.S. Supreme Court, who ruled that downstream state's water quality laws must be met at the state line. This decision has far-reaching*

*implications for interstate water quality disputes. The Illinois River watershed in Arkansas is a leader in poultry production and includes one of the fastest growing metropolitan areas in the United States. (Soerens 2003)*

### **Urban agriculture may generate conflict**

Practically everywhere agriculture continues while the town is growing. People with a farming background move to town and bring their capacity to farm. Farms are also being incorporated as a result of the town spreading. This can turn the piped water supply into an irrigation system (for example in Harare and Dar es Salaam), a task for which it was obviously not designed.

Urban agriculture is a fairly recent research subject. It is being promoted as one of the ways to solve part of the sustainability questions surrounding the development of large cities.<sup>17</sup> It can be a very effective way to process wastewater while producing food. The downside of this is also clear: a whole range of pathogens can be spread through the urban population very fast. In the case of Dar es Salaam where 90% of the leafy vegetables sold on the markets are produced in the town, this poses a major risk to public health. (Mwalukasa 2000) A question is also whether it is a good idea to support irrigated subsistence farming in urban areas where water possibly could be directed to other more growth generating economic sectors.

*Harare (Zimbabwe); Because of the disruption of the rural agriculture, there is a lack of agricultural products being brought to town. This has led to the development of a urban and peri-urban agriculture in the city. Piped water supply is being used for irrigating this, leading to major disturbances in the distribution and affecting users that need water for household consumption and other economic activities.*

---

<sup>17</sup> [www.ruaf.org](http://www.ruaf.org)

# Project Review

The objective of the project review is to highlight how Sida has worked in urban settings with water issues, and specifically in connection with conflict. The Sida portfolio of projects with urban water components in Africa is small and the projects we have looked are the ones we thought could be of interest considering future interventions. The chosen projects are quite different one from another; this was also our intention. Out of the reviewed projects the Maji-na-Ufanisi project is the only one which was solely administrated by Sida. Therefore the attention in the description has been put on the Sida management of the project, and few external references have been introduced. In the other cases several other agencies, both national and multilateral have been involved, and the descriptions are thus of a different kind. The structure of the reviews has some common traits but the same headings are not always repeated, in accordance to the diverse components of the projects.

## **Criteria for Selection of Projects**

The projects we selected should be:

- projects supported by Sida, either as lead agency or as a partner or financial supporter
- in urban water supply/sanitation
- with some occurrence of conflict, according to our above definition

## **General Observations on the Project Review**

We analyse the projects in accordance with the “conflict-triangle” presented in the *Definition of Conflict* chapter. We also try to provide some background information. The historical and physical/geographical conditions are essential to understand the context of the projects. As noted above a history of conflicts in the area of the intervention may influence the outcome of present and future projects.

## **Review and Not Evaluation**

The brief descriptions of the projects do not in any sense represent the entirety of the individual projects. Many of the projects have extensive goals and many components that are not taken into consideration. We have only given accounts of the particulars of interest in the conflict perspective. It is not an evaluation of projects, even in the case when

we highlight problems within a certain project, one might consider the project all in all successful even if certain components did not reach the objectives.

**Anonymity etc.**

We have chosen not to give any names of informants or people engaged in the projects except for when it comes to third party actors, such as evaluators etc. Names of persons that have signed clearly “official” documents are sometimes given. The discussion in this study is not one of responsibility or guilt, but rather of structural issues and how to address these. Possible contradictions existing between information from various actors, both given orally and in documents have mostly been left uncommented.

# Maji-na-Ufanisi Nairobi, Kenya

Sida Project 1998–00600

## **Introduction**

Maji na Ufanisi (Water and development) is the name of a NGO working in Kenya. Sida decided to support the organisation's projects in the slums of Nairobi. The project had several goals, establishing water selling points, the building of latrines and sanitation in connection with these, mobilisation of community based organisations (CBO) to manage the infrastructure etc. This was part of a series of pilot programs that Sida got involved in during the late nineties. At this particular moment (May 2005) Sida has cancelled payments to Maji-na-Ufanisi (MnU) because of internal turbulence and lack of management at MnU. There are doubts that the organisation still exists and there is a current court case concerning the infighting between different groups of the organisation. The alleged reason for this was the departure of the director for a job as an international civil servant.

## **Conflict**

Information gained in conversation with Sida employee 2005–04–27.

The institution of water vending points had the goals of lowering prices; ameliorate water quality by using the municipal supply and securing the availability of water for purchase. The private water vendors, generally individuals who by their own initiative had spotted a market niche, are not always present and cannot be depended upon for a steady supply of water.

The pricing of water by the private water vendors was considerably higher than MnU's price. Water is generally sold in 20 and 5 litre jerry-cans. A few days after the MnU supported CBO had started one of the selling points it was burnt down. There was also some commotion around the selling points, allegedly no one died in these incidents.

Informal negotiations started between MnU and private water vendors. No one of course admitted to the arson and it is difficult to know to what extent the water vendors are organised. Common consensus seems to be that they do not belong to any organised criminal network.

A compromise price was agreed upon as the selling price of the water selling posts. This meant that the revenues of MnU rose considerably above the actual cost recovery level planned in the project setup. This extra money was supposed to be used for the construction of additional communal showers and latrines.



## Conflict analysis issue

<b>Conflict</b>	Water selling “rights” in informal settlements
<b>Actors</b>	Water vendors, MnU, CBOs, Nairobi city Council, Sida etc.
<b>Incompatibilities</b>	Managing the resource: Market for drinking water, distribution “rights”
<b>Dynamics</b>	Arson, rioting, informal negotiations

## Background of the Project and Review of the Project Documentation

During the mid nineties Sida got more and more aware of urban issues in general and tried, at least at a management level to direct more attention to urban issues. One of the first traces of this direction is found in Sida (1995) *Towards an Urban World. Urbanization and Development Assistance*. This document is sometimes referred to in later documentation. In 1996 a protocol was issued to all personnel (*Sida (1996) I stället för protokoll 16:96. Verksledningens möte den 17 september 1996. 1. Sidas arbete med urbana insatser.*) This protocol led to a decision explained in a memorandum to the general director by Göran Tannerfeldt “*Sida 1997–08–30 Promemoria. Särskilda medel för urban programutveckling.*”, the then head of Sida INEC’s division for Urban Development and Environment. In this paper funds are committed to so called “program development”. This means in this case funding of projects where Sida could learn and try methodologies to develop its own competencies and policies in cooperation with organisations/institutions in the receiving countries. 15 million SEK were dedicated during a three-year period (*Decision Gd 137/97*).

Some criteria for selection of projects listed in this document are:

- a good test case to try executing organisations and receiving capacity
- should lead to increased knowledge and better contacts with actors in the respective sector
- follow INEC priorities and goals etc.
- be limited in time and extension
- build on existing institutions and organisations
- in need of moderate administrative efforts from Sida and the embassy
- be sensible and show tangible results
- has a thought-through plan for how results shall be given account for and appraised

## First Stage of Project

Contacts were already established with various local NGOs and Maji-na-Ufanisi was selected as a viable partner working in the slums of Nairobi. After a considerable amount of negotiation (for references see files concerning project 1998–00600 in the Sida INEC archive) a decision (*Decision INEC 485/98*) was taken to contribute to MnU with 2.46 MSEK during 1998–1999.

From early on it is obvious that the project has various problems, but obviously nothing alarming enough to step on the breaks. The project had very wide goals but some of the material objectives are initially achieved, building of latrines, installation of water posts etc.

When reviewing the project documentation there are some warning signals at an early stage. In the “*Sida report #2, October 1998 – January 1999*” submitted by MnU there are e.g. mentions of stolen and misappropriated funds and a resulting court case. There are also indications of

that the management of the water selling points create problems; economical and “power wrangles and conflicts”. The economical reporting also indicates that there are no clear ideas about how to deal with pricing, unaccounted for water etc.

These issues are highlighted further in the “*Final Report on Sida Support of Maji Na Ufanisi’s “Nairobi Slum Programme. Period covers July 1998 to March 2000”*” page 5: “The water losses at the selling points has (sic) increased tremendously. The unaccounted for water stands at 15%. The sellers are misappropriating money at the water points. [...] The various controls in place to regulate the project finances are flouted by the CBO’s management.”

## Evaluation

An independent evaluation by a local consultant, Mr. Boro Gathuo also raises several concerns in his “*Nairobi Slums Development Project. Final Evaluation Report. March 6, 2000*”. A few of these concerns are: p. 2 “The project proposal submitted by MnU and funded by Sida was grossly flawed. Changes were made to the original proposal on areas and population to be served but they were not reflected in the modified proposal that was funded by Sida.” p. 3 ff “Both Sida and MnU made very limited attempts to reach out to other stakeholders for consulting and networking. [...] Similarly, there exists an NGO coordination committee in Kibera. MnU is not an active participant.” p. 3: “However, the available capacity in MnU is not adequate to plan, design and supervise project implementation. Similarly, Sida does not have adequate in-house capacity for project appraisal and monitoring.”

On page 18 Mr. Gathuo discussed the pricing of water and the issues of corruption in the water selling business. The profits are according to the evaluation used to buy plots that the CBO rent to create additional income and not invested in the development of further water and sanitation infrastructure.

In a letter, 2002–03–29, accompanying the delivery of the evaluation Mr Gathuo notes: “Overall, MnU displayed hostile and confrontational attitudes towards the whole evaluation process. MnU just did not want to be evaluated by an independent consultant.” It should though be noted that Mr Gathuo is recommending Sida to both continue and raise the level of the support to the project on the basis of the dire needs of the population of the Nairobi slums. He is also calling for tighter control and more supervision and involvement by Sida in the project.

The issues raised in the evaluation and by local embassy representatives are discussed in printouts of extant e-mail correspondence in the project files. There seem to be some consensus that MnU does not qualify for the extended support, above already decided amounts, and this is made clear to them. Support according to budget/plan is nevertheless is forwarded (*Decision URB/522 of 2000–07–06*).

Several Sida employees discuss and question the project and the actions of the management of MnU but this does not seem to leave any traces in the actual decisions taken in relation to the budget. What is repeatedly asked of MnU is to adjust plans and proposals to recent experiences.

## Second Round of Financing

A new proposal for support is submitted by MnU in February 2002 “*Improved and Sustainable WSS Service Delivery Through Enhanced Partnerships Amongst Consumer Groups, CBOs and the Private Sector Entities in Kibera Slums and Kangemi Peri-Urban Settlements.*”

This proposal is discussed in “*Assessment Memo 2002–11–12*”. In this memo one of the very few explicit mentions of conflict is found, p. 3:

“Private water vendors are common in the slums. Most of them are illegal. Where CBO’s have constructed new selling points and taken over the management, conflicts have arisen between the newly established CBO’s and the present vendors of water. Negotiations have recently been taking place between the two parties and resulted in the CBO’s agreeing to a small increase of the present price in order to level out the difference. Despite the measures taken, this is a possible conflict area, which could pose a risk for the programme.”

The memo recommends: “to financially contribute to the project with 7.1 MSEK” This is formalised in the “*Decision INEC Urban 767 of 2002–11–16*”.

The last item in Sida’s project files is the “*Progress report for the period January to December 2003*” submitted by MnU 2004–02–06. There are no mentions of conflicts in this report.

## **Conclusion**

Could the conflict have been prevented? As touched upon above it is easy to judge with hindsight and to sustain that it probably could have been prevented. A more nuanced answer is that the warning signs in the documentation, and without doubt even more so facts that most likely were transmitted during informal information exchange, should have led to some sort of support to MnU in dealing with issues that were outside of its competence. There is from the beginning several signals that they do not manage to control the finances and cost of the CBOs they “contract” to run the water selling points. Without entering the discussion whether MnU was negligent or not, it should probably be clear, at least after the 2000 evaluation, that monitoring and support was needed. Whether such support would have avoided the conflict between the private water vendors and the selling points is of course difficult to say. That MnU did not have clear ideas about pricing, financial management and actual handling of money is apparent from the project documentation. Such knowledge may possibly have avoided the confrontation with the private vendors.

The complexity of these issues should not be undervalued; there are for instance seasonal variations in the water supply, which makes the prices of water fluctuate considerably. A general conclusion is that the skills needed for commercial ventures, probably the right way to classify the water selling component of the MnU project, are essentially different from the capacities needed in other parts of the project and must be regarded as such in the planning.

