Utrecht Centre for Water, Oceans and Sustainability Law

Report JACANA field work

in Mozambique, South Africa and Swaziland

June 2016

Universiteit Utrecht

INKOMATI-USUTHU CATCHMENT MANAGEMENT AGENCY

Drents Overijsselse Delta

uw waterschap

1. Introduction

This report describes the JACANA research project, carried out in June 2016. The project entailed multidisciplinary research on public participation in South African water management and law. JACANA stands for Joint Approaches to Catchment Area management in the Netherlands, Germany and Southern Africa (Mozambique, South Africa and Swaziland). The South African local water authority, the Inkomati-Usuthu Catchment Management Agency (IUCMA), is currently implementing a strategic management approach which emphasizes public participation. With the financial help of Rotary De Bilt Bilthoven and Rotary Bilthoven-Zandzegge, five students who have different research backgrounds were given the opportunity to conduct fieldwork on, and help improve this management strategy. With their research, the students provided feedback on legal and societal aspects of the IUCMA's water management, to adjust it to stakeholders' needs. Together with Marleen van Rijswick and Anoeska Buijze- both working at the department of Law and the Utrecht Centre for Water, Oceans and Sustainability Law- , these students spent a month in the Inkomati-Usuthu Catchment Area (South Africa) in close cooperation with the Dutch water authority Drents Overijsselse Delta, who have also supported the JACANA project, and the IUCMA.

Heading for Nelspruit in the Inkomati Basin

The five students have a background in law, anthropology and sociology, which resulted in a wide range of research topics. The topics for each of the students were: 'Involvement of women in water management' (Jasmin Schous); 'Perception of water among water users' (Anne-Christine Makkinje); 'Redress of past racism in water law' (Bram Schmidt); 'Incentivizing corporate compliance in water governance' (Rebecca Wörner); and 'Risk perception among stakeholders and water management practitioners' (Benjamin Asante). These sub-researches are presented below, in addition of the relevant conclusions.

The team: Marleen van Rijswick - Rebecca Wörner - Bram Schmidt - Jasmin Schous – Benjamin Asante- Anoeska Buijze - Anne Christine Makkinje

The project was designed to help improve the IUCMA' s water management and the position of stakeholders in the Inkomati Catchment Area, with a focus on the position of women and historically disadvantaged individuals. This was achieved by means of various interviews with a diverse group of stakeholders, including representatives of local water management entities, various experts from the private and public sector and end water users, students and researchers. Thanks to the help of Susan van Heerden it was possible to interview this wide range of stakeholders in a relatively short time. The exchange of perspectives inspired local stakeholders, the Dutch water authority and the students. The students' research findings, in turn, are useful for the Catchment Management Agency to achieve a more inclusive and equitable distribution of the scarce water resources, which also benefits people who historically had less access to water. The project has also been a valuable source of inspiration for the Dutch water authority, as the JACANA project also concerned transboundary cooperation in water management. The group attended a meeting at the United Nations Development Programme office in Mbabane (Swaziland) where different delegates from Mozambique, Swaziland and South Africa came together to prepare the annual River and Environment Management Cooperation (REMCO) conference. The group also visited the Dutch embassy in Maputo (Mozambique) and the Mozambique Regional Administration of Waters in the South (ARA-SUL), where the students further learned on trans-boundary co-operation between South Africa, Swaziland and Mozambique. This report will give an overview of the aims of the general research project, a summary of the students' individual projects, and the results of these projects.

2. Aims of the project

The three Rotary Clubs' aims formed the starting point for the project. The main goal was to design the project to be sustainable in order to make a long-lasting impact. Moreover, the project focuses on the benefits for the local water entities and stakeholders- in particular women. Water was the overarching topic that the project was steered by. First and foremost, the project was intended as a means to help improve the public participation mechanisms of the IUCMA's management by developing Key Performance Indicators, which provide feedback on the management process, and should function as the basis for improvement of this strategy. The aim is to achieve a better management strategy, which benefits stakeholders and results in better water quality. Further societal relevance lies in the exchange of ideas. The students brought with them a Dutch perspective, which proved very valuable for the residents of the Inkomati area involved in water management. As the JACANA project entailed many visits to different kinds of stakeholders and governmental water authorities, it also provided valuable insights from Dutch practice and scholarship in water law and management, which was inspiring for stakeholders involved. It was also very fruitful for the representative of the Drents Overijsselse Delta, as the level of public engagement in South African water management was surprising, yet inspiring to him.

