

# NGS Theme 1, 2 & 7

**SALSA**  
 - Information sharing on local level and by stakeholders  
 - Funding of awareness programmes at local level  
 - "WAR ON GROUND WATER THEFT" be established comprising of different sectors

1. People on the ground do not have full info
2. Through public participation, forums & awareness campaigns
- 3.
- 4.
5. No
6. By mentoring & training more young people to enter in groundwater studies
- 7.

**M3 Term - CoATA - FS**  
 Finance - Funding is available, we need to support Municipalities, give them hand money that they can utilize sector plan (Water Sector Development Plan, Water Market Plan) and train all relevant structures at the district / state to deal with Operational matter. Recommendation be made to regulate where these systems by them

- Local Gov/Municipality
- Annually Meetings/Workshops
  - Monitoring of all stakeholders
  - Yes
  - Involving at regional level
  - Proper training / rural development of local work force cause artisans / guys will always go at a later stage after been developed
  - Develop local workshops
  - Establish old system / Conventios
  - Maintenance strategies

**Dept of Agriculture**  
 Law → Rule

Enhance knowledge and understanding of the requirements towards effective operations and maintenance of boreholes

Also ensure effective, efficient and sustainable water supply to the communities

Yes we need a strong national agreement

Failure of most groundwater supply schemes in the country is mainly associated with poor monitoring of ground resources and poor operation and maintenance of the infrastructure.

**AGRICULTURE**

1. Financial Decision makers needs to be knowledgeable and skilled on groundwater sources
2. Managing sources in agriculture is a challenge eg: Many boreholes are being drilled instead of cleaning and existing existing ones. Because of people making such decisions the policies with no knowledge.
3. Officers or involved in the initiation of projects, during the identification of the sources, where boreholes are tested and yields are determined. Once the projects are in operation there is no monitoring or maintenance of such sources
4. Groundwater is used without authorization

- Agriculture:
- and awareness of small bus. structures in water.
  - What is the relationship between municipal and water affairs. Legislation yes
  - Bill: municipal / or water and sanitation
  - 3

# 2. Theme 1, 2 & 7

**Sector: Local Government**

The DWS should assist the local municipality in creating and implementing By-laws (water).

**Water Abstraction - Local Government (Municip)**

How do you get to use groundwater as a source of income for Municipality? Seeing that most communities will claim that they utilised their resources to drill and operate.

- Empower Local Municipality**
- Education for both Local Gov. and local farmers is required as well as communities
  - Publication of all state holds to utilize and implementation of all plans of action and feedback must be made available
  - Trust would be a good idea, and the trust for each district or local mun. should be created and in hand in establishing a staff of new holds as well as existing ones.
  - All local governments as well as farmers and communities are the first in line to develop the strategies
  - Comm. state holders should have a TRP and the municipalities to have qualified staff and by-laws to be updated
  - Finance could be directed via the state or to be put in a trust and sharing authority with local municipality communities.

**Sector: Irrigation (WUA)**

- delegation of power and functions
- "Regulations in place", raise more awareness, education and implementation
- too little localized institutional capacity.
- authorization process need improvement.

The issue of AMD in our fresh groundwater systems?

Bayada

Proper alignment of groundwater work in the regions with the national office

Bayada

**Bidding from Justice System.**

- No teeth.
- Identified non-compliance need to be handled and processed speedily through judicial system.
- No adherence needs to be felt with appropriate fines?

What critical deliverables do you see as your sector in general?

I would like to see strategy talking to looking and the US development, and the implementation thereof.

I also would like to see the strategy talking to the "south dog" and the implementation thereof. Especially with issues like acquirer management.

- Fanie de Lange Academic IGIS**
- Rolling the functions and process in local level with order + process implementation
  - Participation on Learning
  - Improved Communication
  - LOCAL GOV. DISTRICT LEVEL
  - Subsidiary → Services LRI
  - Interworking relationship between sector departments with DWS as the main contribution.
  - Ground water landscape/Map information

Reserve determination need to be revised urgently!!

No mention in strategy?

3.

