



## Drought relief in rural KwaZulu-Natal

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SOUTH AFRICA is a water scarce country which is periodically afflicted by severe and prolonged meteorological droughts. No area is immune, and includes the province of KwaZulu-Natal which receives about twice as much rainfall as the other provinces in South Africa, and has about 40 per cent of the country's rainfall runoff.

A prolonged period of below average rainfall in the late 1980's had a cumulative effect on the country's water resources and when the seasonal rainfall for 1992-93 was the second consecutive year of rainfall below 75 per cent (Calow et al, 1996), the impact was devastating. Most of the areas worst affected had large rural populations. This drought exacerbated an already existing problem of inadequate water supplies.

The response to this crisis was for a group of government and non-government organisations to jointly launch a drought relief programme in all affected areas. This programme was terminated in December 1993 with the onset of good rains at the start of the 1993-94 wet season. In retrospect, it was terminated prematurely as the rains ended early and many areas remained in a water-stressed situation. A second drought relief programme, organised and executed primarily by the Department of Water Affairs and Forestry (DWAF), was initiated in the northern part of the country in September 1994 and with continuing poor rainfall at the start of the 1994-95 wet season, in KwaZulu-Natal in January 1995.

The procedures used in conducting the drought relief exercise differed slightly throughout the country according to circumstance. This paper discusses the methodology applied to the province of KwaZulu-Natal, particularly to the Zululand region in the north.

### Organisational arrangements

In order to implement effective coordination between the various government and non-government organisations active in the water field and with the rural communities, Crisis Committees were established in the areas of operation. These Crisis Committees met on a regular basis throughout the programme. The main functions performed by this forum included:

- prioritisation of areas of greatest need;
- determination of drought criteria;
- clearing house for requests from communities for assistance;
- report back and information platform;
- sharing of expertise gained and lessons learnt;

- discussion of particular problems encountered;
- sharing of available resources.

The KwaZulu-Natal Regional Office of DWAF was tasked with the drought relief programme within the province. A project manager/coordinator was appointed to oversee the operation. Under his direction a number of field teams were assembled. Each team consisted of two technical persons and one community liaison officer (CLO). The technical personnel were required to undertake the actual assessments. In most cases, they were not of the same cultural group as the communities and therefore could not speak their language or understand the intricacies of their culture. This was the function of the CLOs who were of the same cultural group. They were required to act as the interface between the two parties.

Each field team was allocated a separate area within which to operate, and were issued two vehicles, two Global Positioning Systems (GPSs), the relevant maps, and any other information which could prove to be useful.

### Drought criteria applied

At the onset of the programme, it was necessary to establish criteria for prioritizing the communities' needs within the drought stricken areas so that efforts could be focused where needed most.

The categories of priority initially used were:

Red:	< 10 litres/capita/day	or	> 2km walking distance
Yellow:	10 - 15 litres/capita/day	or	1-2km walking distance
Green:	> 15 litres/capita/day	and	< 1km walking distance

The walking distance factor was used secondarily to the litres/capita/day factor. Although these criteria are well below the standards set for the country's RDP programme, they provided the correct focus for a drought relief exercise. Near the end of the programme when funds were running low, these criteria were tightened further, to ensure that the most stressed areas were catered for.

A water quality classification consisting of various acceptability levels relating to health effects was also established. This was used in the assessment of newly drilled boreholes.

### Implementation

Requests for assistance were received from a number of communities. It was soon realised that the majority of these requests emanated from communities who were slightly more affluent and urbanised and their needs gen-

erally fell in the yellow to green categories. Further, in rushing off to attend to these communities, others were being passed by, who were in a far worse state and desperately needed assistance. It was thus decided to 'sweep' through the drought areas and cover all communities within, rather than provide spot assistance.