Next to these practical, societal goals, the project also had academic goals. The IUCMA offered an interesting case study of public participation in water management with its Strategic Adaptive Management (SAM) strategy. This strategy emphasizes public participation and constant feedback on the management process, in order to adjust the management process when needed. Because of this, SAM is a useful example of a contemporary and innovative water management strategy which is currently receiving much attention in the international academic literature. The comparison between Dutch and South African water law and water management is also of academic interest. Next to the research carried out by the students, the project was also used to prepare a proposal for a research grant from the Netherlands Organization for Scientific Research. Using the information from the field research, Marleen and Anoeska submitted a proposal for post-doctoral research on the development of KPIs for the IUCMA's Strategic Adaptive Management. The results of this research should benefit the IUCMA, as it will be used as a basis to further improve the IUCMA's management strategy.

Moreover, the project was intended to provide the students with international multidisciplinary research experience.

Visiting the UNDP in Swaziland

During their stay in the Inkomati region, the students have experienced new empirical research methods. The group of students and supervisors was diverse, on an academic and a personal level, and this has led to many interesting discussions among the participants. The students visited a wide range of locations, from sugar mills to the offices of the United Nations Development Programme, to the Dutch Embassy in Maputo, Mozambique. They also have met just a wide and diverse range of people, from the IUCMA's CEO to high-potential students visiting Saturday School. This has influenced the participants, especially the students, in more than just an academic way.

On the road to Mozambique

3. Sub-researches and findings

The students came from various academic backgrounds, such as gender law, sociology and anthropology, administrative law and water law. With these diverse research backgrounds, the students have delved into different topics. Most of the researches focused on the position of parties who have been disadvantaged, such as women and black South Africans who were repressed under the apartheid regime. Two of these research projects specifically focused on the position of women relating to management and use of water. Other projects focused on the position of historically disadvantaged individuals, or on more general governance aspects of water resource management. This chapter briefly introduces each student's sub-research.

3.1 Involvement of women in water management

This research addressed various questions, such as whether it is desirable to have women in water management and how to get women involved in water management. It also involved a comparison between the situations in the Netherlands and South Africa, both on the general subject of stakeholder involvement and on the more specific issue of involvement of women in water management. This research helped to demonstrate that it is beneficial for water management to get more women involved, and it showed that there is currently still room for improvement, both in South Africa and the Netherlands. This research was mostly carried out through interviews with a diverse group of interviewees. These interviews were mainly carried out in South Africa, but also in the Netherlands.

This research shows that gender diversity can improve performances in the corporate and governmental sphere. In commercial businesses, inclusion of women results in improved company performance, improved quality of decision-making and improved corporate governance. From a macroeconomic perspective, drawing on women's talent and professional skills for leadership positions is likely to become more necessary because of ageing populations and shortages of skilled labor. More diversity could also be beneficial to the governmental decision-making process, as a water authority with an equal gender balance will be more representative for the general population.

This research has shown that there is a discrepancy in general stakeholder commitment between the Netherlands and South Africa. In the Netherlands, citizens are not aware of efforts and costs of water management. People living in the area of DWO Delta do not attend board meetings, even though these are public. Because of the current drought in South Africa, every South African citizen realizes that he or she has a direct interest in the management and allocation of water, and therefore wants to give his or her input on the matter. Through forms of participation such as catchment management forums, stakeholders in certain areas can bring their views forward. These forums are well attended, and the standpoints brought forward are used as input for the policies of the CMF and the IUCMA. If WDO Delta wants to involve stakeholders to a larger extent, they should draw conclusions from the way the IUCMA involves stakeholders. First, they should make people aware of the urgency of water management. Second, participation must have a very low threshold. Meetings must be held on concrete topics people can relate to, and close to the stakeholders' homes.

