



SCHOOL OF  
DEVELOPMENT STUDIES  
University of KwaZulu-Natal

# Hydropolitics and Second Order Water Scarcity in South Africa: mapping complexity and contradictions

By Zoë Wilson, [wilsonz@ukzn.ac.za](mailto:wilsonz@ukzn.ac.za)

*Project research assistance from Kea Gordon, Eleanor Hazell, Chitonge Horman, Amanda Khan, Emeka Osuigwe, Karen Peters, Horacio Zandamela and principal investigator, Julie Trottier*

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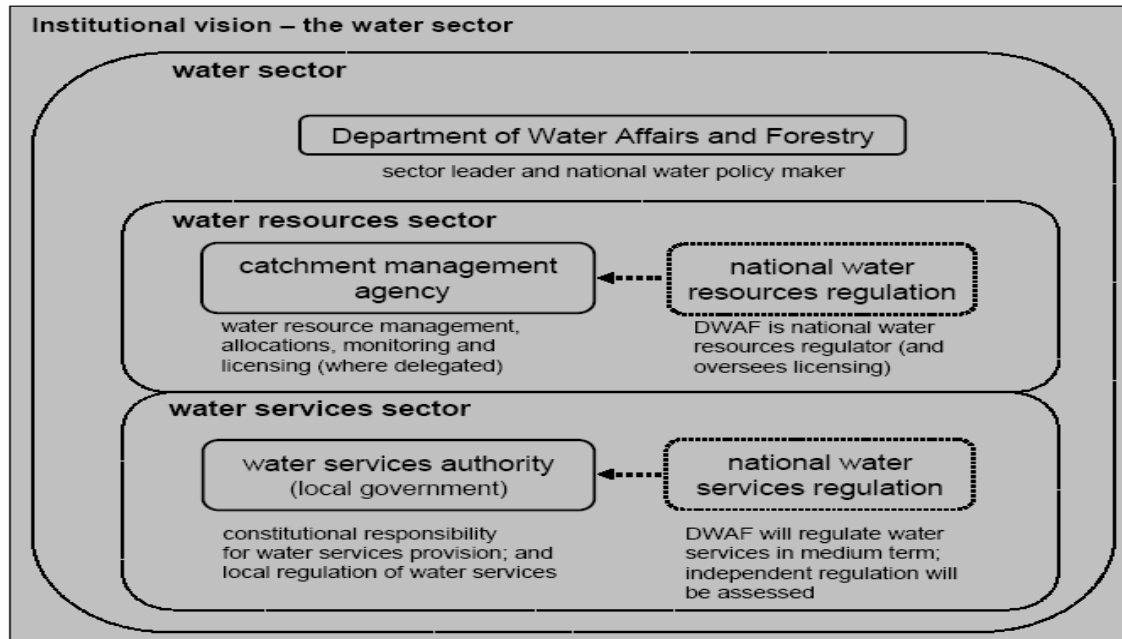
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DFID Engineering KaR Programme 2002: Proposal W1-17

# Introduction to SA hydropolitical landscapes

- Water management has passed from a mixed system of Metro management and riparian rights to a wholly publicly managed system at the District and Local Municipality level
- Simultaneously, a new water resource management strategy was also adopted creating catchment-level management areas