# Theme 1, 2 & 7

Judith  
 A National Strategy should describe  
 Co. Institutions (EWRA) eg. to  
 with the development Nat Strategy  
 develop their business plans to  
 manage the gw. within their  
 area of jurisdiction  
 Commercialization of laws can  
 only work if it is better to ground

Judith  
 EWRA's must develop  
 Business Plans taking into  
 consideration the National Strategy,  
 in other words EWRA's will  
 not meet the same in the  
 boards  
 Specific policies will be  
 developed by the EWRA's.  
 Some require are big  
 and of more importance than  
 local and can be developed  
 as brown agendas (Plans not  
 detailed) eg. There can be  
 managed to local institutions

Need to fully use  
 the gas capacity that  
 we have/had  
 eg. many hydrogeologists working  
 elsewhere in Africa/world  
 because they could get work  
 in SA.

consultant

3. Ebt. authorisation must be  
 investigated and must be  
 Regulated through Management  
 by Taxation  
 and not try to be managed  
 by means of Regulation

So give them and avoid  
 by monitoring that it is  
 sustainable working  
 of their responsibility  
 of EWRA's

EWRA should  
 We have a Kalkbeld Aquifer  
 near Sp. and JES has  
 developed the KAMS - Kalkbeld  
 Aquifer Plan System - then in  
 a JES system and through this  
 (see book)

Judith  
 The water Institutional structure  
 in down-growth. Then institutions  
 and be empowered to take  
 over management of gw.  
 some regulatory capacity  
 so. would the DWS  
 be a regulator only.  
 That's demarcation or  
 was the release of UG  
 NWA. Others also do  
 not do away with law  
 as it is described in the  
 NWA and in a legal trans-  
 lation. Also try to analyse  
 surface DWS and EWRA sit-  
 uation. The DWS can  
 assist with best practice  
 guide for EWRA's. Clean  
 and EWRA established 2007

WHAT CAN BE DONE IF A PRIVATE  
 LAND HAS GOT WATER, BUT THE OWNER  
 DOES NOT WANT TO PUMP BUT HE WANTS  
 TO SELL THAT WATER?

MOBILISE LAW

1. What is the GDP Contribution of Groundwater  
 2. What does one dollar invested in ground  
 water yield?  
 → Who would any analysis of this report  
 reduction investment in of finance.

4.

# Theme 1, 2 & 7

Fanie de Lange  
 Academics

Too many groundwater projects  
 are allocated to engineers  
 without proper groundwater  
 background or advice.

Qualified hydrogeologists  
 should be a prerequisite  
 on any GW tender  
 going out from DWS.

- This include WULA's

IGS

Governance is required in  
 terms of groundwater  
 conditions for use as  
 required for restrictions, drought,  
 etc.

There is a gap in the  
 implementation of licence and  
 registration conditions which  
 can be achieved through  
 proper coordination, ie.  
 a Trust.

Anton Jones

Need to develop gas  
 capacity in CMA's/  
 municipalities/water  
 boards → or provide  
 them with capacity

education + awareness  
consultant

DWS need to have  
 a strong gw unit  
 (a la D.V.: hydrogeology)

6 water boards  
 Introduction of water related  
 topics in the education system  
 to how far ~~that~~ does the  
 strategy talk to that.

Need to implement  
 the NWA 1998

Need to have clear  
 guidelines & standards

consultant

DWS are in touch  
 of (ground) water

in SA - they need  
 to take responsibility  
 & stop trying to shift  
 the responsibility down the  
 line

consultant

All groundwater  
 stakeholders need to be  
 part of a groundwater  
 trust and engage under  
 a groundwater code of  
 practice to ensure that  
 the Strategy is both  
 implementable + implemented  
 through proper coordination  
 + management + ensuring  
 regulation of resources +  
 users.

Anton Jones

The Strategy should have  
 specific groundwater financial  
 legislation - piece.

The Strategy should create  
 various types of local  
 bodies of decentralisation at

# Theme 3, 4, 5, 6 & 8

1.