On the issue of the gender perspective, the research suggests that Dutch practice can learn from South African practice. The IUCMA and South African water management authorities in general have more female employees than the Netherlands, also in the positions with more power. The Dutch should take South African policy as an example, but should not copy it one on one. First, because this is simply impossible; the South African situation is shaped by a completely different history and background than the Dutch, and the people regard gender equality in water management situations completely different. Second, because although the South African policy works to the extent that its number of female involvement is higher than the Dutch situation, this does not mean that the actual influence women in these positions have is substantial. There is a lot of discontent about the fact that women can get management positions for the only purpose that they are female.

Left: Interview with Maria Madisa who wants to increase the role of women in agriculture, not only in small farming but also in commercial farming.
Right: traditional role for women in the kitchen

3.2 The role of gender in relation to water

Closely connected to the research on involvement of women in water management is this research on gender in relation to water. This research has a broader scope than the research discussed above, as it not only concerns water management, but also water use by the general population. The main topic addressed by this research is how the division of labour between genders affects men's and women's use of water. This should clarify how gender roles in South Africa influence the use of water, and inform policy on the distribution of water.

This research has been carried out by means of interviews which focused on household situations. These interviews gave insight into South African cultural aspects. The country is still very much a patriarchal society. With regards to the division of labour, this means that generally men are responsible for providing income for the family, while women are responsible for the household. This means that traditionally South African men from the Inkomati region, who are mostly working in the agricultural sector, mainly use water by means of irrigation. Women, on the other hand, mainly use water for domestic purposes, such as cooking, drinking and washing. These traditional gender roles may be changing currently, though. The interviews already indicated that some men are currently inclined to use water for domestic purposes such as cooking. Conversely, women are also getting more engaged in agriculture, and water management as well. These changes may result in a shift in the water use between genders.

Left: men start cooking (although mainly prepairing the 'braai'
Right: the female CEO of the Usutu water authority in Swaziland

3.3 Incentivizing compliance in water governance

This research focused on the issue of how government authorities can ensure that water users comply with South African water law. The aim of this research is to show the IUCMA on what grounds compliance may fail, and how to help improve its policy to ensure the general public's compliance. In general, to ensure compliance, the law should contain clear substantive norms and standards, and sufficiently consider the interests of stakeholders. This research determines whether South African water law lives up to these standards.

With regard to the criterion of clarity of the norms and standards, South Africa's water law is satisfactory. South Africa's most important statute on water law, the National Water Act (NWA) clearly indicates the rights and the duties of water users. With regard to concern for the interests of

people addressed by the law, however, South African water law is more problematic. The consideration of stakeholder's interests is important to ensure enforceability, because parties are more inclined to comply with rules which reflect shared values and principles. Conversely, stakeholders who feel that their interests are not embodied in the applicable rules are less likely to obey the law. This holds true in the South-African context. White commercial farmers who previously held the most extensive water rights are discontent about the legal reforms which resulted in a change of entitlements to water. Black farmers on the other hand may feel that despite the explicit recognition of their rights under the NWA, the political reality is different as the power is still vested with the white elite. Besides this sentiment of discontentment there are various other reasons for non-compliance – such as severe water scarcity that make illegal tapping an attractive option in order to keep the business flowing as well as the lack of awareness of the applicable rules. Many farmers are not sufficiently informed about the legal framework and therefore unconsciously act in violation of the law.

