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Second Order Water Scarcity in Southern Africa

Welcome to our first newsletter of 2006![1] This newsletter is designed to be of interest to people concerned about access to and conflict over water resources in Southern Africa, and –with the exception of this inaugural double issue - will be distributed bi-monthly until the end of the project cycle, May 2007.

For new subscribers, this issue will first provide a brief re-introduction to the Second Order Water Scarcity Project, penned by Research Director and Principal Investigator, Dr. Julie Trottier from Newcastle University, j.trottier@ncl.ac.uk. The balance of the issue is then devoted to a brief introduction to the progress of research in South Africa. This is being coordinated out of the School of Development Studies at the University of KwaZulu Natal, involving a host of young researchers (*Kea Gordon, Eleanor Hazell, Chitonge Horman, Amanda Khan, Emeka Osuigwe, Karen Peters Horacio Zandamela*), under the supervision of Dr. Zoë Wilson, wilsonz@ukzn.ac.za. Previous newsletters are available at www.waterscarcity.org, and include updates on the Zambian side of the research carried out by Paxina Chileshe in 2003/2004, as well as references to a range of related resources.

We wholehearted encourage feedback on the ideas developed here, as well as contributions on related research and upcoming events. We thank you in advance for your future contributions.

Sincerely,

Zoë Wilson, Lead Researcher, Second Order Water Scarcity in Southern Africa, South Africa Team

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[1] If you are on this list it is because you or somebody you know has suggested that you may be interested in the results of this project and/or you have been a direct participant in the project. To suggest further interested parties or to unsubscribe to this list please email wilsonz@ukzn.ac.za with the word 'unsubscribe' in the subject line.

Brief Re-introduction to the Project

Very little is known about the strategies local actors in Southern Africa deploy and about the competitions, the co operations and conflicts around access to water. The interface between customary institutions and formal institutions is very poorly known. This means that the water law put in place by national government only unevenly corresponds to the political dynamics at play at the local level. It means that many institutions that do not appear in any government document concerning water management actually play a crucial role in determining water access, water use and water allocation.

These competitions have generated second order water scarcity in Southern Africa, i.e., a lack of social and political adaptive capacity to manage water successfully to the satisfaction of all stakeholders. The paucity of knowledge concerning this web of power relations, within which control over water is embedded, has prevented social actors involved in water development from improving their strategies in order to reduce this second order water scarcity. Instead water development projects have kept focusing on first order water scarcity, i.e., the lack of resource itself. Most often, these developments have had limited effect because of the rampant second order scarcity.

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 of all these interactions so that each of these actors will be able to perceive how the strategy it deploys fits among them. This research will also allow the development of a methodology to assess the impact a water project would have on this web of competitions, conflicts and co operations. We call such an assessment a hydropolitical impact assessment.

This research is therefore useful for water development in Southern Africa. And the methodology it is devising is useful for water development in most arid situations around the world. Research will be carried out in South Africa and in Zambia. Zambia is much less water stressed than South Africa, so developing the research over both countries will allow us to produce a methodology that is valuable for a wide range of water stress situations.

Dr. Julie Trottier, Principal Investigator, Second Order Water Scarcity Project in Southern Africa

Research in South Africa: Complexities and Contradictions

Durban skyline

Shack settlement in Grabouw

South Africa's social and geographical landscapes are highly differentiated. They span a wide variety of linguistic, ethnic and racial groupings, levels of development and urbanity, as well as relative and absolute water wealth and scarcity. South Africa's information landscape, while dense in comparison to other African countries, is also highly variable. In part, this is due to the prolonged process of institutional transformation from apartheid to post-apartheid state, the relatively recent re-demarcation of both municipal and provincial boundaries, and rural to urban migration.

South Africa's water sector is in the process of profound institutional transformation, and – at least on paper – it has one of the most progressive water management frameworks in the world, including a national free basic water policy. Management of the water resource is in the process of being transferred to 18 Catchment Management Areas and water delivery is now managed at the Local and District Municipal Levels. The process of transformation has been one that wrestles with highly uneven capacity and infrastructure coverage across the country. Often, in practice, water is managed through a complex mix of new and longstanding relationships and institutional mechanisms.

The South African research project began with a survey of empowering quick-reference visual tools useful at the policy, implementation, community, household and individual levels. The emphasis was placed on people; how people understand their water needs and how these map onto resources and capacities.

The first step was then to compile a preliminary survey of key actors and silent or implicated elements at play at the national level. This 'situational map' begins to make visible the actors and elements related to 'the situation.' We invite readers to make additions to this preliminary list.