- ① Groundwater classification
- ② Self-regulation of groundwater needs to be prioritised
- ③ Monitoring of groundwater and management of
- ④ Registration of boreholes
- ⑤ Regulation of activities need to be controlled by DWS

## Local

- ① Not only professional being involved but also training of employed works
- ② Maintenance of Groundwater course once surface water is enough we forget about Groundwater
- ③ Each source should be prioritise Ground and surface water.

**Regulation**

- The use of water that can be extracted per day, per week, per year, etc.
- Ownership of water can mean or community or lease
- The purpose is determined by what has the license issued for regulation or strategic planning

I think Capacity building should start at the top [i.e. Executive or decision maker level]. If they are educated enough they will provide excellent or educated strategic decisions about groundwater usage / drilling and licensing.

## M.J. Tams - CAGWA - FWS

- Involve Water Service Authority of the regulatory / licensing process.
- Regulatory body for Drilling Service
- Institution of higher learning should consider to refer for Groundwater Management by DWS & NSAs
- Action must be taken against power that provide unregulated drilling practices and to improve

→ Without water act stipulate that water should be used and treated and protected and return to the ground should the drought or low flow occur. We should maintain this water resources.

- Reduction of any body drilling existing well
- For, they are bigger user and only building a new one, it should be built the first off to be used
- However, volume decreased and prevent and you build for the next spring so it is not a real solution but a counter measure to be taken

## GW RESOURCES PROTECTION

- Low vulnerability maps needs to be localised and developed into CMAs
- Vulnerability Vs Risk Assessment
  - Creating guidelines on Vulnerability x Risk
  - Training areas industrial areas - population density high risk
- Areas of high vulnerability/risk should be prioritised for risk assessment

Inter departmental partnership specifically DWS and Education for the introduction of water as a subject at Basic Education level.

**Anten Tams**

The strategy needs to assist in regulating the domestic sector in terms of use + the enforcement thereof since it is not possible to limit supply for domestic water

→ Educators and formal (government) will using the lesson learnt government according to laws and rules

- Some quality control and water supply
- Technical education, engineering
- To work as human settlement to assist the water is not sufficient
- Government has to take action

Mapletoft 11

# Theme 3-6 & 8

2.

RDA's go some to require complete review not effective

None standards & guidelines to required - to be practical & implementable

① The Strategy should suggest that a Institution need be established to regulate usage.

Establishment/Development of an institution that looks at putting corrective measures. If there was an incident whereby there was a user abstracting the source which there should be abstraction. This case was reported and the status quo remained for an extended period.

NGS most contextual issues → need to prioritise issues

Good education in hydrogeology very ab. Need to educate for manager.

Need to restructure DWS hydrogeological skills to be contextual LD but also need to get gov knowledge into institutions / water organisations

Mapletoft

- Enough capacity is crucial regarding licensing process or registration of water user.
- Application and registration fees for revenue
- The Department must be able to monitor and enforce compliance, regarding groundwater Management

Paper & efficient authorisation critical LD to learn from SWS

Paper professional accreditation of hydrogeology is very important → state can only employ registered professionals

Mapletoft

① For a individual part of way it being pass and be related at

② Drilling of boreholes shall undergo a process.

## Water Inspector (WIA)

- need to regulate drilling contractors?
- Conditions of authorisation conditions need to be enforced.
- water use authorisations not specific to location and number of boreholes.
- regulating drilling contractors?

- Has the groundwater allocation/authorisation systems ever been evaluated or assessed on its application use and efficiency?

- How well is it working?
- Is it good enough?
- Can its performance be assessed?

# Theme 9-11

## M.J. Juma - COGTA - FS.

1. Introduction of Ground Water Management System is vital.
2. Involve WSA in awareness to private owners to register boreholes and comply with license conditions through ZOP contribution scheme.
3. Development of by-laws that incorporate groundwater management.
4. Water Sector Forum - ground water must District / Provincial level. be a study item.
5. Study it but produce amongst WSAs.

We <sup>ACADEMIC</sup> have made the Groundwater practical work much easier such that anyone can do the work even without receiving training.  
 An example: Anyone can borehole and obtain a water sample or even take a pump test. But if the regulator department does not have some standard protocols for assessing the work of consultants then anyone can simply do the job even if not trained.