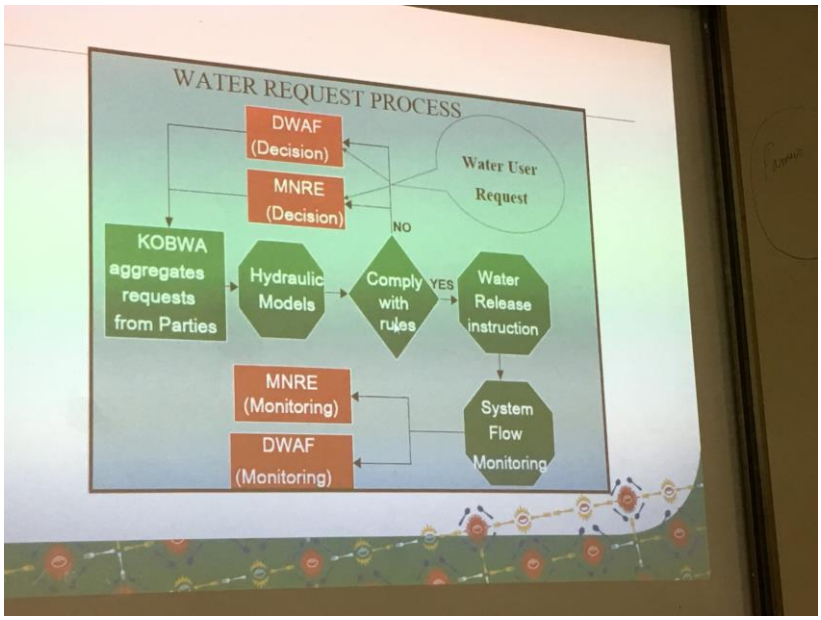
Visiting Ntlemo water projects company which explicitly focuses on compliance with water legislation

The problems with compliance to South African water law also lie outside of the legal framework, and in the sphere of enforcement. In terms of the institutional setting, different problems have occurred that weaken the existing enforcement mechanisms. One of the most pressing issues that should be mentioned in this regard is the inter-institutional struggle between the central governmental and the catchment agency. The mandate of the Inkomati Usuthu CMA has recently been altered by limiting the scope of the agency's powers. The CMA's capacity to perform the tasks it has been entrusted with and its ability to enforce the given rules have therefore been drastically impaired. There is also a lack of available means for proper enforcement. Due to major internal changes pursuant to the reform of the public sector in the 1990's to achieve racial and gender equality, new staff with relatively less sector-specific technical knowledge and experience was hired. This shift not only triggered tensions among employees, it also diminished the government's capacity to adequately enforce the rules. The lacking capacity in terms of schooled staff – but also in terms of manpower – has resulted in very weak enforcement.

Because water authorities are not always in the position to adequately enforce water law, private initiatives to ensure compliances have been established. These include the establishment of fora where governmental authorities and the business sector discuss relevant water-related issues. Another mechanism is the 'naming and shaming' of offenders who are accused of polluting water resources. This is usually done by for instance publishing the name and a description of the offence in

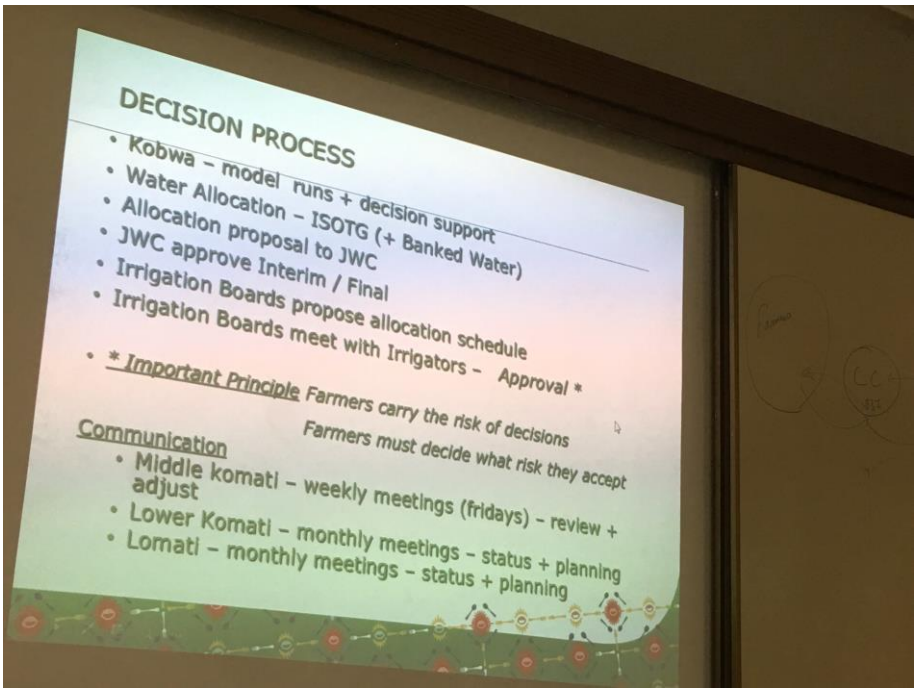
a local newspaper. Highlighting good practices and raising awareness through workshops and other forms of disseminating information are other examples of soft enforcement instruments.