## **References to Sida Policies and Other Documents**

Few references to Sida policy documents can be found in the documentation. In the inception phase there are references to a few basic “urban documents”, during the execution phase most references are to project internal documentation.

The “*Promemoria 1997–08–30*” referred to above and mentioned in the decision on funding of MnU (*Inec 485/98*) could probably be considered a steering/policy document. One of the criteria for the selection of projects is that the projects should require moderate administration by Sida and the embassies. In retrospect it is possible to assert that developing new knowledge and experiences, for all the projects actors, probably needs a higher level of monitoring and supervision than specified in the

memorandum. MnU are also aware of the difficulties of managing projects of the kind they are proposing, this is made clear by a document attached to the Oct 1998 – Jan 1998 report: “*Why is effective community management difficult to achieve in Nairobi Slums?*”

### **Typology**

The conflict is probably closest to the distribution control type. In this case the actors are not municipality/private company vs. communities but water actors such as a CBO (that though has some kind of formal status with registration and statutes) and a group of informal private entrepreneurs. Water vendors are found throughout the Third World, and they are part of life for poor communities. The initiative of MnU was born out of the incapacity of the Nairobi City Council to provide basic services in the informal settlements.

# Mutare Water Supply, Zimbabwe

Sida Project 1995–0027

## Introduction

The situation in Mutare is a studied case, it has been the subject of the work of various researchers. They have studied several aspects of how the water supply issues have been handled during both the planning and execution of the project. The work of van der Zaag, (Gumbo 2001; Swatuk 2003) together with other authors provides much information and analysis on both the technical and the socio-political aspects of the water supply in Mutare.

During the nineties a severe drought struck Zimbabwe. The city of Mutare was forced to reduce its water consumption using extreme measures. After the drought, there was a strong pressure to create a secure water supply, avoiding this type of shortage in the future. The city, with the help of a Swedish engineering company, developed a plan that would lead water from the Pungwe River to the city. The advantages of the plan were many: the water from the planned intake was clean, much cleaner than the present source, allowing it to be distributed almost without any treatment. This would reduce production costs. The water could be brought to the treatment station under gravitation, thus avoiding pumping costs. The city would have control over the resource, as there are no other users involved in managing it. The alternative sources would not have these advantages. The other sources would be dams, from where the water would have to be pumped, it would be less clean, and the quantity would have to be shared with other users in case of drought. In the case of the dams the deciding body would have Mutare as a member among others. In addition the financial conditions were very favourable for the city: the state would offer loans at an interest-rate lower than the inflation.

## Observations

The water situation in Mutare is particularly bad because of high levels of unaccounted for water. They are around 50% in the low-density areas, and “much worse” in the high-density suburbs (Gumbo 2001; Swatuk 2003). One source mentions “90%” for the shantytown of Sakubva (Mukheli 2001). These levels were not considered in the economic appraisal of the project, instead 20% of unaccounted for was used in the calculations.

One source claims: “*No questions were raised regarding the demand-side of Mutare’s water problems. If the city’s water need would be based on, say, half the*

*unrestricted demand (still 50% more than the consumption during the year of the great drought), the existing system would suffice until the year 2010. If all efforts would be directed to reduce system losses/unaccounted-for water, consumption could either increase to more acceptable levels, or new supplies could be postponed even further. Was it known how much the system losses were? These questions were ignored.”* (Gumbo 2001)

There is an awareness regarding the type of industry already present in the city (Sida, beslut, 96–07–04) but that does not lead to suggestions for Water Demand Management (WDM) in these industries, something that is completely normal in similar industries in the rest of the world. The presence of industry is used as an argument for increasing the water supply.

There was an Environmental Impact Assessment (EIA) conducted, focussing on the consequences for downstream users, including the consequences in Mozambique, and looking at the effects of constructing the intake and the pipe. But it did not look at the consequences of transferring extra water to Mutare, including the hygienic effects. The water from the Pungwe was used to reduce the costs of the production of water, not really to add to the capacity.

The distribution in the town remains extremely weak, with very frequent pipe-bursts (2,4 burst per day in the first half of 2000). Out of these 36% occurred in Dangamvura, a “high density area”. This is explained by officials as a result of the low grade material used when building the reticulation system (Gumbo 2001).

A particular case is the situation of the so-called “high density suburbs”. The most well known is the borough of Sakubva. The situation in this part of Greater Mutare is particularly problematic. A combination of unclear ownership, overpopulation, inefficient water infrastructure and sanitation create an increasing level of problems. One author concludes that the Pungwe Scheme has not been a solution for the water issues in Sakubva (Mukheli 2001). Another author concludes that the water issues in Sakubva “are testimony to the heightened levels of insecurity felt by the poor in Zimbabwe” (Swatuk 2003). Continuously running water creates pools, which are a source for water born diseases and vectors. The suburb is also an important voters base. Local politicians are extremely reluctant to take measures that will alienate the voters, leading to only short-term solutions that do not solve the problems (Mukheli 2001).

## Conflicts

There are authors arguing that the issue discussed in the case of Mutare should not “conflict” but rather the concept of “security”. Whatever the wording, there are a number of “frictions” and “problems” as a result of the implemented system.

<b>Conflict</b>	Destruction of natural habitat
<b>Actors</b>	Mutare water company, conservation activists, donors
<b>Incompatibilities</b>	Use of the resource: The water comes from a natural park. Construction and operation could lead to destruction of the park, destruction of habitats for some rare species of fish living there
<b>Dynamics</b>	The funder (Sida) pushed for an EIA and measures to prevent any damage.

<b>Conflict</b>	Less water for downstream farmers
<b>Actors</b>	Mutare water company, conservation activists, donor
<b>Incompatibilities</b>	Use of the resource: The water is used by farmers in Zimbabwe in the Honde Valley, downstream of the intake
<b>Dynamics</b>	There were protests from farmers claiming that their access to water was threatened. A part of the EIA was looking at it, claiming that their resource would not be affected.
<b>Conflict</b>	Competition for water with Beira
<b>Actors</b>	Government of Zimbabwe, Government of Mozambique
<b>Incompatibilities</b>	Use of the resource: The water is used in Mozambique, particularly in Beira. The part of this water deducted to Mutare (0.7 m <sup>3</sup> /s) is a very small part of the total, but during the dry season the amount can still be considerable. It is during the dry period that Beira is suffering from salt intrusion in the river. An additional planned development of the city will further aggravate this situation.
<b>Dynamics</b>	The planned construction led first to protests from Mozambique. A technical solution was developed for maintaining a base-flow. A cooperation agreement was developed for jointly studying the Pungwe River.
<b>Conflict</b>	Conflict over pre-intervention resource rights
<b>Actors</b>	Government of Zimbabwe, Government of Mozambique
<b>Incompatibilities</b>	Management of the resource: The city of Mutare is not willing to talk about its rights for using water from the Alexander and Smallbridge dams. These could be used for improving the situation of rural people, but Mutare claims that the dams are backup sources for the city. As a result these dams are little more than evaporation pans (Swatuk, 2003)
<b>Dynamics</b>	The city is not participating in any of the institutional structures created for managing water resources of the Save River catchment and the sub-catchments of Odzi and Pungwe. This reluctance is creating tensions with the rural populations close to the city. The Pungwe scheme has strengthened the position of the city.
<b>Conflict</b>	Conflict over water pricing for poor suburbs
<b>Actors</b>	Local politicians, action groups in suburbs
<b>Incompatibilities</b>	Management of the resource: There is a threat to the provision of water for the "high density suburbs". There have been proposals to deal with the present high level of unaccounted for by a combination of punitive and cost-based measures. This will affect the livelihoods of the most disadvantaged residents of Greater Mutare (Swatuk, 2003)
<b>Dynamics</b>	Local politicians are afraid to take measures that will scare voters, because the population in the suburbs has decisive voting power. The mayor lives in one of these suburbs, NGOs protesting are lead by a white person, this fact has been turned into a racial issue.

<b>Conflict</b>	Conflict over investing in water for Mutare through subsidised government loans
<b>Actors</b>	Local politicians, (National politicians), national NGO's
<b>Incompatibilities</b>	The investments were financed through subsidised loans from Zimbabwe's Government. A conflict between the Mutare water users and the rest of the taxpayers in Zimbabwe, i.e. a transfer of resources from ordinary Zimbabweans to the Mutare inhabitants may be perceived. Because of the large capacity of good quality water the city can maintain low water prices by not investing in the distribution, even though the losses are high.
<b>Dynamics</b>	The project leads to very critical analysis by people outside Mutare (Robinson, 2002).

### Positive Effects

It has also been argued that the Pungwe-Mutare water system is an example of regional peacemaking: the intake at Pungwe is limited, leaving a secure base-flow of 0.5 m<sup>3</sup>/s. In addition there can be no more than 0.7 m<sup>3</sup>/s taken out of the river in case of a larger discharge than 1.2 m<sup>3</sup>/s.

### References to Sida Tools

In the preparation of the project an EIA was made. This EIA focussed on the construction phase (disturbances from the building sites, waste handling etc.) and the consequences of the scheme once completed regarding the downstream uses of the source. The EIA did not take into consideration the effect of the water being transferred to the Mutare region, such as additional wastewater to be treated.

The project was criticised because it did not include an evaluation of the present water-governance in Mutare, nor did it look at the technical status of the distribution network. Those analysing the distribution argue that the large investment made in the project was unnecessary at this stage if the distribution would have been improved.

### Conclusions

The key conflicts resulting from use of the source, the issue of sharing the water with Mozambique were identified and dealt with. The result was a creative solution for the intake of the Pungwe-pipe that ensures a base-flow for downstream users. In addition the maximum intake for the pipe bringing water to Mutare is limited to 0.7 m<sup>3</sup>/s. The system resulted in an easier water system from a financial point of view: no pumping of raw water, no treatment needed. By not investing in the distribution, the government can maintain low prices (combined with extremely high losses) and thus perpetuating problems locally at the cost of the general public in Zimbabwe due to the subsidised loans



# Melamchi Valley Water Transfer Scheme, Nepal

## Sida Project INEC-1996–0704

### **Introduction**

The city of Kathmandu has traditional water sources that are ancient. The oldest of these so-called dhunge dhara dates from 554 A.D. The piped water supply is of a more recent date. Its construction was started some one hundred years ago to provide the royal gardens with water. This system has been extended to its present status. According to a number of authors, the system is in a very bad condition. Leakages may be over 70%. To supply the city of Kathmandu in the future, something needed to be done.

Nepal is among the poorest countries in the world. Almost half of the population is unemployed parts of the year, and more than half of the population lives below the poverty line. The government spends three times more on fighting the so-called Maoist rebels than it spends on education. Adult literacy rates in 2002 (most recent figures available) are 26% for women and 62% for men.<sup>18</sup>

### **Description of the Project**

In this description we are only looking at the project itself and the resulting conflicts, we are taking into consideration the political conflict situation that is surrounding the project. The Government of Nepal is implementing the Melamchi Water Supply Project with assistance from the Asian Development Bank, NORAD, Sida, the Japan Bank of International Cooperation, the OPEC Fund and the Nordic Development Fund. The project aims to overcome the deficient water supply in Kathmandu. The dry season water demand in the urban areas of Kathmandu Valley, with an estimated population of 1.1 million, is about 180 million litres per day (mld). The supply capacity of the existing systems in the wet months is about 120 mld, which is reduced to only about 80 mld in the dry season.

In the first stage of the project 170 mld of water will be added to the daily supply of Kathmandu Valley from the Melamchi River. Subsequently 170 mld will be further added from the Yangri and Larke rivers thus supplying 510 mld of water to the valley.

The Project is divided into five major components: Melamchi Diversion Scheme, Water Treatment Plant, Bulk Distribution System, Distribution Network Improvement and Wastewater Management. The diversion

---

<sup>18</sup> <http://devdata.worldbank.org/dataonline/>

scheme mainly consists of a diversion weir to be constructed in the Melamchi River to divert the flow and a 26.5 km long water transmission tunnel to deliver the water to the Water Treatment Plant at Sundarijal.

Water will be treated in a conventional type treatment plant built at Mahankal in Sundarijal Village Development Committee (VDC) district in Kathmandu.

