

# International Conference on Geology, Mining, Mineral and Groundwater Resources of the Sub-Saharan Africa:

Opportunities and Challenges Ahead

## 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



# OUTLINE

- 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.

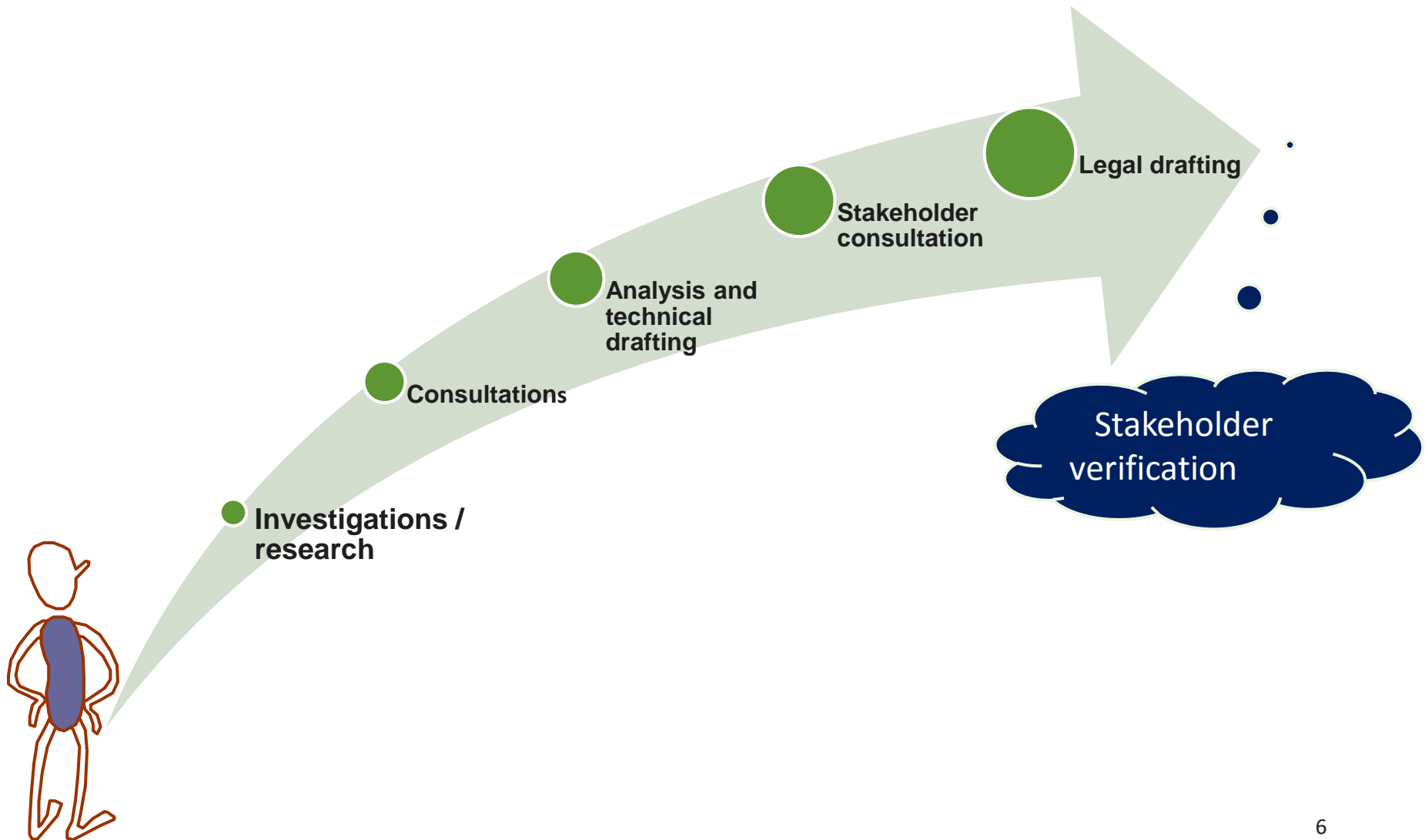
# Why regulation on 'licensing drillers and constructors of water works' ?

- 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

Section of WRM Act (Part X)	Purpose of Regulation
<b>Section 88, 89, 92</b>	<ol style="list-style-type: none"><li>1. Procedure for licensing of drillers and constructors of water works</li><li>2. Criteria and conditions of licenses</li><li>3. Register of constructors, drillers and engineers</li></ol>

# Approach



# Guiding Principles in development of technical content

## ✓ 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

Heh heh..  
What a  
great way to  
sneak in a new  
bureaucracy  
and  
**TAXATION!**



# 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 ??***