1. WITH JUMA WITH THE INTENTION TO HERE.
2. DETERMINER COMPENSATION TO INDIAN BUT IN THE ENTRY POINT BEING THE DISTRICT AND
3. CAPACITY THE DISTRICT WHERE BY ONE HYDROLOGIST CAN COVER THE WHOLE DISTRICT AND SAVE COSTS.
4. DORA TO DETERMINE CLEARLY THE REQUIREMENTS REGARDING GROUNDWATER IN THERE TO INCENTIVE OWNER TO AVOID SHALLOW WATER TABLES.
5. LOCAL SOV IS TO BE ASSIGNED WITH RESPONSIBILITY REGARDING WATER SOURCE TO ADD COVER FOR SHALLOW WATER WITH CLEAR JOB TASK DESCRIPTION.

### LOCAL SOV DISTRICT LEVEL

- LOCAL
- 1. Yes high level must move with the lower level to avoid the high level to be the only one move forward.
  - 2. If you have resource and the source can be use to assess.com
  - 3. Re-use of water efficient

1. Design of an Information Monitoring System.
2. Design of a Monitoring System.
3. Can the monitoring system be ICT supported?

# 1. Local Action - Theme 12

## SASA - Aquifer Management

- Legislation empowering the local authorities.
- SASA would like to be the partner in the future.
- Even though the dist in the development of the strategy, states should be allowed to nominate their own champions.
- Critical deliverables should be the proper management of ground water by municipalities.

### Local Action

- \* Information sharing at District Water Sanitation Forums where DWS officials can share his info, follow-ups and developments to be recorded.
- \* DWS to sponsor establishments and companies with OHS and Water Users Association.
- \* Awareness campaigns like those of "Waterlines" to be enforced for Groundwater usage.

## M.J. Juma - COGTA - FS

1. Roll out of the strategy → continue (Quality through workshops, guidelines, etc.)
2. Assist the District a forum of coordination of Water Sector Forum Participants through Water & Sanitation Forum.
3. Align the strategy with the plan of the County (non) and the Sector Department.

**Agriculture**  
 by encouraging people to switch in the ground water.  
 Common sense we have a problem of drought in SA and extending later capacitor water, why are we not focusing mostly on ground water, infrastructure to boreholes.  
 \* Encourage a water decision to end of our with great discussion of the strategies that are currently in use by farmers to still help with the theme of monitoring of the strategy.

Groundwater must be nurtured and be used sustainably and not as a production mechanism during drought seasons.

### Local

- 1. Multi local economic monitoring (Education, monitoring)
- 2. Education on ground water
- 3. Maintenance of ground water source
- 4. Community, social monitoring
- 5. The or-lans
- 6. National standards on ground water specific

### Mayhela L.M

- Management Committees on the strategies from main water users and boreholes.
- Engagements with some should be of importance.
- All the stakeholders from different sectors should make their input.
- Mapping, by laws, registration of all ground water resources.
- State of our water in the country as well as our neighbouring countries.

### Local Action

There are developments that takes place e.g. pit toilets erection without lining. This pollutes our water resources. How can we reverse the pollution in our resources? Let Cogta do awareness and train the councillors of the ground.

- 1. Innovation to reach Local SOV from the District level.
- 2. The DWS need to have the people in the field to monitor the implementation with RESOURCES support from DWS.

### LOCAL SOV DISTRICT LEVEL

## 2. Theme 12 - Local action

Subsidiary → LM

- Establishment of a groundwater monitoring process/team
- Accessible knowledge base in practice on groundwater

### AGRICULTURE

The strategy must enforce compliance with the farmers through the department of agriculture. Because the department only knows of the boreholes being drilled by farmers only if the farmers are being funded by the government. Even with those farmers being funded by the gov, the agric department is only involved up until where the borehole is drilled and operating. As for monitoring and management of groundwater use, that does not exist. Farmers not being funded by government don't even get authorization to drill boreholes. So the strategy must really enforce compliance with farmers.

The responsibility must be with the agric department to verify the boreholes that are currently in use, and how much

\* There is need for a set of Key Sector groundwater indicators that give a picture of the status or health of ground water as part of the National Sector Performance Monitoring, annual reporting.