For distribution of water, several distribution reservoirs will be constructed at strategically high points around the valley rim. Ductile iron pipes of 300 mm to 1,400 mm diameter will be laid to carry the water to these reservoirs from the water treatment plant.

The existing distribution network inside Kathmandu Valley will be rehabilitated and expanded. The main objective of this component is to attain an equitable distribution of the water supply, reduction of leakage and prevention against contamination during distribution.

The Wastewater Management component includes rehabilitation of existing treatment plants and a portion of the sewer system, construction of some additional interceptors and construction of a sewage treatment plant.

The project also includes a social and environmental component to be undertaken in the 14 affected VDCs of the Melamchi Valley. The program includes activities related to (i) income generation (ii) health (iii) education (iv) buffer zone management and (v) rural electrification (Moench 2003).

Sida is together with NORAD involved in the construction of the tunnel and in the environmental monitoring.

## Observations

The present system has estimated losses of over 70% (Moench 2003). The leaked water flows into the upper aquifer that is also polluted by discharges from septic tanks and industries. There is no groundwater regulation, although groundwater provides a major part of the city's water, especially to the sources that are mostly used by the poor.

There is a continuous opposition since the project was proposed. Water demand management and sanitation were not seriously considered. There has been no attempt to include rainwater harvesting in the Kathmandu Valley (Moench 2003).

The project is suffering delays as a result of Maoist rebel activity. In February 2005 a new contractor from China was hired to finish the work on the access road to the Melamchi end of the tunnel. The earlier contractor from Korea had stopped the work because of attacks by the rebel movement.

There are questions about the technical feasibility of the program, in particular about the tunnel that has to be drilled in a piece of Himalaya that is not very stable.

## Conflicts

<b>Conflict</b>	Downstream water rights
<b>Actors</b>	Nepal Government, Nepal water supply corporation (NWSC), Melamchi Water Supply Project, Donor consortium, NGOs
<b>Incompatibilities</b>	Use of the resource: There are disputes about downstream water rights of the Melamchi River. The problems regard farming, land and indigenous fishery. Many of these rights are not formally written down as they are based on traditional systems.
<b>Dynamics</b>	Protests and petitions are being presented to the main donor, the ADB and its special facilitator.

<b>Conflict</b>	Water pricing
<b>Actors</b>	Nepal Government, Nepal water supply corporation (NWSC), Melamchi Water Supply Project, Donor consortium, NGOs
<b>Incompatibilities</b>	<p>Management of the resource: The water-company in Kathmandu is weak. One interviewee observed: <i>“The water is dumped in a non-existing institutional structure. The potential for a planned shift to a commercial water distribution organization does not look good: without a proper distribution and supply to all parts of the communities this looks like an explosive recipe.”</i></p> <p>There is a major dispute about the financial basis of the program. Research in the Kathmandu Valley showed a positive attitude towards private operators and a willingness to pay much higher prices than had been previously supposed (Whittington, 2002). But an economic appraisal of the whole project produces an uncertain picture: many disparate conditions must be fulfilled to make the project financially sound in the end. A major prerequisite is a steadily growing Nepalese economy. To achieve such a steady growth, water is a key factor. A chicken and egg situation, where one author suggests that the donors should take a bet on the water system, a bet that investors in large infrastructure always have to take (Whittington, 2004).</p>
<b>Dynamics</b>	There is major opposition to the project, including the announced tariffs. The NGOs try to get into a debate with the other actors.
<b>Conflict analysis issue</b>	Insufficient sanitation
<b>Actors</b>	Kathmandu Metropolitan City Municipality (water & sewerage section and environment section), local NGOs, Melamchi Water Supply Project, Donors
<b>Incompatibilities</b>	<p>Quality of other resources: There is no sanitation of adequate size in the present project. In addition to that, there is only one real wastewater plant in function in Kathmandu serving 15% of the population. As a consequence a major amount of water, the size of a small river, is turned into wastewater. This seeps into the groundwater, flows to lower areas of the city and is discharged in the already polluted rivers running through Kathmandu, thus creating more problematic conditions for those using this water in other parts of the city and downstream. Water of the two rivers, Bagmati and Bishnumati, once considered as pure and sacred, is now highly contaminated and polluted. The newspapers in Kathmandu report on the pollution of the traditional water sources, which have levels of ammonia exceeding WHO standards by factor 50.</p>
<b>Dynamics</b>	Constant attempts from NGOs to put attention to the problems. From the project budget only 2.1% goes to sanitation measures.

## **Conclusions**

The conflicts in the project have been addressed in the planning stage. The question is whether they are being dealt with properly during the execution? The ongoing opposition from the population of the Melamchi Valley and groups in Kathmandu suggests that there are quite some problems ahead.

Potential conflicts are visible at the level of the source, in the management of the water, and the afflicting the discharge of the water.

In terms of risk and vulnerability another situation is developing compared to the situation during the development of the project. Water systems are sensitive in periods of armed conflict. The concentrated source that is now under construction will be an attractive target for attacks from rebels.

# Water for African Cities, Dar es Salaam

Sida Project 2002–04020

## Introduction

Dar es Salaam, the commercial capital of Tanzania, suffers from problems caused by fast and unorganized urban growth.

While in the beginning attempts were made to clear the slum areas, in 1972 the government changed its policy and ordered that squatter settlements should be improved rather than demolished. In the 1978 Master Plan, squatting was accepted and the focus shifted to uplifting these areas. To date, about 70% of the population live in unplanned settlements with marginal access to tap water, sewage systems, infrastructure or basic social services. This situation threatens public safety and health. The regional water supply system allocates water from the Ruvu River into the city, but it is not developed into local branches.

Consequently, people build individual supply systems depending on their economic abilities, e.g. connecting their own pipes to the regional system, buy shares of the neighbour's supply system or storage, or buy water from vendors.

More than 50 percent of the households in Dar es Salaam buy water from vendors; this indicates that the informal water market is well developed. Water has become a commodity, and as often happens when common goods are "individualised" the result is inequality. The most common diseases in Dar es Salaam are malaria and diarrhoeas, both partly due to the water situation. The poorest suffer the most from water stress because they are unable to buy sufficient quantities of water.

Chronic underfunding of Tanzania's water infrastructure left the utility in need of almost US\$600 million in order to provide water for all citizens. Privatization of the water in the capital city of Dar es Salaam was one of the conditions for a loan under the highly indebted poor countries initiative of the IMF. This direction was supported by a World Bank loan designed to pass enabling legislation and prepare the water utility. Additional funding was raised from other sources, such as the European Investment Bank and the Agence Française de Développement. This additional capital investment was needed; an earlier attempt to privatize the city water services had not lead to any responses: commercial water companies considered the risk to be too big.

The private contract for operating the Dar es Salaam supply was awarded to a consortium consisting of Biwater International (UK), Gauff Ingenieure (Germany) and Superdoll (Tanzania). Biwater is already involved in a number of other privatized public utilities in the

Third World. The contract was intended to be a 10-year lease and included a cost-recovery clause. According to the lease, unprofitable areas are assigned to be served with the assistance of non-governmental organizations.

The total value of the Dar es Salaam Water Supply and Sanitation Project (DWSSP) is 164 million USD, of which roughly 20 million USD is being funded by City Water and DAWASA (Dar es Salaam Water & Sewerage Authority). The three donors involved are lending 143 million USD. Additional funds from DFID (Department for International Development, UK) were used for promoting the privatization to the public. In 2005 the contract with the consortium was ended by the government of Tanzania.

Urban agriculture is important in Dar es Salaam: 67% of the population is involved in agriculture. Over 90% of the leafy vegetables on the market are grown in the town. A lot of the agriculture takes place along streams, on land that is otherwise not suited for building houses. Apart from using streams and groundwater for growing crops, the water supply for Dar es Salaam also doubles as a piped irrigation system.<sup>19</sup> In publications on the urban agriculture in Dar es Salaam some authors argue that these farmers should get “fair tariffs” to make it possible for them to produce crops (Mwalukasa, 2000).

### **The Sida Supported Project**

The Sida project that we refer to here is a “demonstration project” (compare with the programme development intentions in the Nairobi project) and part of the larger UN-HABITAT Water for African Cities (WAC) Programme. The project was started just before the privatisation took place. The proposed changes in the structure of the water supply were known when the project was developed.

The main objective of the project is to provide a framework for urban water management by seeking new directions to rapidly improve and increase service delivery. The Project is implemented and promoted jointly by the United Nations Human Settlements Programme (UN-HABITAT), The United Nations Environment Programme (UNEP) and The United Nations Foundation for International Partnerships (UNFIP).

The specific objectives of the project are to:

- promote water demand management
- mitigate the impact of urbanisation on freshwater resources and aquatic ecosystems through the execution of a demonstration project
- promote sustainable sanitation
- create public awareness on water resource management and environmental issues
- promote value based water education in formal education

During a dinner at 16 August 2002 letters of collaboration were signed for the Water for African Cities program between the Ministry of Water and Livestock Development, the University College of Lands and Architectural Studies and UN-HABITAT.

### **Observations**

The activities of the Sida supported project started in 2002 with a workshop to discuss an implementation plan. Since then many work-

---

<sup>19</sup> [www.ruaf.org](http://www.ruaf.org)

shops have followed. A review of the project-proposal by Marianne Kjellén (Kjellén 2003) contains many suggestions for improving it. The review points at the multitude of activities, and suggests dividing them into separate budgetary units. The formal start of the project was in August 2003.

The project seems to have difficulties in getting underway. Although it is part of a UN-HABITAT network of projects on the continent, there are no evidence that experiences from other countries or continents are considered in the project.

The component on water demand management does not really come off the ground. There are attempts to start a unit for WDM in DAWASA (Dar Es Salaam Water and Sewerage Authority) but these have not been very fruitful. It seems odd that capacity for WDM is to be developed in the framework of this project, considering that the water authorities should have a major interest in reducing losses. Other activities involve a training program and developing educational material. It is not possible to observe any “beneficiary ownership” in the project. It appears to be a program owned and run by universities/academics and consultants. Another peculiarity is that the capacity building in the project was not linked to the major PSP (private sector participation) and sector reform that was taking place at the same time.

### Privatisation

During the first year of the Sida supported project the water distribution of Dar es Salaam is “reformed”. The counterpart organization, that is the water company, is split into an organization that owns the infrastructure and a service organization which is controlled by the infrastructure entity.

The service organization has a management contract. Like most privatizations in water supply, this one is also strongly criticized by NGOs. The NGO ActionAid made an extensive overview of the process of privatisation. Based on desk studies and interviews with more than twenty Tanzanian government officials, NGOs, think-tanks and private companies in Dar es Salaam in June 2004, they found that:

- donor pressure has been crucial in pushing the government to privatise the water system in Dar es Salaam
- there has been very little public discussion or consultation about the reforms
- most Tanzanians are opposed to the privatisation process
- the reforms are unlikely to meet their stated objectives
- poor people’s needs – particularly those of poor women – have been largely ignored in the reform design. (ActionAid 2004)

### Conflict Analysis Issues

<b>Conflict analysis issue</b>	Privatisation of Dar es Salaam City Water
<b>Actors</b>	Ministry for Water and Livestock Development, DAWASA, City Water Services Limited, Multilateral banks, Donor Agencies, NGOs etc.
<b>Incompatibilities</b>	The management of the water supply of Dar es Salaam.

---

**Dynamics**

Historically no institutions or organisations have dealt with the control/management of distribution of water in Dar es Salaam. Water has been treated as a common good, sharing the fate of most common pool resources

The first attempt introduce private participation was not successful and the second time there was only one consortium that qualified for the tender, the bid was accepted. A major conflict developed. On May 24, 2005, the Tanzanian government announced that it had terminated a 10-year contract with City Water, claiming the company had made less than half the required investment and failed to improve services.

City Water began operations on 1 August 2003. The dispute began after the company pressed the government to review the contract, claiming that operating conditions were different from what it had expected, according to minister Lowassa. The government, however, hired independent consultants who determined that there was no justification for review of the contract. The consortium was supposed to pay an annual lease, which they have not done, and they should have invested 8.2 million USD until now, but only invested half of that. There were a lot of complaints from the users. The exact events will probably become clear at a later stage. The government has formed a new firm, the Dar es Salaam Water and Sewerage Corporation, to replace City Water.