Compliance to water law in South Africa thus shows a varied picture. On the one hand, there is a good condition for compliance in the clarity of the rules posed in the NWA. On the other hand, there are sentiments that the current legal framework does not adequately take the relevant interests into account. Moreover, there seems to be an enforcement problem, which leads to even lower compliance. In the absence of adequate governmental compliance, though, private initiatives emerge which could help ensure compliance.



3.4 Redress of past discrimination in the context South African and Dutch water licensing law

This research was aimed at evaluating the issue of equity in relation to race, which is one of the IUCMA's main strategic goals. The research initially focused on the issue of redress of past racial discrimination. This is a specific legal requirement in South Africa, which entails a compensation for the inequalities which are a result of Apartheid. In order to make society more equal, affirmative action is required. The obligation of redress can be found in the Constitution and in many other statutes. Among these statutes is the National Water Act, the most important South African statute on water law. This starting point eventually led to a comparison between the Dutch and the South African legal systems on water allocation, and an evaluation of which system could be more equitable and market efficient. The questions addressed in this research were: what is the meaning of redress for the IUCMA? How does the obligation of redress influence the allocation of water law in South Africa? And: How do the legal frameworks on the allocation of water in the Netherlands and South Africa compare? This research should help evaluate the South African and Dutch policies, in order to show whether they are currently equitable enough.



The Malelane Cane Growers Association provides empowerment and sustainable finance arrangements for small farmers to enable the redress and the land and water use for small farmers

One of the research findings is that redress and public participation are essential obligations for the IUCMA. The open norm on redress gives the IUCMA much freedom to choose the way in which it implements this obligation. It chose to do so in two ways: allocation and empowerment. By verifying existing water uses, without having the legal competence to do this, the IUCMA is an important contributor to the water allocation reform. This is an important program for redress in water law, and the activities of the IUCMA aim to benefit people who did not have authorized access to water before. Even more than as the basis of water reallocation, the IUCMA has interpreted redress as a vehicle for empowerment and public participation for historically disadvantaged individuals. It was most crucial to the IUCMA to engage these individuals in water resource management, and to help them make effective use of clean water. This obligation is interpreted in a public participation manner, as the IUCMA works together closely with the people it aims to benefit, in order to help them, but also in order to achieve the general goal of good water resource quality.

South Africa's sophisticated water licensing law, including its compulsory licensing system, give issuing authorities the capacity to distribute water rights in an equitable way which takes into account all relevant interests. The Dutch norms on water licenses are relatively simple, and leave less room for deliberation and flexibility for the government. South African water law could be an inspiration to Dutch water law on distribution of water rights. A Dutch legal system inspired by the South African legal system could give more room for an equitable distribution of water, and for a distribution which is not only in the best public interest, but also in the best interest of various different stakeholders with competing interests.

3.5 Risk perception among stakeholders and water management practitioners

This research seeks to compare and contrast the risk perception among stakeholders and water management practitioners, in relation to the current state of the water allocation reforms. Over the course of more than a decade, the National Water Act from 1998 has been in the process of implementation. Risk analysis is applied to the verification procedure, which is the current stage of implementing the National Water Act. The verification procedure is found in the National Water Act, and is a procedure obliging water catchment agencies and water boards to verify the lawfulness or extent of existing water use. Within the process of implementing reforms, the verification procedure preludes the reallocation of water resources. Risks associated with this verification procedure are likely to capture an overall sentiment towards the water allocation reforms. Nevertheless, at the backdrop of an ongoing severe drought, additional factors may influence sentiments towards water allocation reforms. This research discerns between risks pertaining to the water allocation reforms and remaining factors, and aims to exclusively focuses on the water allocation reforms. This research scope cumulated to the following questions: What risks are associated with the water allocation reform? What risks are associated with the verification procedure among stakeholders and water practitioners? What are the similarities and differences in risks associated with the verification procedure between stakeholders and water practitioners? How do these risks inform the risks associated with the overall water allocation reform, and specifically the future procedure of water reallocation? These findings could equip the water catchment agency with the information to devise a communication cable to the public in order to diminish risks, and steer policy-making towards an approach more fitting with public interests.

