



Drinking Water Quality Management Framework

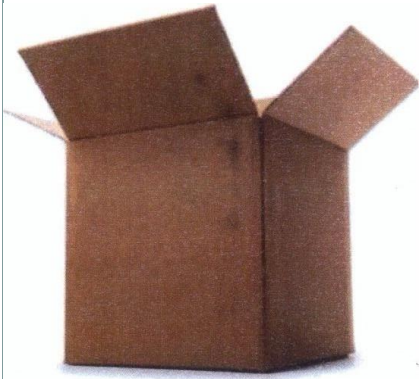


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Outline of Presentation

- Introduction
- Findings of Rapid Assessment
- The NDWQM Framework
- Update on System Development-WQM
- Next Steps



Introduction



- Water and Sanitation related disease burden, including cholera outbreaks since 2011 (70% of OPD cases) in Ghana (OECD, 2007)
- Challenges with coordinating institutions responsible for drinking water quality i.e. roles, mandates and activities
- Need to prepare Ghana towards the SDG goal 6.1, which has strong focus on safe water access

Introduction (Cont'd)

★ *By 2030 achieve universal and equitable Access to safe and affordable drinking Water for all (SDG 6.1)*

Proposed Water Indicator:

- Percentage of population using **safely managed drinking water services**. This comprises of 4 elements:
 - a basic drinking water source (MDG 'improved indicator');
 - which is located on premises;
 - available when needed; and
 - **compliant with faecal and priority chemical standards.**

Safely managed

A basic drinking water source which is located on premises, available when needed and free of faecal and priority chemical contamination

Basic

Piped water, boreholes or tubewells, protected dug wells, protected springs and rainwater provided collection time is no more than 30 minutes for a roundtrip including queuing¹

Unimproved

Drinking water from unprotected dug wells, unprotected springs, carts with small tank/drum, tanker trucks or basic sources with a total collection time of more than 30 minutes for a roundtrip including queuing¹

Surface water

River, dam, lake, pond, stream, canal or irrigation channel

¹ Bottled water is considered 'basic' for drinking only when the household uses a basic source for cooking and personal hygiene.

Introduction (cont'd)



- Given the importance of safe drinking water, MWRWH (with support from UNICEF) carried out a rapid assessment on status of Drinking Water Quality Management in Ghana to:
 - i. Identify the challenges and gaps in the existing drinking-water quality management**
 - i. Make Recommendations to address the identified challenges and gaps**
 - ii. Formulate a National Drinking Water Quality Management Framework (based on above recommendations)**
 - iii. Specify capacity needs related to policy, tools, logistics and expertise for effective operationalisation of the Framework**

Introduction – Approach for the WQM assessment



- Rapid Drinking Water Quality Assessment country-wide - Snap shot of the status of drinking water quality in Ghana through country survey (Ghana Living Standards Survey (GLSS), 2014)
- Desk study to assess the situation – Status of System for management of DWQ i.e. Roles, Mandates, Structures and Approaches
- Validation workshop on the Assessment report findings
- Framework formulation
 - Roll out, including capacity building at relevant levels

Findings of Rapid Assessment



A number of drinking water quality parameters do not conform with standards which is a threat to public health such as;

- Though over 80% of population has access to improved water sources (89% , JMP 2015), there are water Safety /Quality Challenges e.g.
 - Significant deterioration of bacteriological quality from source to point of use (GLSS 2014) – (43.5% to 62.1%, GLSS 2014) – including improved sources
 - Chemical quality in some areas, notably, Fluoride, Iron, Manganese, Arsenic and Salinity of drinking-water doesn't conform to the national standards. (e.g. Fluoride data 8 mg/L , HAP 2011)
- Meanwhile, estimated 9% of population practice HWTS (MICS, 2011).
- Institutions carry out their mandates without formalised coordination.
- Water quality of self-supplies, vendors and tanker water suppliers are not regulated, or effectively and consistently monitored.

Findings of Rapid Assessment Cont'd



- The National Drinking Water Quality Standards (by GSA) do not provide risk-based approach as a requirement for the water supplier.
- MMDAs have mandate to ensure water safety with coordination and support from regional and national relevant organisations - Lack clear and consistent guidelines for drinking-water quality management.
- MMDAs and relevant institutions are generally under-resourced (funding, HR) in face of weak collaboration and coordination on DWQM (mandates and roles).
- **Independent water quality check** are not done systematically, except few spontaneous checks by PURC that is limited to water supply by GWCL in urban areas.
- The Disaster Management Plans at district level are not regularly updated and also most MMDAs do not have necessary emergency supplies in place.
- **Overall, drinking water quality management follows traditional reactive approach (not risk based) i.e. action is taken based on the results of water quality tests - Major limitation of this approach is that water quality results only available after exposure has taken place.**

NATIONAL DRINKING WATER QUALITY MANAGEMENT FRAMEWORK

KEY

- National Level
- Implementation Service Delivery Level
- Cross-cutting (all levels)



Overview of Water Safety Planning (WSP)

- WSP is a risk based approach considers all the barriers to prevent contaminants from reaching the public from the catchment to the users (raw water, remove contaminants in water, maintain WQ in distribution, prevent contamination during handling)
- A comprehensive hazard identification, risk assessment and risk management
 - Less reliance on water treatment processes - more sustainable solutions.
 - Emphasis on managing risks.

Water Safety Plan

- Traditional hazard control based systems
 - Testing the water for a wide range of parameters after it leaves treatment or at the consumers tap – sole means of demonstrating quality of water supplied to consumers
- Main drawbacks of this approach
 - Water is likely to have been consumed before the results of analysis are known – in spite of developments in rapid and on-line analysis
 - What does the monitoring amount to?
 - Timeliness of remedial action to be taken to protect consumers?!
 - Consumers hardly appreciate water quality and related issues – processes, their interface, roles etc.

Benefits of WSP

- Provide a proactive (rather than reactive), framework for managing drinking water quality.
- Enable early identification of new/ increased risks - incidents and events become more predicable and preventable.
- Monitoring becomes more targeted towards demonstrating that the controls are working.
- Provide transparency and also better targeting of resources – highlight need for capital investment and types of improvement programmes required (including additional treatment processes).
- Inclusiveness of approach:
 - Stakeholders more responsive to responsibilities towards the safety of water supplies
 - Consumers have more confidence in the quality of their drinking water (information)
 - Widespread implementation in the long term – systematic contribution to reduction in disease burden attributable to poor drinking-water quality and WASH (generally)

Update on System Development – Water Quality Management



- MoU establishing a National Inter-Sectoral Coordinating Committee for the Management of Drinking Water Quality signed
- NDWQMF Published
- National (Ministerial) level Indicators for monitoring drinking water quality being finalised
- Inauguration of the Committee and Launching of Framework
- Dissemination of Framework (in progress)
- Capacity building on key aspects (in progress)– Water Safety Planning

Next Steps



- Dissemination of the NDWQMF , especially at the decentralized level
- Advocacy for effective implementation of the Framework and WSPs (*as the main WASH tool*) – including awareness creation among right holders and strengthening of related accountability/ regulation systems
- Support development of key related human and other capacities at relevant levels for implementation of WSPs, particularly for rural water supplies esp. piped water schemes (including small towns)
- Scale-up of HTWS (based on national Strategy) in the context of WSP implementation
- Development of innovative approaches and Knowledge management (e.g. WSP and Water Security, WSP & CLTS etc.)



THANKS