Biwater is allegedly planning to take legal action over the cancelled water contract. Although City Water admits works were behind schedule, it said it had offered to invest a further 5 million USD in 2006.

---

**Conflicts**

Interviews show that consumers are angry. One report says that they resent the fact that they are being charged more for their water, even though there has been no public debate about the need for privatisation. They do not feel they are getting a better service, and believe that City Water is making excessive profits at their expense. According to another source the prices have not been increased. However, the price of water for most citizens is defined by the water vendors and water-trucks, considering the fact that they have no access to piped supply.

Addressing public discontent will be difficult, especially given that tariffs will eventually have to double from their pre-privatisation levels, according to World Bank staff. ActionAid found that City Water continues to charge households for water even though the supply only works occasionally. This means that households often have to pay twice – once to City Water for water that does not come, and again to the water vendors that provide water at much higher prices. Public anger at this situation is at such levels that, according to one local NGO, City Water bill collectors are being “chased away with dogs and knives”. Households that refuse to pay simply face higher water bills and are threatened with disconnection. Even households who do pay sometimes get disconnected because City Water disconnects whole areas in an attempt to get those with illegal connections to pay up.

According to members of Africa Youth for Development, “there is a problem with water privatisation because local people don’t have water.



After privatisation, the bills are coming, but no water!” In Tabata, members of the local women’s group said that since City Water took over they have not received water on a regular basis, while they used to get it twice a week (ActionAid 2004).

There is also a problem with those willing to pay for a piped connection. The old practice was that you would get a pipe, whatever the distance and this led to “spaghettisation” of the system. Now you have to wait until a proper distribution main comes close to your place. This creates pressure from the more affluent part of the population that demands better services.

The company in the meantime faced problems, because the unwillingness to pay results in an operational loss, instead of a profit. Another point of criticism is the continued corruption. The personnel that used to work for DAWASA, including those known for their corrupt practices, have mostly been taken over by City Water. Households still have to pay bribes to receive water or to avoid being disconnected (ActionAid, 2004).

Apart from experiencing water shortages on account of drought, a major conflict of interest exists between Dar es Salaam Water & Sewerage Authority (DAWASA) and the people carrying out agricultural activities within the city. This is mainly due to the tariffs charged by DAWASA in relation to the large amounts of water needed for agriculture (Mwalukasa 2000).

The contract with the consortium was suddenly stopped by the government of Tanzania. Immediately a new entity was established, the Dar es Salaam Water and Sewerage Corporation, that took over the tasks of the consortium.

City Water had been saying: give us 2 years to prove our results. The newly established Dar es Salaam Water and Sewerage Corporation is promising to put things in order in a few months.

## **Conclusions**

With conflicts developing the last two years in Dar es Salaam, the central question seems to be: why did the Sida supported project do so little?

Considering the type of problems in the city, the agenda for the project and the partners involved in the program it could have been a strategic project. Added value would have been created by linking experiences from other African cities partaking in the larger WAC project. It could have provided DASAWA and other partners in the city with information and links to experiences from other similar situations.

No conflict management components were included in the programme, notwithstanding the highly conflictual situations in the informal settlements.

With its limited budget of 700.000 USD, the contribution should have remained strategic in order to have an effect. With the known changes of the water supply system in Dar es Salaam, the project might have used some of its efforts in influencing the larger process of privatisation and infrastructure investments.

DASAWA looked to the WAC project for support for experimenting in supplying un-served communities and to train its personnel in leak-detection. DASAWA, with a budget of 140 million USD apparently had no funding for these core activities. (Project document: *Proceedings of the Workshop on Implementation of the Water For African Cities Programme: Dar Es Salaam Project. Workshop 2 Oct. 2003, annex 6*).

Kjellén (2003) suggests that one solution may be a structured collaboration where the different supply systems are integrated and supervised by the local authorities.

Referring to the principles spelled out above in the box in the Typology chapter (Palaniappian et al. 2004) it is clear that the actors in the Dar es Salaam case are far away from regarding the essential point of such principles. The only aspect being covered to some extent is the “managing water as a social good”, but that goes at the expense of “using sound economics”. Some government regulation is present, but not as the principles suggests it: as a transparent process to ensure the proper management of a public asset.

# Sida Policies and Instruments

The goal of this chapter is to briefly investigate which are the relevant Sida documents that have/could have a bearing on the reviewed projects and how they relate to the issues brought up in the preceding chapters. We will also discuss how far Sida has come in the thinking on conflict and conflict sensitive development aid.

## Policy

Sida has a range of policies and guidelines covering a large number of issues in relation to its activities. These documents cover both the concrete development areas, such as water in this context, and thematic areas such as conflict and environment. There is also a range of documents that inform and regulate Sida's own operations. At this moment (June 2005) Sida is in the process of reducing the number of overarching policies. A sketchy overview of how Sida itself structures the policy documentation can be found at the "Partner Point" part of the Sida website.<sup>20</sup>

The new policy structure regulation prescribes four levels of policy:

- documents describing Sida's fundamental principles and values
- overarching policies for the development cooperation process
- thematic and specific sector policies
- position papers

Figure 3: Sida's policy structure



<sup>20</sup> <http://www.sida.se/Sida/jsp/polopoly.jsp?d=2268>

Sida's intention is to add overarching policies that cover all its core areas. In addition to these documents there is a large array of documents such as *Country Analyses*, *Strategic Conflict Analyses*, *Background Study for the Swedish Country Strategies*, various *Guidelines* etc. If a policy analysis would be seriously undertaken enunciations of policy could probably be said to exist in many of these documents.

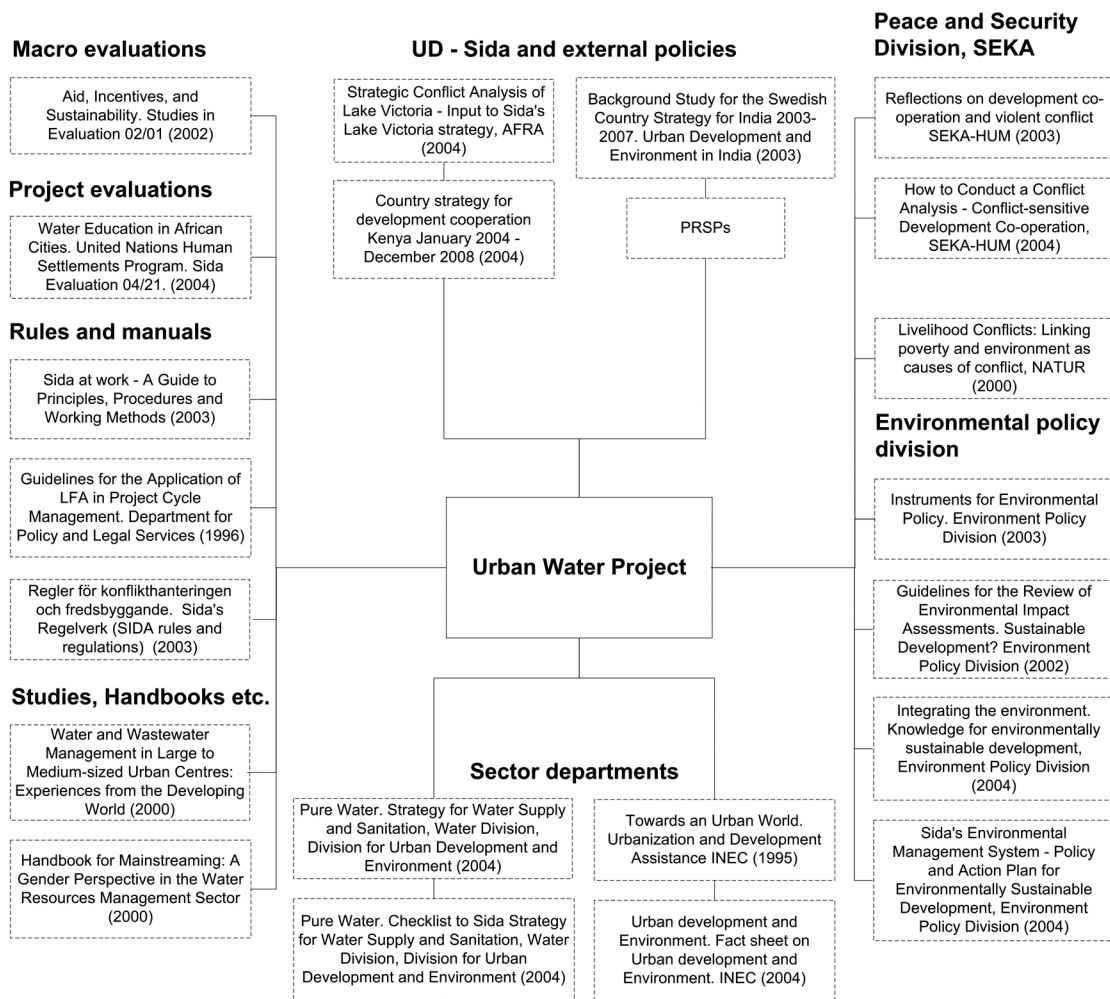
### Status and levels of documents

The new Sida policy structure is a way to create order in the bewildering richness of Sida documentation. It is not always clear what the respective status of a document is and it is often difficult to make a clear distinction between the different classes of documents, this might in many cases not even be possible.

### Documents Relevant for Urban Water Projects

The scheme below is an attempt to group the documents that could in any possible way have a bearing on the planning and execution of an urban water intervention. The figure is meant to be an indication of the kind of information available within the agency. It is obviously not comprehensive; the documents on especially the left side are only meant as examples out of a vast group. The place in the chart of certain documents could of course be debated.

Figure 4: Chart of relevant documentation



The documentation proves that there is extensive knowledge in Sida covering most aspects of the agency's work. Documents show good technical knowledge and especially the more recent documents show awareness of the social implications of Sida's work. After a short discussion on a few issues we will concentrate on one especially interesting document in the context of our study, the checklist attached to the (2004) *Pure Water. Strategy for Water Supply and Sanitation*.

### **Policy and steering documents in relation to project reviews**

As noted in the project reviews there are scant references to Sida steering documents. Some of the issues identified in the project review could be addressed by a stricter adherence to policies and guidelines, but the question is whether these issues are critical. Other issues, such as the reluctance to document conflicts and problems, will have to be addressed in a larger context of learning and organisational cultural change.

The policies are generally focussed on the planning and selection rather than the execution of projects. Problems that are difficult to foresee often arise during the implementation phase. These problems cannot be "planned away", and must be identified and dealt with during the project cycle.

### **Evaluations**

In the context of policy analysis is often difficult to establish the status and influence of evaluations. Evaluation departments are by necessity cut off from the daily running of an organisation. This organisational setup also tends to have an influence when trying to establish to what extent the results and conclusions of evaluations are regarded in the daily work of an organisation. Evaluations should in the best case be an important source of information in the planning of projects. We have not found that this was the case in the projects reviewed. Evaluations can be classified in two rough categories: macro evaluations dealing with larger agency wide issues and specific project evaluations.

### **Macro vs. micro level**

Another issue often discussed is the level of the documents. *Country strategies* are so general that programme officers feel that there is little guidance and *Conflict analyses* are made from a macro perspective and tend to deal with high politics.<sup>21</sup>

### **Conflict Analysis and Conflict Sensitivity**

There is knowledge in Sida on conflict analysis, do no harm approaches etc. and what recently has been called conflict sensitive development aid. Sida has, like many other agencies and NGOs,<sup>22</sup> developed a framework and manuals for how such conflict sensitivity can be applied in development work. There are two general areas of applications for these manuals. Many of the conflict analysis frameworks are meant to be used in situations of existing conflict, especially in the area of humanitarian assistance. Another group of manuals has as a goal of implementing conflict sensitive development aid. The aim is to avoid

---

<sup>21</sup> For an enlightening discussion of this issue see Sida (2003) *Country Plans: The Missing Middle of Sida's Country Strategy Process*. Sida Evaluation 02/37. <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=15897>

<sup>22</sup> A good introduction to this area and a list of such manuals is found in *Conflict sensitive approaches to development, humanitarian assistance and peace building: Tools for peace and conflict impact assessment. Resource Pack*. (2004) [http://www.conflictsensitivity.org/resource\\_pack.html](http://www.conflictsensitivity.org/resource_pack.html)

exacerbating conflict by the adding of resources or creating new tensions in the context of developmental aid. There is no clear line between those two different uses in Sida's (2004) *How to Conduct a Conflict Analysis – Conflict-sensitive Development Co-operation*. The same can be said of other publications of the Division for Peace and Security in Development Co-operation.