The point of departure was to ascertain, with the assistance of the Crisis Committee, which areas were the worst affected. The next step was to attend a 'Regional meeting' of the affected area. This is a quarterly meeting of all the various Amakhosi (tribal chiefs) within a particular district. Here the purpose of the drought programme and the modus operandi were explained, and permission obtained to operate within their areas of jurisdiction. The Amakhosi were requested to prioritize the needs of the district. This not only produced a starting point for the assessments, but prevented conflict and discontent later in the programme, as none could complain about the order in which the areas

were covered. If this meeting was not imminent, the Amakhosi were consulted individually, and then again later when the meeting took place.

Contact was then made with the local District Development Committee, if one existed, to explain the team's presence and intentions within the area, to obtain their assistance in contacting the individual communities, and to report back on progress later.

Each team linked up with the local Agricultural Extension Officer from their area. These extension officers were familiar with the countryside and the communities, and often knew of the location of a large number of the existing boreholes and other water sources.

The modus operandi of each team was as follows: they would visit a community, and after explaining the purpose of their visit would get community members to indicate all their sources of water. Each source was geo-referenced, then assessed as to its yield, distance from the community,

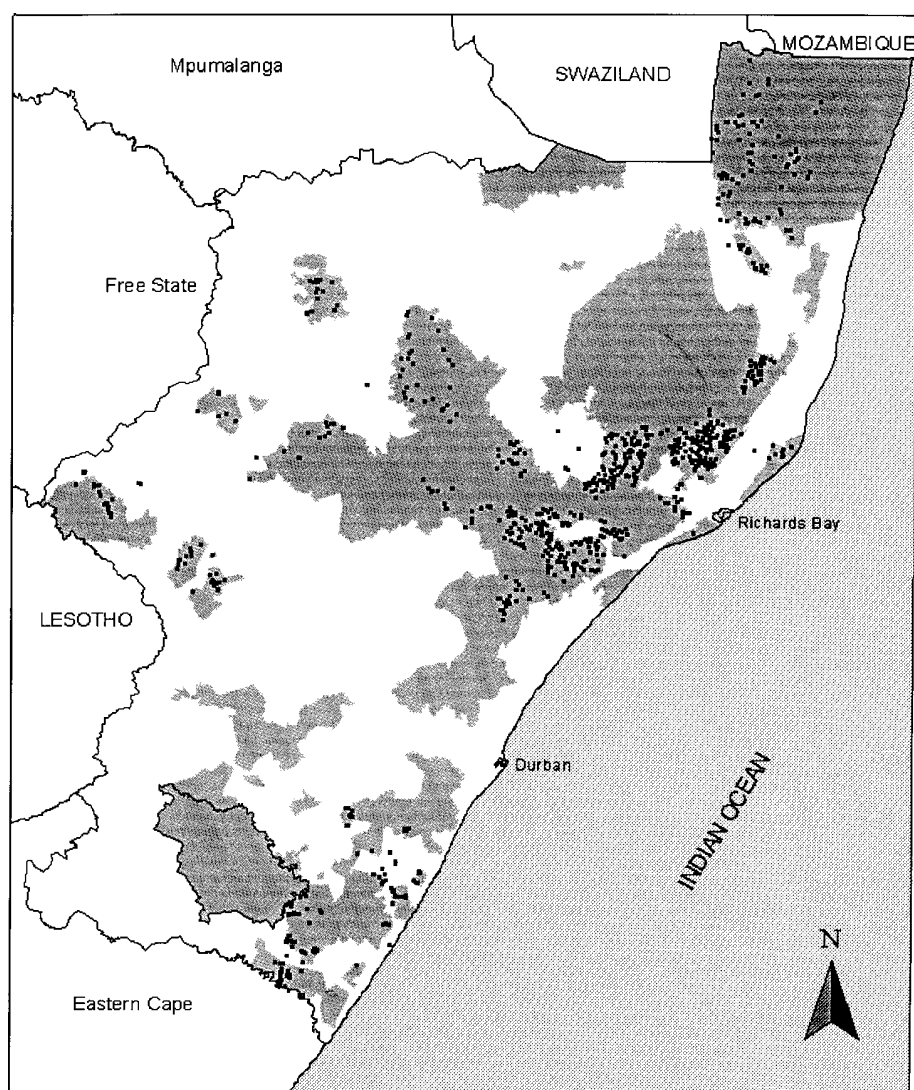


Figure 1. KwaZulu-Natal showing rural areas and concentrations of newly drilled boreholes

