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Ensuring Better Services and Fa



# **Regulatory Framework** for RWSS – Water Quality Monitoring

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## Outline

- Aim of reforms
- Institutional setup
- Functions of NWASCO
- Enforcement tools
- Frameworks for RWSS
- Water Quality Monitoring
- Conclusion



# Why reforms?



- Well clarified policy, legal and institutional setups.
- Introduce private-sector mentality in operations.
- Enhance transparency and stakeholder confidence.
- Attract investments.
- Financially viable and sustainable water sector.

#### **INSTITUTIONAL SET-UP**



## FUNCTIONS OF NWASCO

- Advise government on water supply and sanitation matters
- Advise local authorities
- •Licence utilities and providers
- Develop guidelines
- Establish and enforce standards
- Advise on consumer complaints





# FUNCTIONS OF NWASCO cont'd

- Disseminate information
- Carry out all necessary activities relating to regulation of WSS







**Enforcement tools** 

for regulation

#### 🔶 Guidelines on provision of services

★ Tariff setting process

Comparative publication

**Enforcement notices** 

<del>/ Incentives</del> Penalties





#### **CLASSIFICATION OF AREAS**















## WATER QUALITY MONITORING GUIDELINES

- Risk management based approach and on-boards aspects of ISO 17025
- Applies to all water supply systems, public or private system.
- Water supplies categorised into piped and non-piped systems.
  - Also public institutions such as schools and health centres will have either a piped or a non-piped water supply and shall monitor their respective systems based on its system's characteristics.
- Piped systems: include a raw water source (ground or surface water) from which the water is abstracted, treated and safe drinking-water distributed via a piped network to consumers,



## WATER SAFETY PLANNING



## **BASIC STEPS IN THE WSP**





### **Establishment of a WSP team: Non-piped systems**

- Mostly operated & used by communities via V-WASHE Committees
- Service provider/LA/CBO assembles a WSP team consisting:
  - community members (preferably V-WASHE members)
  - ✓ responsible EHT
  - other persons responsible for the water supply (e.g. local chiefs) and may include NGOs

Team Members listed & list shared between community, LA, service provider and NWASCO.







# **Compliance Monitoring – Sampling**



	Number of samples per year per parameter in the network		
	for annual water production <240,000 m <sup>3</sup>	for annual water production >240,000 m <sup>3</sup>	
Bacteriological	12	12 + 1 for each additional 30,000 m <sup>3</sup> above 240,000 m <sup>3</sup>	
Residual chlorine	48	48 + 1 for each additional 15,000 m <sup>3</sup> above 240,000 m <sup>3</sup>	



## **Compliance Monitoring – Sampling**



	Groundwater		Surface water	
Number of samples per	Water production per year		Water production per year	
year per parameter*	< 240,000 m <sup>3</sup>	$> 240,000 \text{ m}^3$	$< 240,000 \text{ m}^3$	$> 240,000 \text{ m}^3$
Turbidity, pH, Colour (each)	4	12 + 1 for each additional 120,000 m <sup>3</sup> above 240,000 m <sup>3</sup>	12	12 + 1 for each additional 60,000 m <sup>3</sup> above 240,000 m <sup>3</sup>
Metal analysis for each (Manganese, Lead, Iron, Arsenic, Copper, Cobalt)	4	12	4	12
Other tests**	2***	4	2	4

\*\*\* More frequent sampling might be required where there is known or suspected contamination e.g. from industry, agriculture or human settlements



#### Non-Piped supplies: Operational monitoring

- regular checks, sanitary inspections at least quarterly. Additionally, after unusual and extreme events, e.g. flood, drought.

Source and mode of supply	Frequency
Dug well (with or without windlass)	4 (6)*
Dug well with hand-pump	4 (6)*
Shallow and deep tube well with hand- pump	4
Rainwater catchment	4
Gravity spring	4



#### Structure to Capture and Verify Rural Water Supply and Sanitation Data





# Conclusion

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- For Rural WSS, key aspects
  - Clear accountability channels
  - Service delivery models
  - Partnerships
  - Resource mobilisation
  - Sustainability



# Thank you



of regulating

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