The situations and projects discussed above did not take place in war zones etc. but some of them showed elements of social conflict. The Nepal case is put in risk by the Maoist insurgency.

Many actors underline the importance of profound social analysis as an integrated part of project planning and management. This perspective has been highlighted in the World Bank's series "Influential evaluations", the quoted case concerns a water and sanitation project in Flores, Indonesia: "*In 13 per cent of the sample villages water supply schemes were never completed – in some cases not even begun – even though communities had contributed cash and labour. Social conflict was the major reason, especially concerning the sharing of water resources between villages. The projects had no mechanisms to deal with this important determinant of sustainability, neither in brokering agreements nor in facilitating alternative supply options in the absence of reasonable agreements. The more ambitious schemes were more likely to expose conflicts, and conflicts tended to be more severe in drier areas, where competition for scarce resources, especially during the dry season, was more pronounced.*"<sup>23</sup>

Our impression is that attention of these issues is growing at Sida but that a conflict perspective is far from being operationalised. It can be compared with the compulsory Environmental Assessment that few actors nowadays question, the goal for the Division for Peace and Security in Development Co-operation is probably to make a conflict analysis perspective an integrated part of project planning.

It should also be noted that the paragraphs on Conflict management and Peace building in Sida's Regelverk already prescribe that such analysis should be done and integrated in the project documentation.<sup>24</sup>

Comments on "Checklist to Sida Strategy for Water Supply and Sanitation"

The most up to date document in the portfolio of Sida documents in relation to water projects is probably the checklist attached to the (2004) *Pure Water. Strategy for Water Supply and Sanitation*. According to Sida this checklist should be used by staff when selecting and preparing projects.

We have chosen to comment on the document as we regard it as a good indication of the present level of Sida thinking on water issues. Many current concepts are present in the checklist; we will comment and give a few examples from the project review. The Sida text is marked in darker grey.

The checklist is attached in annex 1 in its original form.

---

<sup>23</sup> World Bank, Operations Evaluation Department (2005) *Influential Evaluations: Detailed Case Studies*. Washington D.C. [http://inweb18.worldbank.org/oed/beddoclib.nsf/24cc3bb1f94ae11c85256808006a0046/920f6ecd297978d785256f650080bb9e/\\$FILE/influential\\_evaluation\\_case\\_studies.pdf](http://inweb18.worldbank.org/oed/beddoclib.nsf/24cc3bb1f94ae11c85256808006a0046/920f6ecd297978d785256f650080bb9e/$FILE/influential_evaluation_case_studies.pdf)

<sup>24</sup> Sidas Regelverk – C. Biståndsprocessen – Regler för konflikthantering och fredsbyggande – § IV: "Alla insatser inom Sidas utvecklingssamarbete bör granskas under planering och genomförande för att identifiera sannolik och faktisk påverkan på samhälleliga motsättningar och konflikter. Bedömningen, som kan vara översiktlig i områden där sannolikheten för en konfliktsituation anses liten, bör dokumenteras kortfattat i bedömningspromemoria och viktiga uppföljningsrapporter."

## Commented Checklist

### Water division. Division for urban development and environment June 2004

#### *Checklist to Sida Strategy for Water Supply and Sanitation*

The following issues need to be considered in relation to interventions in water and sanitation, and in relevant parts of industrial use of water.

Remember that a checklist can never be complete and in each intervention there are particular characteristics that might have to be taken into account.

#### *Socio-economic Sustainability*

1) Does the proposed intervention provide indirect or direct benefits to the poor?

A question relevant from a conflict perspective. The situation in Mutare indicates some problems: poor people living in one of the shanty towns are consuming a large part of the water because the pipes are broken and the water is flowing in the streets without being used. The lack of interventions to create responsible use of the resource leads to complex conflicts.

2) Is the intervention coherent with national poverty reduction strategies and other sector specific strategies in the country/region?

3) Is there a shared understanding between key actors of the need and appropriateness of the intended intervention, in terms of its relation to and effects on the natural resource environment and the socio-economic implications, including issues of gender equality, HIV/AIDS, social exclusion etc., as well as an understanding of the linkages between water supply and sanitation and health?

This point is formulated in a complicated manner. The issue that is particularly relevant for conflicts (water-sanitation) comes back in the next point. It could also refer to urban agriculture.

4) Have sufficient measures been taken with regard to the integration of (a) water supply with sanitation, and (b) water supply and sanitation with hygiene promotion?

This point is highly relevant. In none of the cases that were studied had sufficient attention been given to sanitation. As a result the additional water brought by the intervention was not at all or only partly taken care of. The effects are: degradation of the resource for downstream-users, degradation of the living conditions of the lower parts of the urban area (usually the place where the poor communities are) and degradation of shallow aquifers (which are principally usually used by the poor).

5) Have sufficient measures been taken to create public acceptance of the proposed intervention and the conditions under which it is undertaken?

We assume this refers to the participation of all actors.

7) Are the future users, with special attention to the most marginalised groups, included as active participants in the decision-making process?

In the Nairobi case the NGOs and the CBOs are supposed to guarantee such participation. The reports submitted by MnU though underline the difficulties of involving the local habitants in the processes.

8) Are other donor interventions in the sector properly mapped and co-ordinated?

In most of the cases we evaluated there was some kind of coordination efforts taking place, though often at a "quick fix" level. In Dar es Salaam there was no proper coordination in spite of a major intervention that would have profited from experience of other parties.

In the Nairobi case conflicts between several donor organisations were visible in the documentation and it would be quite difficult to sustain that coordination was efficient.

### *Environmental Sustainability*

9) Has the proposed intervention been assessed in accordance with existing guidelines for environmental impact assessment to ensure that the intervention results in reduced loads on the environment in terms of resource utilisation and pollution?

This should include the shifting of large volumes of water, and the disposal of additional wastewater. It is to be expected that with an increase of the population and the increased amount of water brought into an urban area, you will also get an increasing flow of wastewater. This will typically go in two directions: the shallow groundwater and whatever streams flowing out of the town.

At the source side the reduced flow can have opposite consequences: the reduced flow in the Pungwe River as a result of the Mutare water supply leads during the dry season to a further intrusion of the salt water in the Beira region in Mozambique.

10) Does the proposed intervention take an integrated catchment approach into account?

In order to make this question operational, a clear definition of the concept “integrated catchment approach” is needed.

11) Have all reasonable measures been taken to ensure that best practices are used to safeguard sustainable access to the land and water resources required for the intended intervention, including protection of the water source?

12) Are proposed technologies adapted to the local conditions where the investments are to be made?

13) To what extent is recycling of nutrients included in the sanitation concepts?

### *Financial Sustainability*

14) Is the proposed intervention guided by expressed user demand?

This is often a contradictory question. Very few people in water stressed areas will say that they have an adequate water supply at for what they consider a fair price.

15) Are management structures and financing facilities, including those for recovery of costs, adequate to ensure sustained operation and maintenance of the facilities?

In Kathmandu this was not the case. In Dar es Salaam this was not part of the project, but it was apparently also a major problem. In Mutare this was not part of the project. The project resulted anyhow in lower costs for the operator, as the new source did not require any treatment. In the Nairobi case the financial management was one of the most difficult aspects of the project, the NGO and the CBOs did evidently not have the capacity to deal with the economic issues.

16) Are tariff structures designed to meet the full costs of operation, maintenance, replacement and capital costs? If not, how and who will cover these costs?

These were problems in all projects. Although typically the poor are paying very high prices for their water, this was also the issue the Nairobi project explicitly dealt with. In Kathmandu the water price will have to rise much further than what was considered feasible.

17) Do consumers accept and support proposed fee structures and fee collection systems? Is the proposed cost of services within the range of the ability to pay (normally appr. 4% of household income)

### *Institutional Sustainability*

18) Are management structures appropriate in terms of efficiency, accountability, transparency and anti-corruption?

Quite clearly this was lacking in all projects. In the case of Mutare it was not addressed, in the case of Kathmandu it was left to other donors, and in the case of Dar es Salaam it was not taken up as one of the major potential contributions of the project. In Nairobi the lack of management (from both the executing partner and the donor) probably was one of the critical factors that lead to failure.



19) Are regulation and policy functions of the water and sanitation sector managed by democratic controlled institutions?

Out of the four countries in the project review only Kenya shows signs of such institutions.

20) Are the regulatory and legal frame-works sufficient to safeguard long-term sustainability and, even more importantly, is there evidence that regulations are actually implemented?

How is long term sustainability defined? It would be good if these conditions were met. None of the cases reviewed were complying with this condition.

21) Have sufficient measures been taken to enhance capacity building of relevant actors?

22) Have the roles of different private and public actors been properly defined?

### **Policy – management gap**

The common denominator for the difficulties of transferring knowledge from the science/academic sector to the world of decision-making and policy is “the science – policy gap”. This is an issue that has been well investigated in the aid sector (e.g. de Vibe et al 2002; Ramalingam 2005). It must be admitted that Sida spend a considerable amount of resources and capacity in research and building a sound knowledge base. The problem, notwithstanding the proffered goal of being a learning organization, is that that this knowledge often does not seem to reach the actual programming and project execution level. In Sida’s case a “policy – management” gap might be a better expression of the problems that affects some projects. We are of course aware of the often extreme workload of programme officers, of the difficulty of maintaining Sida goals when working with other and often larger organisations etc.

But we also want to underline that a lot of knowledge already is present in Sida. As an example, one recent Sida commissioned study concluded: *“One essential element is to become involved early in a project preparation cycle. The possibility to influence a project is reduced to details with marginal effects in late stages. Also the potential effects, again provided that Sida becomes involved reasonably early, of combinations of the different tools available in Sida should be explored. [...] However, a pro-active role requires resources within Sida, supplemented by short-term inputs by consultants.”*<sup>25</sup>

### **Policy Review Conclusions**

The general conclusion is that Sida has a large pool of knowledge related to the issues of the study. This knowledge is dispersed in a number of sources at different levels and departments and not always easy to find and extract from the vast amount of internal documentation. The recent focus on various issues like gender and environment seem to have led to a certain “mainstreaming fatigue” in the organisation. Thus we do not think it would be a workable solution to suggest a conflict perspective mainstreaming. Such a mainstreaming process would also possibly interfere with the strong poverty reduction goal which has been underlined with the 2003 parliament bill on Sweden’s Policy for Global Development.

<sup>25</sup> Sida (2000) *Water and Wastewater Management in Large to Medium-sized Urban Centres: Experiences from the Developing World*. <http://www.sida.se/Sida/articles/3900-3999/3948/pdf/study.pdf>

# Conclusions

A large number of issues have been touched upon above. As said in the introduction we do not pretend to draw statistically valid conclusion from the material. We are also aware that there are several processes within Sida trying to improve project analysis and management in relation to conflict. Below we only give a few indications on the areas we think are the most important to address when extending Sida's urban water portfolio.

## **Conflict analysis and project preparation**

Sida and the donor agency community have come quite far in the thinking around conflict, and as described above it is dealt with at the policy level. At the present stage, implementation of this knowledge should be emphasised. This will at least partly guarantee that the knowledge is put in practice at the field level. This process can be compared with how environmental and gender issues have entered development practice.

From the cases we looked into we may conclude that Sida used a limited frame of analysis when defining its contribution to these projects. We did not find evidence of an analysis of the whole system, what is called an "integrated catchment approach" in the checklist commented upon above. One consequence of this is that (potential) conflicts were not considered.

We believe that the projects would benefit from conflict analysis. The project review has shown complexity is not always connected to the amount of support the project receives. Small projects or small parts of projects are as likely to run in to conflictual situations as bigger ones. This is a finding in accordance with the conclusion that water related conflict is more probable at local levels rather than in transboundary cases.

Such conflict analysis does not have to be an onerous exercise. A structured process by the project team might be sufficient. Guidance from Sida's Division for Peace and Security in Development Co-operation or external consultants can be sought to build internal department competence.