Preliminary Hydropolitical Situational Map for South Africa

Individual Human Elements/Actors: Minister, Municipal Managers, Heads of Water and Sanitation, Activists, Traditional Leaders, Councilors, Water Users	**Implicated and Silent Actors/Actants** 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
Collective Actors: 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	**Key Events** Demonstrations (Ladysmith, Port Elizabeth), cholera outbreak, typhoid, Delmas, Cape Town, conferences, networks, summits, droughts
Discursive Constructions: Water as a human right, as scarce resource, as economic good; people as clients, as citizens, as poor and vulnerable	**Discursive Constructions of Non-Human Actants** Race, class, gender and ethnic biases in technologies, water as symbol of new 'class apartheid', systemic clash between traditional/modern governance structures, 'alternative technologies'
Political and historical Elements: Legacy of apartheid, redrawing of municipal boundaries, decentralization, 'appropriate technologies', RDP to GEAR, constitution, capacity (lack of human resources, corruption, governance), infrastructure backlogs, vandalism	**Socio/cultural and Symbolic Elements** Water for rituals and funerals, water as 'life', water as driver of economic growth
Major Issues and Debates: FBW, appropriate technologies, privatization, water rights, poverty alleviation, service backlogs, accountability, conservation, prepaid meters, commoditization, cost recovery	**Spatial Elements** 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
Non-Human Elements: City geographies, climate, drought, technologies, water and sanitation infrastructure (dams, treatment plants, etc.), bulk supply (source, delivery, costs), white paper, water Acts	

The Selection of Case Studies

The table above represents one of a number of extensive efforts to analyze and synthesize South Africa's hydropolitical landscape. After a survey of national level processes, instruments and actors, the project moved to select, in the first instance, two most different cases. This was done in order to begin to capture the highly variable hydropolitical landscapes of South Africa as local scales as well.

The two case studies selected were: 1) Mseleni Water Project, Umkhanyakude District, KwaZulu Natal, and 2) Grabouw, Theewaterskloof Local Municipality, Western Cape.

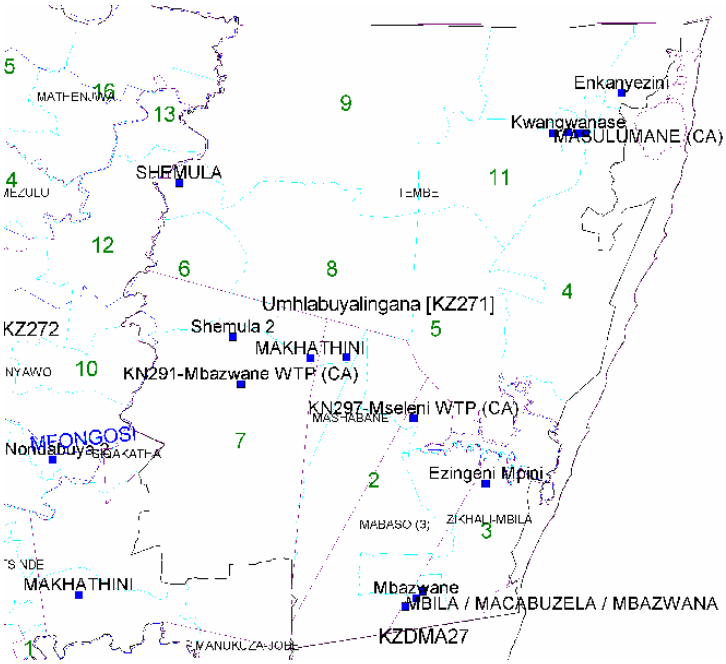
Case Study Briefs:

Mseleni Water Project, Umkhanyakude District, KwaZulu Natal - by Eleanor Hazell

Location, demographic and socio-economic background

The study area is located in Umhlabuyalinga (KZ271), the Northern-most local municipality in KZN. Umkhanyakude District Municipality is the Water Service Authority in the local area. The Catchment-level Water Management Area is Usuthu-Mhlathuze. 14,230 people live in the area served by the Mseleni Water Project. The Water Project covers 9 'isigodi' (traditional political units): Bangizwe, Mafa, Manaba, Mboma, Mlamula, Myanduya, Nhlamvu, Sonto & Vimbkhalo. The area is deeply rural; the nearest town is Mbazwane (25km, R7.50 by Taxi-Kombi). Sodwana Bay National Park is 38km. Water for the scheme is extracted from nearby Lake Sibaya.

Except for a small professional community at Mseleni hospital, the population is exclusively Zulu. The project area falls under Mabaso tribal authority. The tribal court is at Mabaso (see map right) and the traditional system of governance features strongly in day-to-day life. The most commonly referred to division of space are 'isigodi', which follow similar lines but do not map exactly onto municipal demarcated 'wards'.