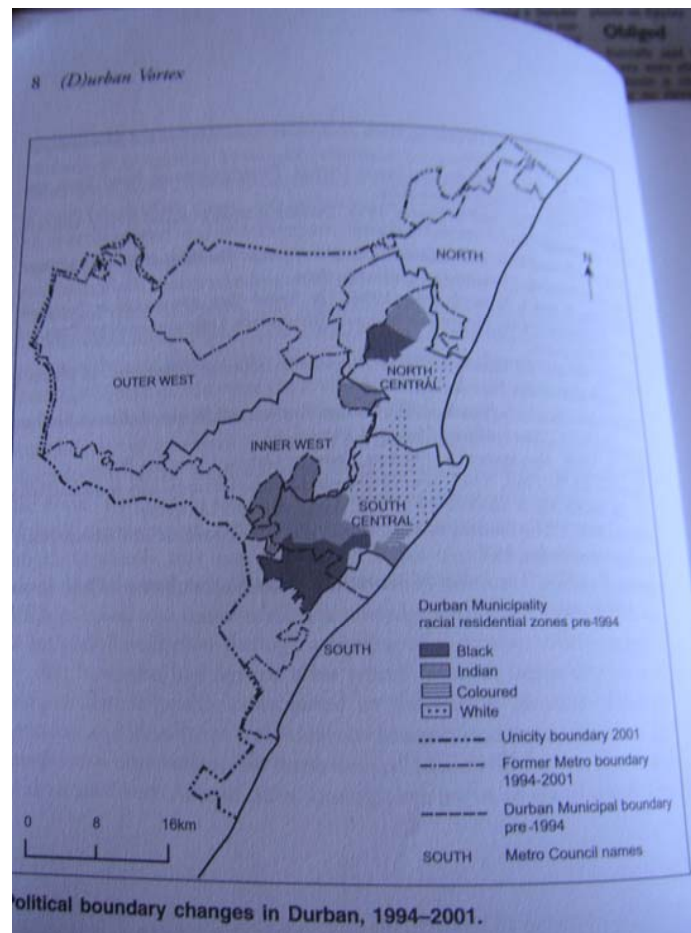




# New Conflicts, Competitions, Cooperation

Today, various and not always well understood logics operate differently in different locales, involving complex, interpenetrated and tangled hierarchies (involving local, national and global relationships) rather than simple linear bottom-up or top-down management processes

# Durban Metro to eThekweni Municipality



# Introduction to Project

- The interface between customary institutions and formal institutions is very poorly known. This means that the water law put out by national government only unevenly corresponds to the political dynamics at play at the local level.
- This research investigates the web of power relations surrounding water access, water use and water allocation. It seeks to identify the relations of cooperation, competition and conflict existing among the various actors that deploy their strategies over a local scale, a national scale or a global scale.
- The relations of cooperation identified can be perceived as an asset that can be built on in order to develop successful water management. The relations of competition can be perceived as crucial interactions that can be changed into occasions of cooperation. Finally, the conflict relations can be downscaled into competitions.
- This research will produce (a) map(s) of all these interactions so that each of these actors will be able to perceive how the strategy it deploys fits among them.

# Phase One

## Preliminary Hydropolitical Situational Map for South Africa

|   |   |
|---|---|
| <p><b>Individual Human Elements/Actors:</b><br/>Minister, Municipal Managers, Heads of Water and Sanitation, Activists, Traditional Leaders, Councilors, Water Users</p>  | <p><b>Implicated and Silent Actors/Actants</b><br/>Children, AIDS-HIV, indigent, environment, pollution, gender politics, politics at the interface of overlapping categories of diversity, interface between water availability and other opportunities (i.e. home-based industries), time</p> |
| <p><b>Collective Actors:</b><br/>CSIR, DBSA, WRC, INTERWATER, , NCWSTI, WISA, SAAWU, SAWAC, SANTAG, SA Red Cross, WIN – SA, DWAF, WRIA, LHWP, Umgeni Water, BloemWater, Waterwise Siza, Mvula Trust, AWARD, World Vision, SUEZ, SAUR, Biwater, Vivendi, PRG, WZC, MSP, AMREF, WHiRL, AFRICON, CONCOR, ERWAT</p> | <p><b>Key Events</b><br/>Demonstrations (Ladysmith, Port Elizabeth), cholera outbreak, typhoid, Delmas, Cape Town, conferences, networks, summits, droughts</p>   |
| <p><b>Discursive Constructions:</b><br/>Water as a human right, as scarce resource, as economic good; people as clients, as citizens, as poor and vulnerable</p>  | <p><b>Discursive Constructions of Non-Human Actants</b><br/>Race, class, gender and ethnic biases in technologies, water as symbol of new 'class apartheid', systemic clash between traditional/modern governance structures, 'alternative technologies'</p>                                    |
| <p><b>Political and historical Elements:</b><br/>Legacy of apartheid, redrawing of municipal boundaries, decentralization, 'appropriate technologies', RDP to GEAR, constitution, capacity (lack of human resources, corruption, governance), infrastructure backlogs, vandalism</p>                            | <p><b>Socio/cultural and Symbolic Elements</b><br/>Water for rituals and funerals, water as 'life', water as driver of economic growth</p>  |
| <p><b>Major Issues and Debates:</b><br/>FBW, appropriate technologies, privatization, water rights, poverty alleviation, service backlogs, accountability, conservation, prepaid meters, commoditization, cost recovery</p>   | <p><b>Spatial Elements</b><br/>Apartheid era spatial planning, move to catchment management areas, rural, urban and sprawl, migration flows population distributions, city geographies, areas of water scarcity, new gated communities</p>  |
| <p><b>Non-Human Elements:</b><br/>City geographies, climate, drought, technologies, water and sanitation infrastructure (dams, treatment plants, etc.), bulk supply (source, delivery, costs), white paper, water Acts</p>  |   |



# Mapping

- Situation
- Social Worlds
- Positional Maps
- End-User Maps

Such maps have proved useful in making the 'usually invisible and inchoate social features of a situation more visible' (Clarke 2003: 572).