We recommend that documentation of such an analysis becomes a standard document in the compulsory project planning documentation as proscribed in Sida's Regelverk.

Such procedures can help to unveil (potential) conflicts that will disrupt the intervention if not addressed in the design of the intervention. Since such with the essential parts of the water-system, and since all cases that we studied appeared to have one or more disrupting conflicts, we believe that this subject requires immediate attention.

We also believe that the introduction of conflict management components in projects that have been identified as especially conflict prone as essential. Conflicts must be analysed and dealt with during the project cycle and not only in the preparation phase.

---

**Questions to ask yourself when preparing a project**

---

The Source	Who is using the water now, and what are the arrangements for the future?
The Distribution	How is the water managed/distributed now, and what will/should happen in the future?
Sanitation and waste water	What happens after the water has been used the first time?
Institutional framework	What mechanisms are in place or are planned in order to decide on allocation issues and resolve potential conflicts?

---

Going through these questions, and including the answers in your activities avoids “externalizing” elements that will backfire on the intervention.

---

**Sida's role in projects**

More attention should be put on discussing Sida's role in the projects. The possibility of having a constructive role seems to diminish the later Sida enters the project.

The conflict analysis will lead to a more clear idea of the potential role of Sida in the project. It should also be investigated how Sida could play a proactive part even in projects where it is not the leading agency. Such analysis will also underline that Sida is one of the “actors” and how the agency can act to mitigate conflict or prevent that the resources the projects adds lead to additional conflict.

In the best case Sida could play a positive role in advising how conflictual zero-sum games situations can be made into positive-sum game solutions.

**Sida policy and instruments**

As underlined in several contexts above there is much relevant knowledge in Sida. The checklist we commented upon is a good departure point for a discussion on how to structure further analysis. The checklist in itself presupposes a large amount of knowledge. Such deep knowledge probably cannot be expected of programme officers, which are not specialised and have an extensive experience in water management issues. One possible solution would be to extend this document and start elaborating an urban water “tool” which specifically deals with the urban issues. We agree that many of the issues are of general importance for water projects but we still sustain that certain urban issues need special clarification and investigation.

**Increased spending, more conflicts?**

Increased spending in the water and sanitation sector as a result of the MDGs will increase the number of projects. These projects face the questions regarding source, distribution and sanitation highlighted above. The pressure to deliver quick results in combination with capacity shortages at many levels (institutions, human resources etc.) will jeopardize the quality of the projects. If donors and receiving countries want to avoid conflicts, projects will have to be better designed and executed than has been the case so far.

## **Areas in Need of Further Study**

To produce an “urban water tool” as mentioned above, additional research is needed, both on already existing projects which Sida has been a part of and on various topics relating to urban issues. We only mention a couple of those areas.

### **Urban agriculture**

The importance of urban agriculture in urban water supply issues is underestimated. In many African cities it is an important part of the food supply and a considerable consumer of water (groundwater, surface water, wastewater and most important in this perspective: treated drinking water). The presence of urban agriculture is often not considered when planning projects extending urban water supplies. If additional treated water is going to be used for irrigation, the effects must be investigated and accounted for in project planning.

### **Urban water projects in violent environments**

We have seen that the presence of societal conflict seems to be an important factor when predicting conflicts in projects (see also discussion in annex 2). The fulfilment of the MDGs will need substantial investment in informal settlements in African cities. These settlements are often prone to violence and conflict. This makes it important to investigate how projects can be executed in such environments without creating additional problems.

# References & Bibliography

All URLs cited were active as of 2005–06–30.

## Sida and UD Documents

(ordered chronologically with most recent first)

- UD (2004) *Country strategy for development cooperation Kenya January 2004 – December 2008*. <http://www.sweden.gov.se/sb/d/574/a/39637>
- Sida (2004) *Water Education in African Cities. United Nations Human Settlements Program*. Sida Evaluation 04/21. Department for Infrastructure and Economic Cooperation. <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1265&a=32140>
- Sida (2004) *Urban development and Environment. Fact sheet on Urban development and Environment*. INEC. <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=25820>
- Sida (2004) *Strategic Conflict Analysis of Lake Victoria – Input to Sida’s Lake Victoria strategy*, AFRA, <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=27015>
- Sida (2004) *Sida’s Environmental Management System – Policy and Action Plan for Environmentally Sustainable Development*, Environment Policy Division. <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=25950>
- Sida (2004) *Pure Water. Strategy for Water Supply and Sanitation*, Water Division, Division for Urban Development and Environment. <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=24424>
- Sida (2004) *Pure Water. Checklist to Sida Strategy for Water Supply and Sanitation*, Water Division, Division for Urban Development and Environment. <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=27448>
- Sida (2004) *Integrating the environment. Knowledge for environmentally sustainable development*, Environment Policy Division. <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=28364>
- Sida (2004) *How to Conduct a Conflict Analysis – Conflict-sensitive Development Co-operation*, Department for Cooperation with NGOs, Humanitarian Assistance and Conflict Management. <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=30780>
- Sida (2003) *Sidas Regelverk. C Bistandsprocessen. Regler för konflikthantering och fredsbyggande*. Available at Sida’s Intranet.
- Sida (2003) *Sida at work – A Guide to Principles, Procedures and Working Methods*. <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1265&a=21320>

- Sida (2003) *Reflections on development co-operation and violent conflict*. The Department for Cooperation with Non-Governmental Organisations and Humanitarian Assistance. <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=18860>
- Sida (2003) *Natural Resource management in India 2003–2007. Background Study for the Swedish Country Strategy for India 2003–2007*. <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=16698>
- Sida (2003) *Instruments for Environmental Policy*. Environment Policy Division. <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=17686>
- Sida (2003) *Country Plans: The Missing Middle of Sida's Country Strategy Process. Sida Evaluation 02/37*. <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=15897>
- Sida (2003) *Background Study for the Swedish Country Strategy for India 2003–2007. Urban Development and Environment in India*. <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=16710>
- Sida (2002) *Perspectives on Poverty*. <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1265&a=15654>
- Sida (2002) *Guidelines for the Review of Environmental Impact Assessments. Sustainable Development?* <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=21315>
- Sida (2002) *Aid, Incentives, and Sustainability. An Institutional Analysis of Development Cooperation. Main Report*. Elinor Ostrom and Clark Gibson, Sujai Shivakumar, Krister Andersson. Sida Studies in Evaluation 02/01 <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=11710>. At this page Sida's management response to the report is also found.
- Sida (2001) *Water Utility Partnership's Project for Water Utility Management and Unaccounted for Water, Phase 1. Sida Evaluation 02/22, Department for Infrastructure and Economic Cooperation*, available at: <http://www.sida.se/Sida/articles/15600–15699/15666/Utv02–22.pdf>
- Sida (2001) *Utvärdering av Water Utility Partnership, WUP: Project no. 3 Water Utility Management, Management response*, available at [http://www.sida.se/Sida/articles/15600–15699/15666/PM\\_mgmt\\_response.pdf](http://www.sida.se/Sida/articles/15600–15699/15666/PM_mgmt_response.pdf)
- Sida – UD (2001) *Guidelines for Country Strategies in Swedish Development Cooperation*, with annex. <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=21132>
- Sida (2000) *Water and Wastewater Management in Large to Medium-sized Urban Centres: Experiences from the Developing World. Report prepared by: Colling Water Management AB, Stockholm, August 2000*. <http://www.sida.se/Sida/articles/3900–3999/3948/pdf/study.pdf>
- Sida (2000) *Livelihood Conflicts: Linking poverty and environment as causes of conflict*, NATUR. <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=19924>
- Sida (2000) *Handbook for Mainstreaming: A Gender Perspective in the Water Resources Management Sector*. Department of Natural Resources and the Environment. <http://www.sida.se/Sida/articles/9100–9199/9182/gender.pdf>
- Sida (1999) *Position paper. Management and use of water resources. A summary of Sida's Experiences and Priorities*. Department of Natural Resources and the Environment. <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1265&a=13754>
- Sida (1997) Sida Evaluation 97/12. Hesawa, Health through Sanitation and Water. Sida-supported programme in Tanzania. available at: <http://www.sida.se/Sida/articles/11000–11099/11054/UTV%2097–12.pdf>

- Sida (1996) *Guidelines for the Application of LFA in Project Cycle Management*. Department for Policy and Legal Services. <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=18998>
- Sida (1995) *Towards an Urban World. Urbanization and Development Assistance*. <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=10520>

## General Bibliography

- ActionAid (2004) *Turning off the taps. Donor conditionality and water privatisation in Dar es Salaam, Tanzania*. by Romilly Greenhill, and Irene Wekiya. ActionAid International. <http://www.actionaid.org.uk/wps/content/documents/TurningofftheTaps.pdf>
- Allan, Tony and Alan Nicol (1998) *Water resources, prevention of violent conflict and the coherence of EU policies in the Horn of Africa*. London: Saferworld.
- Baechler, Günther., Kurt R. Spillmann and Mohamed Suliman. eds. (2002) *Transformation of resource conflicts: approach and instruments*. Bern: Peter Lang.
- Bakker et al. eds. (2000) *Growing Cities Growing Food; Urban agriculture on the Policy Agenda*. Resource centre on Urban Agriculture and Forestry (RUAF). [http://www.ruaf.org/reader/growing\\_cities/growing\\_cities\\_toc.html](http://www.ruaf.org/reader/growing_cities/growing_cities_toc.html)
- Barham, Elizabeth (2001) “Ecological Boundaries as Community Boundaries: The Politics of Watersheds” *Society and Natural Resources* 14, pp. 181–191.
- Borgström, Sara (2003) “From public pipes to private hands in Dar es Salaam.” On Marianne Kjellén’s dissertation. “Sustainable Development Update” Issue 5, Volume 3, 2003. <http://www.albaeco.com/sdu/12/pdf/SDU5-03.pdf>
- Conflict sensitive approaches to development, humanitarian assistance and peace building: Tools for peace and conflict impact assessment. Resource Pack*. (2004) Africa Peace Forum, Center for Conflict Resolution, Consortium of Humanitarian Agencies, Forum on Early Warning and Early Response, International Alert, Saferworld. [http://www.conflictsensitivity.org/resource\\_pack.html](http://www.conflictsensitivity.org/resource_pack.html)
- Davison, Celia A. (2001) “Urban governance and the effective delivery and management of infrastructure services in urban areas in Zimbabwe: an appraisal of water and sewerage services delivered in Ruwa”. *Urban forum*, Vol. 12:2, 2001, 139–170. Johannesburg: Witwatersrand University Press.
- de Vibe, Maja. Ingeborg Hovland and John Young (2002) *Bridging Research and Policy: An Annotated Bibliography*. London: ODI). [http://www.odi.org.uk/publications/working\\_papers/wp174.pdf](http://www.odi.org.uk/publications/working_papers/wp174.pdf)
- DFID (2002) *Conducting Conflict Assessments: Guidance notes*. DFID: The Department for International Development. <http://www.dfid.gov.uk/pubs/files/conflictassessmentguidance.pdf>
- Diehl, Paul F and Nils Petter Gleditsch. eds. (2001) *Environmental conflict*. Boulder, Colorado: Westview Press.
- DIIS (Danish Institute for International Studies) (2004a) Boesen, Jannik, and Helle Munk Ravnborg. eds. “From Water “Wars” to Water “Riots” – Lessons from Transboundary Water Management Proceedings of the International Conference, December 2003. Working Paper 2004: 6, Danish Institute for International Studies, Copenhagen. [http://www.diis.dk/graphics/Publications/WP2004/jbo\\_hmr\\_water.pdf](http://www.diis.dk/graphics/Publications/WP2004/jbo_hmr_water.pdf)