The current drought poses serious threat to the necessary reallocation of water use rights
Left: the Maguga Dam in Swaziland. Right: small lake falling dry during our stay.

This ongoing research has defined risks to form along the lines of issues revolving around capacity, accountability, autonomy, equity, and stability. Water practitioners have identified institutional autonomy to be the greatest source of risks, while water stakeholders have identified accountability to be the greatest source of risks. Institutional autonomy is considered relevant for water practitioners in relation to independent decision-making, and receiving public mandate. Whereas, accountability concerns the effective forms of communication between agency and public, and promotes public participation. Among both groups policy instruments such as public participation is considered vital for information distribution, generating mandate, promoting water allocation

reforms, and overall diminishing risks among both respective groups. Public participation appears to be of mutual interest in resolving risks, which both relate to the verification procedure and the general water allocation reforms. Further, this finding among others informs that public participation holds great potential in reducing risks likely to be associated with reallocating water resources.

In light of contested instruments for water reallocation, such as compulsory licensing, the role of public participation should be further outlined for this subsequent stage of implementing the water allocation reforms. In order to reduce potential risks relating to accountability or autonomy throughout the water reallocation stage, public participation seems fit. Even though, the substantive elements to which public participation could oversee are unanswered, the sheer presence of public participation as procedural instrument is deemed relevant for tackling risk perception.

4. General research outcome and results

The JACANA research project has been valuable for all parties involved. During their visit, the students and supervisors have shared their views with local interested parties. Besides ad-hoc initiatives such as saving fishes from a small lake that became completely dry during their stay, they analyzed the main gaps in current water management in the Inkomati basin.

Saving the fish, and therefore protecting ecology

With their research, they aimed to help the IUCMA improve its policy. This should in turn lead to an improvement in water resource management in the Inkomati area, and an improvement of the position of local stakeholders. The discussions between the IUCMA's employees, the research supervisors and the representative of Drents-Overijsselse Delta, Michiel van Willigen have led to a growth in insight for all parties. The IUCMA currently sees it as an important task to develop KPIs for its new management strategy.

Organising a workshop on the development of Key Performance Indicators for better water governance

The research group has been especially helpful with its research on social and legal aspects of water resource management. This is an important addition to the technical knowledge which was already in place in the IUCMA. The project has been valuable for local stakeholders. Most of them were happy to discuss the situation in the Inkomati region with experts and students from the Netherlands. One of the highlights was a visit to the Crocodile River forum, a forum for government authorities and businesses on water quality management for the Crocodile River, in which one of the supervisors, Marleen van Rijswick, held a presentation on the Crocodile River's current status from the perspective of a *Ten Building Blocks* framework, developed by a multidisciplinary team of water specialists.

Logo of the stakeholder Forum of the Crocodile river basin

It was thus not only the case that the visiting researchers were eager to learn about the South African situation. South Africans were generally also very interested to hear about the Netherlands and to learn from their perspectives. This was also evidenced when the research group visited a Saturday School, in which the prospective interviewees actually were asking most of the questions. This serves as a good example of how the JACANA project has been inspiring for all of the people involved.

High potential students from rural areas attending additional lessons on the Saturday

The value of the research project was acknowledged by the local press as well. The team has been interviewed for radio broadcast station Radio Laeveld on 17 June 2016 and an article about the project was published in the local press (The Lowvelder on 13 July 2016, see http://lowvelder.co.za/344871/experts-from-netherlands-scrutinise-our-water-laws/).