water quality, and existing problems (if any). This information was filled onto a form together with information about the community, and then summarized to determine the community's priority according to the established criteria. Suitable recommendations were then passed back to the project coordinator as to the measures to be implemented, if any. The team then moved on to an adjacent community to repeat the same exercise.

All handpumps requiring maintenance were recommended for repair, and all unprotected springs were recommended for protection. Possible borehole sites, in areas that required additional sources, were geo-referenced in consultation with community members. In areas that were extremely critical, water tankering was recommended, but *only* if other options could be developed such that there was a definite end point to the tankering.

The project coordinator obtained tenders and quotations from the various geo-consultants, drillers, contractors, and suppliers at the onset of the programme for use throughout the programme's duration. Upon receipt of the teams' recommendations, materials were ordered and jobs awarded to the relevant consultants and contractors. This was an ongoing process throughout the programme. The teams were required to indicate the water sources and the possible borehole sites to the consultants and contractors. The consultants were required to supervise all drilling and yield testing operations, whilst the field teams were required to supervise all maintenance and water tankering operations. Invoices were submitted via the supervisors to the project coordinator for payment.

Boreholes were sited by geohydrologists as close to the indicated positions as possible. The sites were then referred back to the communities for acceptance. All successful boreholes (>0.1 litres/second) were subjected to pumped yield tests to determine their true potential. Two water samples (one taken after the blow yield and one after the pump test) were sent to the DWAF laboratory for analysis to determine the borehole's water quality. All acceptable boreholes (according to the water quality criteria) were then equipped with handpumps regardless of their yield.

## Termination

Good rains fell in the 1995/96 wet season alleviating most of the need for a drought programme. The programme was thus terminated in March 1996. By this stage, the allocated funds (R23 million) had been exhausted. At termination, over 500 communities had been assessed. A total of 993 new boreholes were drilled (refer Figure 1), of which just over 480 were equipped with handpumps, 1130 handpumps and windmills were repaired, and 176 springs protected (Lenehan, 1996).

## Lessons learnt

Overall, the original objectives were achieved, i.e. to supply emergency water to as many people as possible in the drought stricken areas.

Positive aspects of the exercise were:

- the usual bureaucratic procedures were allowed to be short circuited enabling a timely response to most areas;
- through the partnerships formed, coordination and community involvement, the correct areas were targeted;
- the cost incurred compared to the number of people assisted was relatively low;
- valuable information on the communities and their water supplies was obtained. Yield information on the newly drilled boreholes can be used for further development at a later stage.

The programme's effectiveness, if based on the above points, can be considered successful. However, a number of problems were encountered and the programme contained certain negative aspects:

- the exercise contained many elements of 'crisis management', such as: little time for full community mobilisation, diversion of government resources, and no post-drought evaluation (Calow et al, 1996);
- not all drought stricken areas were assisted owing to lack of available manpower;
- lack of suitable communication equipment affected efficiency;
- relatively little baseline information about the rural populations and their water supplies was initially available, thus valuable time was lost at the onset;
- many areas in a water-stressed situation resulted more from long term neglect than from the prevailing drought;
- owing to the urgency with which assistance had to be rendered there was insufficient time to do adequate capacity building, thus ownership of the newly installed handpumps was never officially handed over to the communities, thereby creating additional infrastructure for the Government to maintain.

Although over 900 000 people were assisted through this exercise, proactive drought management through proper monitoring, planning, and taking advanced precautionary measures can prevent the need for future exercises such as this.

## References

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