- DIIS (Danish Institute for International Studies) (2004b) *Water and Conflict: Lessons Learned and Options available on Conflict Prevention and Resolution in Water Governance*. DIIS Brief, Danish Institute for International Studies, Copenhagen. [http://www.diis.dk/graphics/Publications/Briefs2004/hmr\\_WaterConflict\\_web.pdf](http://www.diis.dk/graphics/Publications/Briefs2004/hmr_WaterConflict_web.pdf)
- DIIS (Danish Institute for International Studies) (2004c). *Water and Conflict: Conflict Prevention and Mitigation in Water Resources Management*. DIIS report 2004/2. Copenhagen: Danish Institute for International Studies. [http://www.diis.dk/graphics/Publications/Reports2004/hmr\\_waterconflict.pdf](http://www.diis.dk/graphics/Publications/Reports2004/hmr_waterconflict.pdf)
- Gleditsch, Nils Petter. (1998) "Armed Conflict and the Environment: A Critique of the Literature" *Journal of Peace Research* Vol. 35, no. 3, (May 1998) Special Issue on Environmental Conflict. pp. 381–400.
- Gleick, Peter H (2003) *Water Conflict Chronology, Version updated December 6, 2004*. <http://www.worldwater.org/conflict.htm>, for discussion on sources and categorisation see: <http://www.worldwater.org/conflictIntro.htm>
- Gleick, Peter H. (2004) *The World's Water 2004–2005. The Biennial Report on Freshwater Resources*. Pacific Institute for Studies in Development, Environment, and Security in Oakland, California. Island Press: Washington, Covelo
- Greenhill, Romilly and Irene Wekiya (2004) *Turning off the taps. Donor conditionality and water privatisation in Dar es Salaam, Tanzania*. ActionAid International. <http://www.actionaid.org.uk/wps/content/documents/TurningofftheTAPs.pdf>
- Gumbo, Bekithemba and Pieter van der Zaag (2001) *Water losses and the political constraints to demand management: the case of the City of Mutare, Zimbabwe*. Paper presented at the 2nd WARFSA/WaterNet Symposium: Integrated Water Resources Management: Theory, Practice, Cases; Cape Town, 30–31 Oct. 2001. <http://www.waternetonline.ihe.nl/aboutWN/pdf/gumbol.pdf>
- Gurr, Ted Robert and Monty G. Marshall et al. (2005) *Peace and Conflict 2005. A Global Survey of Armed Conflicts, Self-Determination Movements, and Democracy*. Center for International Development and Conflict Management (CIDCM). University of Maryland. <http://www.cidcm.umd.edu/inscr/mar/>
- Hauge, Wenche and Tanja Ellingsen (1998) "Beyond Environmental Scarcity: Causal Pathways to Conflict" *Journal of Peace Research*, Vol. 35, no. 3, (May 1998) Special Issue on Environmental Conflict. pp. 299–317.
- Kirtipur Stone Spouts' Water Contaminated* (2004) The Himalayan Times, September 9, 2004. [http://www.environmentnepal.com.np/news\\_d.asp?id=845](http://www.environmentnepal.com.np/news_d.asp?id=845)
- Kjellén, Marianne (2003) Comments on Project Document "Managing Water for the City of Dar es Salaam, Tanzania". Report prepared for Sida.
- Maksimovic, Cedo and José Alberto Tejada-Guibert. eds. (2001) *Frontiers in urban water management: deadlock or hope*. London: IWA Publishing.
- Moench, Marcus and Ajaya Dixit, S. Janakarajan, M. S. Rathore and Srinivas Mudrakartha (2003) *The Fluid Mosaic, water governance in the context of variability, uncertainty and change*. Nepal Water Conservation Foundation, Kathmandu, Nepal and the Institute for Social and Environmental Transition, Boulder, Colorado, U.S.A. <http://www.i-s-e-t.org/FluidMosaic.pdf>



- Mohamoda, Dahilon Yassin (2003) *Nile Basin Cooperation A Review of the Literature*. *Current African Issues* 26. Uppsala: Nordiska Afrikainstitutet <http://130.238.24.99/webbshop/epubl/cai/cai026.pdf>
- Mukheli, Azwidowi, Gilbert Mosupye and Larry A. Swatuk (2001) *Is the Pungwe Water Supply Project a solution to water accessibility and sanitation problems for the households of Sakubva, Zimbabwe?* Paper presented at the 2nd WARFSA/WaterNet Symposium: Integrated Water Resources Management: Theory, Practice, Cases; Cape Town, 30–31 October 2001. <http://www.waternetonline.ihe.nl/aboutWN/pdf/mukheli.pdf>
- Mwalukasa, Michael (2000) “Institutional Aspects of Urban Agriculture in the City of Dar es Salaam.” in Bakker et al. 2000. *Growing Cities Growing Food; Urban agriculture on the Policy Agenda*. [http://www.ruaf.org/reader/growing\\_cities/Theme6.PDF](http://www.ruaf.org/reader/growing_cities/Theme6.PDF)
- Nickson, Andrew and Richard Franceys (2003) *Tapping the market: the challenge of institutional reform in the urban water sector* New York: Palgrave Macmillan
- Nordin Mwaiselage, Agnes (2003) *Organised chaos: water and sanitation systems in housing areas in Dar es Salaam*, Lund Univ.: Dept. of Architecture and Development Studies
- OECD (2003) *Creditor Reporting System on Aid Activities. Aid Activities in the Water Sector 1997/2002* Volume 2003 Issue 1. OECD Publishing
- Ohlsson, Leif. (1999) *Water Conflicts and Social Resource Scarcity*. Paper for European Geophysical Society, 24th General Assembly, The Hague, The Netherlands, 19–23 April 1999. <http://www.padrigu.gu.se/ohlsson/files/Haag.pdf>
- Olson, Mancur (1971) *The Logic of Collective Action: Public Goods and the Theory of Groups*. Harvard University Press: Cambridge, Mass.
- Ostrom, Elinor and Clark Gibson, Sujai Shivakumar, Krister Andersson (2002) *Aid, Incentives, and Sustainability. An Institutional Analysis of Development Cooperation. Main Report*. Sida Studies in Evaluation 02/01 <http://www.sida.se/Sida/jsp/polopoly.jsp?d=1250&a=11710> At this page Sida’s management response to the report is also found.
- Palaniappan, Meena and Peter H. Gleick, Catherine Hunt, Veena Srinivasan (2004) *Water Privatization Principles and Practices in: The World’s Water 2004–2005. The Biennial Report on Freshwater Resources*. ed. Peter H. Gleick
- Public-Private Partnership in Water Supply and Waste Water Treatment in Kathmandu Metropolitan City* (2002) Urban Environment Section, Environment Department Teku, Kathmandu Metropolitan City Office Kathmandu, Nepal. Workshop paper. [http://www.iges.or.jp/kitakyushu/Successful%20Practices/SP%20\(Analyzed\)/Water/2%20Kathmandu.pdf](http://www.iges.or.jp/kitakyushu/Successful%20Practices/SP%20(Analyzed)/Water/2%20Kathmandu.pdf)
- Rakodi, Carole. ed. (1997) *The urban challenge in Africa: growth and management of its large cities*. Tokyo: United Nations University Press, 1997.
- Ramalingam, Ben (2005) *Implementing Knowledge Strategies: Lessons from international development agencies*. ODI Working Paper 244. London. ODI. <http://www.odi.org.uk/RAPID/Publications/Documents/WP244.pdf>
- Ravnborg, Helle Munk (2004) *Water and Conflict: Conflict Prevention and Mitigation in Water Resources Management*. DIIS report 2004/2. Copenhagen: Danish Institute for International Studies. [http://www.diis.dk/graphics/Publications/Reports2004/hmr\\_waterconflict.pdf](http://www.diis.dk/graphics/Publications/Reports2004/hmr_waterconflict.pdf)

- Ravnborg, Helle Munk. (2004) *Water and Conflict: Lessons Learned and Options available on Conflict Prevention and Resolution in Water Governance*. DIIS Brief, Danish Institute for International Studies, Copenhagen. [http://www.diis.dk/graphics/Publications/Briefs2004/hmr\\_Water-Conflict\\_web.pdf](http://www.diis.dk/graphics/Publications/Briefs2004/hmr_Water-Conflict_web.pdf)
- Robinson, Peter B. (2002) “All for some”: water inequity in Zambia and Zimbabwe” *Physics and Chemistry of the Earth* Vol. 27 (2002) pp. 851–857
- Ross, Michel L. (2004): “What Do We Know About Natural Resources and Civil War?” *Journal of Peace Research*, vol. 41, no. 3, 2004, pp. 337–356. Manuscript version at: <http://www.polisci.ucla.edu/faculty/ross/whatdoweknow.pdf>
- Schwartz, Peter (1998) *The Art of the Long View, planning for the future in an uncertain world*. Chichester: Wiley
- Shandler, David and Stephen Granger (1997) *Water Resource Management And Conflict In South Africa: Experiences The Western Cape*. Paper presented at the 17th Annual Conference of the International Association of Impact Assessment (IAIA) New Orleans, USA 1997. <http://biodiversityeconomics.org/pdf/topics-30-10.pdf>
- Shiva, Vandana (2002) *Water wars: privatization, pollution and profit*. London: Pluto Press
- Showers, Kate B. (2002) “Water Scarcity and Urban Africa: An Overview of Urban–Rural Water Linkages” *World Development* Vol. 30, No. 4, pp. 621–648, 2002
- Smith, Laila (2001) “The urban political ecology of water in Cape Town”. *Urban forum*, Vol. 12:2, 2001, 204–22. Johannesburg: Witwatersrand University Press.
- Soerens, Thomas S., Edward H. Fite and Janie Hipp (2003) *Water Quality in the Illinois River: Conflict and Cooperation between Oklahoma and Arkansas*. Paper presented at the Diffuse Pollution Conference Dublin 2003. [www.ucd.ie/dipcon/docs/theme09/theme09\\_03.PDF](http://www.ucd.ie/dipcon/docs/theme09/theme09_03.PDF)
- Swatuk Larry A. and Pieter Van der Zaag (2003) *River Basin Security: Theory and Practice in the Save and Pungwe River Basins of Zimbabwe and Mozambique*. Paper presented at: Resource Politics and Security in a Global Age. June 2003 – University of Sheffield, United Kingdom. <http://www.shef.ac.uk/~perc/resourcepol/papers/swatuk.pdf> and maps in appendix: <http://www.shef.ac.uk/~perc/resourcepol/papers/swatukappendix.pdf>
- Tamas, Pal (2003) *Water Resource Scarcity and Conflict: Review of Applicable Indicators and Systems of Reference*. UNESCO, PC-CP Project. <http://unesdoc.unesco.org/images/0013/001333/133307e.pdf>
- Turton, Anthony and Roland Henwood eds. (2002) *Hydropolitics in the developing world: a southern African perspective*. Pretoria University.
- UN (2002) *World Urbanization Prospects: The 2001 Revision. Data Tables and Highlights*. New York, Population Division, UN Secretariat, Department of Economic and Social Affairs. <http://www.un.org/esa/population/publications/wup2001/wup2001dh.pdf>
- UN-HABITAT (2003) *Water and sanitation in the world's cities, local action for global goals*. Chapter referred to: <http://www.unesco.org/water/wwap/wwdr/pdf/chap7.pdf>
- UN-HABITAT (2004) *The state of the world's cities 2004/2005: globalization and urban culture*. United Nations Human Settlements Programme. London: Earthscan.

