Groundwater drilling regulations: What will it take to implement them?

Kawawa Banda, Tobias El Falhem, Levy Museteka, DCW Nkhuwa
11-13 July 2017, Livingstone, Zambia
• Motivation for drilling regulation
• Why regulation for licensing of drillers?
• Approach
• Principles for regulation development
• Proposed regulation
• Impacts of regulation
• Challenges + Opportunities
• Implementation
Motivation for regulations

- Since water is life, the first priority is that it should be made available. For groundwater = drilling

- In contrast to its strategic role as a resource for community development and poverty alleviation, groundwater has remained poorly understood and managed (BGR, 2007, FAO, 2003).

- One acute groundwater issue for Zambia is unknown and unregulated groundwater use and development.

- This has resulted in data gaps that prevent evaluation for true sustainability and potential cumulative impacts.
Why regulation on 'licensing drillers and constructors of water works'?

- Part X (license of constructors and of WRM Act (21 of 2011) invokes provisions to mitigate the problem.
- The purpose of legislative instrument will be to:
  
  a) Provide licenses to companies that prospect and drill water wells/boreholes
  
  b) Regulate in a sustainable manner development of groundwater resources
### Regulation Demands

<table>
<thead>
<tr>
<th>Section of WRM Act (Part X)</th>
<th>Purpose of Regulation</th>
</tr>
</thead>
</table>
| Section 88, 89, 92          | 1. Procedure for licensing of drillers and constructors of water works  
                                2. Criteria and conditions of licenses  
                                3. Register of constructors, drillers and engineers |
Approach

- Investigations / research
- Consultations
- Analysis and technical drafting
- Stakeholder consultation
- Legal drafting
- Stakeholder verification
Purpose of regulation
- Balancing water management and regulation vs revenue generation
  - The idea is to discourage non-compliance not to cripple companies.

Stakeholder consultation = Better compliance
WARMA, DWRD, NCCZ, Drillers Association of Zambia, major users of groundwater, consultants.....

Align with existing regulations (formal or informal)
  e.g. NCCZ criteria for license of drillers

KISS – avoid over regulation
Guiding Principles in development of content…cont..

✓ Consideration **in detail** relevant sections of Act

- Read in conjunction with rest of Act, particularly principles.
- Read in conjunction with Water Policy (2010)

✓ Work from existing frameworks where appropriate
Proposed licensing

• Groundwater Consultant license
  Selection of borehole drilling sites, supervision of drilling activities, guidance of drilling operations and exploration for groundwater.

• Driller’s license
  Drilling operators and supervisors

• Drilling license
  Drilling companies
Impacts of developed regulations

• Cost of drilling a borehole increase
• Upliftment of standards in drilling and actualize the much needed data collection
• Value for money in the borehole investment
• Need to consider equity of access to training
• Commission a study to look at the socio-economic impacts of the proposed groundwater regulations
Opportunities and Challenges

• Monitoring and management is expensive and licensing is a way of resource generation.
• A call for innovation towards data requirements for stakeholders.
• Groundwater Resource assessments.
• With continued data collection advanced analysis (models)
• Need for standards and guidelines
Implementation

• Enactment of the Statutory instruments
• Complete human resource recruitment with Job descriptions.
• Use existing datasets from assessment
• Draw from best practice
• Human capacity development for Junior Professionals and Technicians (Priority) in the water management authority + human capacity development plan.
Thank you – Questions ??