The study area is very poor. One recent household income survey recently revealed that just 40% of the population has incomes of R500+ per month and 12% are formally employed (PID, 2005:17). Similarly the 2001 census (www.demarcation.org.za) revealed that 45% of households reported no income; just 10% of the working age population are employed (the remainder being unemployed or not economically active) and 54% of people over 20 have had no schooling. Umkhanyakude Water Service Development Plan (2002) estimated the poverty level within the district at 97%. The very high incidence of HIV/AIDS in KZN compounds poverty and poverty contributes to the spread of the epidemic.

High unemployment and levels of poverty have implications for the delivery of water services and the upkeep of infrastructure. With such low incomes, households find it

difficult to pay even a small amount for water and thus recovering the cost of infrastructure investment, operation and maintenance costs is problematic. Local and District Municipalities receive grants such as the equitable share which subsidize the cost of providing basic services to indigent households (those surviving on less than R1100 per month) but these are not sufficient to cover the entire cost of providing basic services. The Free Basic Water Policy intends to provide poor households with 6kl free water per month, but roll-out has yet to reach many rural areas, including Mseleni.

Theewaterskloof Local Municipality, Grabouw, Western Cape - by Karen Peters

Map of the Overberg
(Source: http://www.sa-venues.com/maps/default.htm)

Location, demographic and socio-economic background

The research area, Grabouw, is a small agricultural town in the Western Cape 80km from Cape Town. 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 (IDP, 2003:4). The demographics of Theewaterskloof Municipality represented by Table 1 indicate that aside from the rural category which includes nine smaller rural areas, Grabouw has the largest population - 21 587 people.

Table 1: Demographics of Theewaterskloof Municipality

Town	Black	Coloured	Indian/ Asian	White	Total
Botrivier	564	3202	9	277	4052
Caledon	648	7204	33	2762	10647

Genadendal	96	4302	9	252	4658
Grabouw	**8119**	**12270**	**30**	**1168**	**21587**
Greyton	-	773	15	311	1099
Villiersdorp	2729	3318	9	1513	7568
Riviersonderend	398	2609	21	575	3603
Rural	8813	27524	60	3663	40060
TOTAL	**21368**	**61201**	**186**	**10519**	**93274**

(Statistics South Africa, Census 2001)

The Theewaterskloof Intregrated development Plan (IDP) (2002:78) suggests that, given the legacy of apartheid, the demographics are representative of socio-economic profiles of South Africa more generally. Table 1 indicates that the majority of Grabouw households are from population groups disadvantaged by apartheid. Thus, in Grabouw there are a large proportion of households living on or below the poverty line. An accurate representation of the number of poor households is difficult to gauge because of the constant migration to Grabouw of people in search of seasonal employment in the farm and fruit sector (IDP, 2003:29). This results in job seekers relocating to informal settlements (IDP, 2003:29).

One recent estimate supplied by municipal officials is that 26 000 people live on or below the poverty line in Grabouw. This is well above the total number of people recorded as living in Grabouw by the 2001 Census (Peters, 2005:37). In addition, the Water Services Development Plan (WSDP, 2000) confirms that because of the influx of squatters it is difficult to provide an accurate consumer profile, income distribution or growth rate for Grabouw.

The area is comparatively water rich, yet water contamination is a problem. Grabouw gets its water supplied from the Groenveld Irrigation Scheme (Peters, 2005: Municipal Interview Data). The latter means that Grabouw does not have to negotiate its water supply with a water board. It reports directly to the Department of Water Affairs and Forestry (DWAF). Farmers in the area have their own arrangements with the scheme so do not impinge on the domestic supply of water or vice versa. There are three major private sector users of water in the area – the abattoir, Two-a-day Fruit Juices and Appletizer. They and several smaller industries are supplied with water by Grabouw.

According to the Overberg District IDP (2002:70), the district municipality under which Theewaterskloof Municipality falls, Grabouw uses twice the amount of water it has been allocated. The anticipated building of another 3 500 houses will further increase water

demand. The Groenveld Irrigation scheme can supply 2 650 mega litres per year, but Grabouw will need 5 000 mega litres per year. Surprisingly, the WSDP (2000) does not acknowledge the necessity of a water saving scheme, suggesting only that one will be introduced "when necessary". The Overberg District IDP (2002:72) acknowledges that demand management is under-emphasised, however in Grabouw it appears to be absent.

Progress

Research began in Grabouw in March 2006, and results are in the process of being analyzed and synthesized into visual form. 5 community reports backs and end-user mapping workshops took place on April 10th and 11th and that process is ongoing. Research in Mseleni began in April and is still in the first phase. The next issue of the newsletter will provide an update on those case studies and the results of the end user mapping workshops.

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