- Wallensteen, Peter (2002) *Understanding conflict resolution: war, peace and the global system*. London: Sage
- Whittington Dale and Donald T. Lauria, Vimalanand Prabhu, Joe Cook (2004) “An economic reappraisal of the Melamchi water supply project – Kathmandu, Nepal” *Portuguese Economic Journal* 2004, 3: 157–178.
- Whittington, Dale and Subhrendu K. Pattanayak, Jui-Chen Yang, K.C. Bal Kumar (2002) “Household demand for improved piped water services: evidence from Kathmandu, Nepal” *Water Policy* 4 (2002) 531–556.
- Wolf, Aaron T. (1998) “Conflict and cooperation along international waterways”, *Water Policy*, Vol. 1, Issue 1 (1998) p. 251–265. [http://www.transboundarywaters.orst.edu/publications/conflict\\_coop/#paper](http://www.transboundarywaters.orst.edu/publications/conflict_coop/#paper)
- Wolf, Aaron T. ed. (2002) *Conflict prevention and resolution in water systems. The management of water resources; 5*. (Cheltenham: Edward Elgar)
- World Bank (2001) Freire, Maria Emilia and Richard Stren. eds. *The challenge of urban government: policies and practices*. Washington, D.C.: World Bank. [http://www-wds.worldbank.org/servlet/WDSContentServer/WDS/IB/2001/02/02/000094946\\_01011905315240/Rendered/PDF/multi\\_page.pdf](http://www-wds.worldbank.org/servlet/WDSContentServer/WDS/IB/2001/02/02/000094946_01011905315240/Rendered/PDF/multi_page.pdf)
- World Bank, Operations Evaluation Department (2004) *Influential Evaluations: Evaluations that improved Performance and Impacts of Development Programs*. Washington D.C. [http://www.worldbank.org/oed/influential\\_evaluations/](http://www.worldbank.org/oed/influential_evaluations/)
- World Bank, Operations Evaluation Department (2005) *Influential Evaluations: Detailed Case Studies*. Washington D.C. [http://lnweb18.worldbank.org/oed/oeddoclib.nsf/24cc3bb1f94ae11c85256808006a0046/920f6ecd297978d785256f650080bb9e/\\$FILE/influential\\_evaluation\\_case\\_studies.pdf](http://lnweb18.worldbank.org/oed/oeddoclib.nsf/24cc3bb1f94ae11c85256808006a0046/920f6ecd297978d785256f650080bb9e/$FILE/influential_evaluation_case_studies.pdf)
- Yoffe, S., G. Fiske, M. Giordano, M. Giordano, K. Larson, K. Stahl, and A. T. Wolf (2004), “Geography of international water conflict and cooperation: Data sets and applications” *Water Resources Research*. vol. 40, No. 5: 1–12. [http://www.transboundarywaters.orst.edu/publications/YoffeEtAl\\_intl\\_conflict\\_2003.pdf](http://www.transboundarywaters.orst.edu/publications/YoffeEtAl_intl_conflict_2003.pdf)

# Annex 1

## Checklist to Sida Strategy for Water Supply and Sanitation

The following issues need to be considered in relation to interventions in water and sanitation, and in relevant parts of industrial use of water. Remember that a checklist can never be complete and in each intervention there are particular characteristics that might have to be taken into account.

### **Socio-economic Sustainability**

- Does the proposed intervention provide indirect or direct benefits to the poor?
- Is the intervention coherent with national poverty reduction strategies and other sector specific strategies in the country/region?
- Is there a shared understanding between key actors of the need and appropriateness of the intended intervention, in terms of its relation to and effects on the natural resource environment and the socio-economic implications, including issues of gender equality, HIV/AIDS, social exclusion etc., as well as an understanding of the linkages between water supply and sanitation and health?
- Have sufficient measures been taken with regard to the integration of (a) water supply with sanitation, and (b) water supply and sanitation with hygiene promotion?
- Have sufficient measures been taken to create public acceptance of the proposed intervention and the conditions under which it is undertaken?
- Are the future users, with special attention to the most marginalised groups, included as active participants in the decision-making process?
- Are other donor interventions in the sector properly mapped and coordinated?

### **Environmental Sustainability**

- Has the proposed intervention been assessed in accordance with existing guidelines for environmental impact assessment to ensure that the intervention results in reduced loads on the environment in terms of resource utilisation and pollution?
- Does the proposed intervention take an integrated catchment approach into account?

- Have all reasonable measures been taken to ensure that best practices are used to safeguard sustainable access to the land and water resources required for the intended intervention, including protection of the water source?
- Are proposed technologies adapted to the local conditions where the investments are to be made?
- To what extent is recycling of nutrients included in the sanitation concepts?

#### **Financial Sustainability**

- Is the proposed intervention guided by expressed user demand?
- Are management structures and financing facilities, including those for recovery of costs, adequate to ensure sustained operation and maintenance of the facilities?
- Are tariff structures designed to meet the full costs of operation, maintenance, replacement and capital costs? If not, how and who will cover these costs?
- Do consumers accept and support proposed fee structures and fee collection systems? Is the proposed cost of services within the range of the ability to pay (normally appr. 4% of household income)

#### **Institutional Sustainability**

- Are management structures appropriate in terms of efficiency, accountability, transparency and anti-corruption?
- Are regulation and policy functions of the water and sanitation sector managed by democratic controlled institutions?
- Are the regulatory and legal frame-works sufficient to safeguard long-term sustainability and, even more importantly, is there evidence that regulations are actually implemented?
- Have sufficient measures been taken to enhance capacity building of relevant actors?
- Have the roles of different private and public actors been properly defined?

# Annex 2

## Intensity of Conflict

Research on conflict is usually geared towards international and major intra-state conflict. To a certain extent “conflict” has been equalled to “armed conflict”. The most well know projects studying conflicts have number of deaths as criterion for inclusion in their databases; the Uppsala University “Uppsala Conflict Data Program”<sup>26</sup> requires a minimum of 25 battle deaths in a given calendar year. The Correlates of War<sup>27</sup> (currently hosted at Pennsylvania State University) project’s criterion is at least 999 battle deaths during the span of the conflict. Most data sets include intrastate conflict but often require that government is one of the actors in the conflict. The type of conflicts that are related to water issues obviously does not qualify for inclusion in such databases in the great majority of cases. As mentioned above, the majority of deaths in a water conflict are probably children dying from diarrhoea. They are of course difficult to count, generally reported number of deaths in conflict vary significantly with the way they are counted.

The databases above are directed towards the analysis of armed conflict, normally such conflicts presuppose a certain degree of organisation by the conflict parties. Reported conflict with water components tend to be of a more “spontaneous” kind, this does though not mean that it is impossible to predict or prevent. Such conflict rarely involves organised armed groups.

There are different models describing the levels of conflict on the international level. In order to systemize the observations of conflicts, scales have been developed. Below is an example of how such a scale has been adopted for water events.

**Table 2: International Water Event Intensity Scale\***

Description of conflictive events	Score	Description of cooperative events
Formal declaration of war	-7 * 7	Voluntary unification into one nation
Extensive military acts causing deaths, dislocation or high strategic cost	-6 * 6	International freshwater treaty; major strategic alliance (regional or international)

<sup>26</sup> <http://www.pcr.uu.se/research/UCDP/>

<sup>27</sup> <http://cow2.la.psu.edu/>

Small scale military acts	-5 * 5	Military economic or strategic support
Political-military hostile actions	-4 * 4	Non-military economic, technological or industrial agreement
Diplomatic-economic hostile actions	-3 * 3	Cultural or scientific agreement or support (non-strategic)
Strong verbal expressions displaying hostility in interaction	-2 * 2	Official verbal support of goals, values or regime
Mild verbal expressions displaying discord in interaction	-1 * 1	Minor official exchanges, talks or policy expressions – mild verbal support
Neutral or non-significant acts for the inter-nation situation	0	Neutral or non-significant acts for the inter-nation situation

\*This scale is from the Basins at Risk (BAR) project and is used in the International Water Events Database to describe conflict and cooperative events in international water relations.<sup>28</sup>

### Escalation and Scale of Intensity for Intra-state Conflict

The concept of escalation and intensity of conflict is constantly debated and discussed in Peace and Conflict research. There is no common adapted scale for internal conflict that does not qualify as “armed conflict” according to the above criteria. There are projects trying to track and define conflict and social unrest of different kinds than the armed conflicts defined by a certain number of battle deaths. There is some consensus on the process of escalation that leads to conflict, both international and internal. Higher levels of escalation often presuppose leadership and an ability to mobilise groups of the population. Escalation is often seen as a progressively changing scale of attitudes, the table below is an example of how such change may evolve. The level of mobilisation required for a full-scale armed conflict is obviously consistently larger than most of the attitudes we can observe in some of the intra-state conflicts with water as one of the grievances. Some of the attitudes in the list can though be observed in especially the politicised urban struggles. One of the difficulties with “classical” Peace and Conflict Research is that it hasn’t yet convincingly described and analysed the stages and levels of low-level intra-state conflict that is the category where most of the observed conflict with water components can be observed.

**Table 3: Escalation of conflicts**

Consolidation of stereotypes
Rupture of community
Rigidity of positions
De-individualization
Dehumanisation
Polarization
Irreversible commitment
Self-fulfilling prophecies

<sup>28</sup> Adopted from DIIS Working Paper no 2004/6: [http://www.diis.dk/graphics/Publications/WP2004/jbo\\_hmr\\_water.pdf](http://www.diis.dk/graphics/Publications/WP2004/jbo_hmr_water.pdf)  
“Original” version at: [http://www.transboundarywaters.orst.edu/projects/events/bar\\_scale.html](http://www.transboundarywaters.orst.edu/projects/events/bar_scale.html)

### Minorities at Risk Project (MAR)

The Minorities at Risk Project<sup>29</sup> at the University of Maryland tries to follow and analyse such lower level conflict. It maintains data on 284 politically active groups all over the world. In many of the cases the grievances of the tracked group, or the response from government or other groups, have lead to open conflict in the form of social unrest, riots, clashes with the military and the police or with groups of different political and/or ethnic origin. One of the merits of the MAR project is that it is trying to define and describe a wider range of conflict behaviour and manifestations than the violence registered in the armed conflict databases. It nuances the conflict concept and shows that there are ways to classify and define conflict of an essentially different kind; social tension, verbal and symbolic resistance etc.

**Table 4: Levels of intra-state conflict in MAR codebook\***

<b>FCCS1 365</b>		<b>CC1X 409</b>	<b>PROT 422</b>
<b>Severity of intra-group conflict</b>		<b>Intercommunal Conflict with Antagonist Group</b>	<b>Group Protest Activities</b>
0	None	None evident	None reported
1	Sporadic violent attacks	Individual acts of harassment against property and persons with no fatalities.	Verbal Opposition Public letters, petitions, posters, publications, agitation, etc.
2	Series of bombings/ assassinations	Political agitation, campaigns urging authorities to impose restrictions on group.	Symbolic Resistance Scattered acts of symbolic resistance (e.g. sit-ins, blockage of traffic, sabotage, symbolic destruction of property) or political organizing activity on a substantial scale.
3	Substantial rioting	Sporadic violent attacks by gangs or other small groups. Some fatal actions occurred.	Small Demonstrations A few demonstrations, rallies, strikes, and/or riots, total participation of less than 10,000.
4	Sporadic armed clashes	Anti-group demonstrations, rallies, marches.	Medium Demonstrations Demonstrations, rallies, strikes, and/or riots, total participation of less than 100,000
5	Protracted communal warfare	Communal Rioting, armed attacks.	Large Demonstrations Mass demonstrations, rallies, strikes, and/or riots, total participation greater than 100,000
6		Communal Warfare (protracted, large-scale intergroup violence)	

\*The levels are taken from three coding categories in the MAR codebook.<sup>30</sup> The codebook is the manual that defines how the societal situations considered by the project shall be entered as data in the database. The database contains so far 451 parameters, any given situation will only qualify for the use of a part of all these parameters/database fields.

<sup>29</sup> <http://www.cidcm.umd.edu/inscr/mar/>

<sup>30</sup> Codebook at: [http://www.cidcm.umd.edu/inscr/mar/margene/mar-codebook\\_040903.pdf](http://www.cidcm.umd.edu/inscr/mar/margene/mar-codebook_040903.pdf)



Most groups listed by MAR could of course not be substituted for the often socially excluded urban or peri-urban groups that are most affected by water shortages or with very little or difficult access to water in urban settings. The often quite politicised movements that are mobilising people to act in the struggle against water privatisations are more easily compared with the MAR definitions of politically active groups.

It is difficult to adapt the criteria of the MAR database in relation to the conflicts with water components we identify, but when going through the MAR list of tracked groups and the countries and areas they are active in, (listed in the codebook) there is a certain congruity. Sometimes an ethnic component is explicitly present in the project documentation of the cases we have surveyed. In the Nairobi project discussed below different ethnic groups are mentioned in especially the locally produced documentation. In the Melamchi case grievances of the valley population are sometimes expressed in the framework of “ethnicity”.

In the absence of structured empirical data on intra-state conflicts with water components the different criteria set up by MAR gives an idea on how we can think about societal conflict when analysing such situations.





*Halving poverty by 2015 is one of the greatest challenges of our time, requiring cooperation and sustainability. The partner countries are responsible for their own development. Sida provides resources and develops knowledge and expertise, making the world a richer place.*



SWEDISH INTERNATIONAL  
DEVELOPMENT COOPERATION AGENCY

SE-105 25 Stockholm Sweden  
Phone: +46 (0)8 698 50 00  
Fax: +46 (0)8 20 88 64  
sida@sida.se, www.sida.se