



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA



Kwa Zulu Natal National Groundwater Strategy Workshop-comments

Theme: 1-3 & 7

1) EDUCATING THE USER

2) INTERDEPT CO-ORDINATION (20 Ha & FIELD, (NO WATER)

3) UNDERSTANDING WATER NEED FOR IRRIGATION (50,000 - 100,000 l/day)

4) AUTO SWITCH OFF VALVES

5) FOLLOW THROUGH - R300K BOREHOLE, NO 35K PUMP.

6) FACED SPRINGS (WHY?)

7) BOREHOLE INTERVENT 14/20

10PS PER DAY

WHERE DOES GROUNDWATER COME FROM - USERS DON'T KNOW

FROM JOHN PEARSON
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A. NITROGEN FERTILIZER IS APPLIED UP TO OPTIMUM LEVEL, THERE IS NO LEACHING INTO GROUND WATER - ONLY LEIS OVER APPLIED

5- NRCWA - Coordinator consulted
Answers from - Education - Coordination

- Articulation of the principles laid
- who does what and where do we start?
End User to National level.

OR

National level to End-user

- Understanding the basis of why this has to be done
- Stakeholders especially end-users should be seen as subject of development

Strong National Government leadership vital but demand upward communication also required - from Local Municipality - representing the community to Minister then to National Minister

Theme: 4, 5, 6 & 8

Sylvestre Ndoro
 GSCW Consulting Pty Ltd
 Groundwater Consulting
 SCS Consulting & Audit Ltd

(1) Planning in advance for emergency drought relief in institutions and towns. Should by boreholes

(2) Groundwater protection - Need to establish TCE sources and their characteristics such as sustainability, quality, quantity

(3) Education from primary level (end uses to National)

(4) Coordination of all stake

holders - Consultants
 - Private Individuals
 - District
 - Regional

Stakeholder responsibilities
 - Groundwater Monitoring
 - Water level monitoring
 - Quality monitoring
 - Open Demand versus abstraction

Engagement of Professionals in groundwater especially municipalities - training of their personnel as part of capacity building

Appointments of Geohydrology Consultants to manage all drilling activities, recording required information from siting, drilling, testing quality and sustainability

Pre-requisite for on-site sanitation - all low cost housing where VIP sanitation is to be used. Impact on groundwater.

9. Info
 Summary of existing info
 Integrate
 Report as regional basis
 Integrate into city body of knowledge
 Monitoring
 Sonar geophysics instead of drilling

COMMENTS.
GROUNDWATER CONSULTING & GND
 - RDM to be done prior to drilling and not after. Authorities should be informed of shared areas. To be IB part of management plan
 - Awareness drive should target governmental officials first. LM/DM
 - Water Boards must have high priority to integrate NWS with
 - Keep the B&IP momentum in all provinces
 - Appoint dedicated hydrogeologists to support GWA (via term tender)
 - Do not be stopped in policy direction with all 20 mining water = 2000000

W. Kristinger, Agriculture
 Better Communication on groundwater - Currently about non-existing
 Verification and Validation
 Being done in 4 of the 9 CMAs - Must complete and information apply on quantity of groundwater available
 Controlling of quantity and quality should be done by an independent body. Policy can not be reference

RSA should have to
 (1) Water Police - It must be a crime to waste water.
 - B could go around and investigate if there are no water wastages by the community & municipalities etc.
 - If there are pipes broken, the local municipality must be investigated if their asset management is inadequate. If the pipe breaks because it is old, the responsible asset manager must be changed unless the pipe has been vandalised etc.
 - Control boreholes must be drilled to assess the quality of the groundwater from being polluted by activities etc.
 Public Work Done etc.

USE OF WATER WILL BE WASTEFUL UNLESS THE END USERS UNDERSTAND THE CRISIS.
PARTICULARLY TRUE OF GROUNDWATER AS IT CANNOT BE SEEN.
 Terms: Private, PRIVATE SECTOR.

Theme: 4, 5, 6 & 8

Groundwater Information Management
 * Engage with drillers, consultants and engineers. You can meet them at the GAKZN meetings.
 * The geohydrology component of the regional office must be represented at the CMF meetings that are run by the DWS.

Mining

IS IT POSSIBLE TO CREATE THE EQUIVALENT OF OFF-COURSE STORAGE DAMS FOR REPLENISHING AQUIFERS?
 JOHN PHIPSON
 PRIVATE SECTOR.

WE NEED TO CREATE AN ACADEMY (INDEPENDENT) TO TRAIN + MENTOR WATER MANAGEMENT STAFF AT MUNICIPAL LEVEL
 JOHN PHIPSON
 PRIVATE SECTOR

Quality:
 Quantity = to ensure that there is enough water for each borehole it must be about 200 km from each other.
 - For aquifer level - Farmers and municipalities - financial support, skills, equipment

Shared aquifers:
 under the NWA, establish 'Aquifer Users' Associations (similar to WUA's)

(9) Utilisation of local basins - GAKZN to Manage groundwater sources

Rural water supply - often hand pumps, no WUA required. No monitoring of quantities abstracted. No maintenance, no monitoring - needs to be addressed

Theme: 9, 10 & 11

- 1) Improve qualifications related to GW: ensure no gaps during training
- 2) incorporate an apprenticeship into guidelines:
Link to SAQA - SACNASP
↳ involve private sector to evaluate standards

SCN Consulting

- ① - Maintenance action plan especially at Schools - Train Pump operators - how to report identify source of the problem
- ② - End user - operating techniques for long term sustainability of the source -

Academia -
Work closely with DWS on building capacity & provide CPD training for capacity building

Capacity building at all levels is vital. Education required. Increased budgets required

GW MANAGEMENT INSTITUTIONS ARE URGENT - NOT 5 YEARS AWAY.

Theme: 12

Groundwater database - NW, GW, etc need updating. A lot of useless information (incomplete, inaccurate etc) exists. Another drive to update the data is required. Without knowing current use, no future planning possible.

Several (about 10) BMs with broken or no equipment that could be upgraded before drilling of new BMs. Pump testing required - current existing resources being used.

UNIVERSITIES -
TEACHING THE SUBJECT, NOT THE PRACTICE.
LEAVES HUGE GAPS.

TRAINING AT
TECHNICIAN LEVEL

frigate in
fuel
~~2~~
280C
light