The project not only had societal relevance. It has also provided the students with a unique international research experience. The students, by doing many different interviews in many different settings, were able to learn a lot about South Africa and about water management. The students' researches were broad-ranging, and have resulted in a broad picture of different aspects which are important to water resource management in South Africa, and also the Netherlands. Moreover, the research will hopefully result in a research grant from the Netherlands Organization for Scientific Research, which could pave the way for more research on this important and interesting subject.

As a follow up of the project the results have been presented at the REMCO conference in Swaziland from 25-27 September 2016, where the project also got attention from the Swaziland national TV.

JACANA - List of research participants and interviewees

Contacts within the water authorities:

Name : Dr Thomas Gyedu-Ababio (Pr. Sci. Nat.)
Function: *CEO: IUCMA*

Name: Brian Jackson
Function: Manager river operations and data IUCMA

Name: Johan Boshoff
Function: Board secretary of the IUCMA; head of the legal department IUCMA

Name: Joseph Mabunda
Function: Manager institutions and participation, stakeholder participation IUCMA

Name: Diketso Khaile
Function: stakeholder management IUCMA

Name: Sihle Gugu Sandleni
Function: Committee Secretary: Governance Division IUCMA

Name: Manthi
Function: employee IUCMA, presented at Crocodile Catchment Forum

Name: Calisto Mabote
Function: Director for Incomati basin, ARA-SUL, Mozambique

Name: Femmy Le Clercq-Westhuis
Function: Board member WDO Delta

Name: Keimpe Sinnema
Function: Advisor on Government and Relations at the Dutch water authority WDO Delta

Name: Michiel van Willigen
Function: Policy Advisor on Government and Relations at the Dutch water authority WDO Delta

Other stakeholder interviewees:

Name:	Sean Thornton-Dibb
Function:	Researcher at the Centre for Water Resources Research, School of Agriculture, Earth and Environmental Science, University of Kwazulu Natal, Scottsville, South Africa
Name:	Simeon Jaganyi
Function:	Technology student of the University of Kwazulu Natal, currently involved in the development of Key Performance Indicators for the IUCMA
Name:	Susan van Heerden
Function:	Independent consultant in water management, with a focus on water quality. (Business Development & SAQA training; Consultant Water Waste Water; Blue & Green Drop compliance training)
Name:	Roger Armitage
Function:	Chief executive officer of TsGro Farming Services, Malalane
Name:	Martin Slabbert
Function:	General manager of sugar cane supply at RCL Foods
Name:	Dawie van Rooy
Function:	Manager of irrigation at RCL Foods and Water Board member
Name:	Albertina Sibyia
Function:	HR, skills development facilitator, financial manager at White River Technical College
Name:	Sam Ntlemo
Function:	CEO of Ntlemo Projects, a water infrastructure company mainly working for local governments
Name:	Japie van Rheden van Oudtshoorn tot Drakenstein
Function:	Currently retired, has had a career in water quality management
Name:	Antje van Driel
Function:	Manager of water and sanitation affairs at the Dutch Embassy in Maputo, Mozambique
Name:	Theo Dormehl
Function:	Civil engineer active in water purification; Chairman of the Crocodile River Catchment Forum

Name: Helene Botes
Function: Coordinator and teacher of ProTec, an organization providing additional school classes for high-potential rural students

Name: Yolanda Oosthuizen
Function: Sembcorp Silulumanzi

Name: Leanne Reichard
Function: Head of Hydro-informatics and Knowledge Management at HydroLogic

Name: Wethu Nkhululeko Tsoboto
Function: student

Name: Porcentia Mbulelo Centia
Function: student

Name: Princess Diamond Omatala
Function: student

Name: Precious Rejoyce
Function: student

Name: Debbie Turner
Function: Secretary to the White River Valley Irrigation Board

Name: Lindsay
Function: has her own business in equipment for measuring water quality, which she sells to municipalities and water treatment plants et cetera; assists Theo Dormehl in his waste water purification activities.

Name: Maria Madisa
Function: Ambassador of the Agricultural Development Committee

Name: Alice van de Werfhorst
Function: Dutch water user

Name: Ingrid Alberts
Function: Dutch water user

Name: Jesse Zwiers
Function: Dutch water user

Name: Maud Veringa
Function: Dutch water user