# Case Studies

- 1) Mseleni Water Project, Umkhanyakude District, KwaZulu Natal, and;
- 2) Grabouw, Theewaterskloof Local Municipality, Western Cape.



# Grabouw: March - June



Zoe Wilson: wilsonz@ukzn.ac.za

# Some Features

- 80km from Cape Town, fruit growing region
- In 2000 the Grabouw municipality was amalgamated with seven other municipalities in the Overberg District, in accordance with the decision of the Municipal Demarcations Board, to form the Theewaterskloof Municipality
- Constant migration to Grabouw of people in search of seasonal employment in the farm and fruit sector
- Wide variety of hydro-economic regimes flanked one against the other
- Grabouw uses twice the amount of water it has been allocated



| Town    | Black | Coloured | Indian/<br>Asian | White | Total |
|---------|-------|----------|------------------|-------|-------|
| Grabouw | 8119  | 12270    | 30               | 1168  | 21587 |

# Interviews Across the Hydropolitical Constellation

## Questionnaire: goals, challenges, strategies, key perceptions about who gets water and why/how

- Department of Water Affairs and Forestry
- Provincial Government
- Groenveld Irrigation Scheme
- Political parties
- Theewaterskloof Municipality
- Executive Council/ Municipal Management
- Operational Services Director (Theewaterskloof Municipality)
- Operational Services (Grabouw)
- Financial Services Director
- Debtors Clerks
- Ward Councillors
- Ward Committees
- Community Development Workers
- Elgin/Grabouw Community College
- Health Workers
- Grabouw businesses/ Agricultural Forums
- Farm workers
- Households
- Development Bank Southern Africa – has initiated a process to help with new development initiatives such as the housing project, but whose role must still be clarified.

# End User Mapping

- Focus Groups
- Symbols
- Selection of landscape (physical referent, system of relationships, flows)
- Process of setting in proportionate relation: goals, challenges, strategies and theory of change

**\*\*Process on-going \*\***





# Mseleni: April - July





# Some Features

- Northern-most local municipality in KZN, and deeply rural
- The Water Project covers 9 'isigodi' (traditional political units), which do not map exactly onto municipal demarcated 'wards'.
- Except for a small professional community at Mseleni hospital, the population is exclusively Zulu
- 12% are formally employed; 54% have no formal schooling



# Interviews Across the Hydropolitical Constellation

## Same Questionnaire

- Mabaso Tribal Authority and their representatives including: Inkosi, Induna (wardens for each isigodi) and staff at Mabaso Tribal Court.
- Umkhanyakude District Municipality; Umhlabuyalingana Local Municipality
- Partners in Development: Engineering consultancy with Head Office in Pietermaritzburg and office in Mbazwane. PID are consultant engineers on the upgrade. Stephen Nash: Mbazwane Operations Manager and only engineer in the study area. David Still: PID director.
- AquaAmanzi: Implementing agent for the upgrade project
- Sakhisizwe: Institutional & Social Development consultancy based in Mtubatuba. Sakhisizwe are ISD consultants on the upgrade project and have conducted various baseline surveys in the study area. Mrs Dolly Thembe is Sakhisizwe founder and MD.
- Mseleni Hospital: Ex-mission hospital, bulk water user of note (see also background/ history). Dr Victor Fredlund: Devout Christian, Chief Superintendent at the hospital and motivating force behind Vuka Mabaso and the Mseleni Water Project.
- Vuka Mabaso: Community co-operative, founder of the Mseleni Water Project, the office of the water project operates out of their premises.
- Local businesses: a number of small shops and businesses e.g. Post Office; bakery; informal restaurants; 'Rank' equipment store; photocopy shop.
- Africa Foundation: NGO working throughout Africa to improve health care facilities, working in KZN and involved with Mseleni Hospital in the Mduka Clinic and Zululand Flying Doctors programme. Africa Foundation has projects within their 'healthcare' program, which help people gain access to water, they promote technologies such as rainwater tanks, guttering, taps, pumps, windmills and 'Hippo Water Rollers' Water project committee members and sub-committee (each isigodi) members
- Water project plumbers, water project bookkeepers
- Upgrade steering committee members
- Councillors
- Past Actors: Mvula Trust, IDT, Sugar Association, Joint Services Board



# The End

- Questions?
- Comments?
- Suggestions (especially innovative ways to represent information visually)?