



# Challenges in Water Quality Monitoring at Scale and National level Programming Linkages with SDG targets in Water and Sanitation



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WWW Side Event “Data to Decision”

# Introduction

***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
- Comprising 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.**



# Introduction - Implications of SDG target 6.1

## Review the following:

- ✓ Water and Sanitation targets to align with SDG targets
- ✓ Sector Strategies and associated Investment Plans

Therefore:

- Develop new approaches to address drinking **water quality management**, service sustainability and equity /vulnerability issues
- Identify innovative financing for capital and operational expenditure



# Recent DWQ Management Attempts

**2004**

- **Urban Sub-Sector Water Safety Plans (GWCL)**
- *11 of 82 Systems Utility managed conventional treatment piped water schemes*
- *Largely not implemented*

**2010**

- **Rural Water Safety Framework**
- *Covering mainly community managed point sources and small-scale piped water systems*
- *Required enhancement of risk management focus*
- *Largely not operationalised*

**2012 - 2014**

- **National HWTS Strategy & Rural Sanitation Model and Strategy (RSMS)**
- *Framework for integrating HWTS and HWWS into CLTS as post-triggering activities*
- *Moderately successful to date*

**2015**

**National Drinking water Quality Management Framework (NDWQMF)**

# New Approach to Managing Drinking Water Quality

## Rationale

- High incidence of water and sanitation related diseases including cholera
- Challenges with coordinating institutions responsible for drinking water quality i.e. roles, mandates and activities
- Need to prepare Ghana towards the post-MDG agenda, which has strong focus on safe water access (ref. SDG Goal 6)

## Process

- In 2012, UNICEF supported MWRWH to carry out a rapid assessment of the Water Quality Status and its management in Ghana
- Rapid Drinking Water Quality Assessment country-wide - Snapshot of the status of drinking water quality Ghana through household country survey (Ghana Living Standards Survey (GLSS), 2014)
- Desk study to assess the situation
- Field Visits

# Findings - Data

**89% Pop. access to improved water sources (JMP 2015), but *consider in the face of SDG 6.1* .....**

**Less than Two** out of **every five water sources** are **unsafe to drink**, and **three** out of **every five** households **drink unsafe water at point of use** (GLSS 2011)



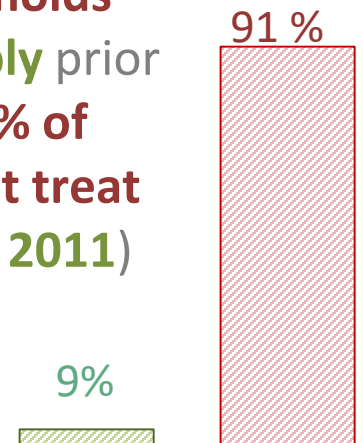
**70% of OPD cases - Water & Sanitation related** (OECD, 2007) including regular cholera outbreaks since 2011



**Significant deterioration of bacteriological quality from source to point of use – even 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)**

**Only 9% of Households treat water suitably** prior to drinking but **91% of Households do not treat water** at all (MICS 2011)



- Challenges with coordinating institutions responsible for drinking water quality i.e. roles, mandates and activities

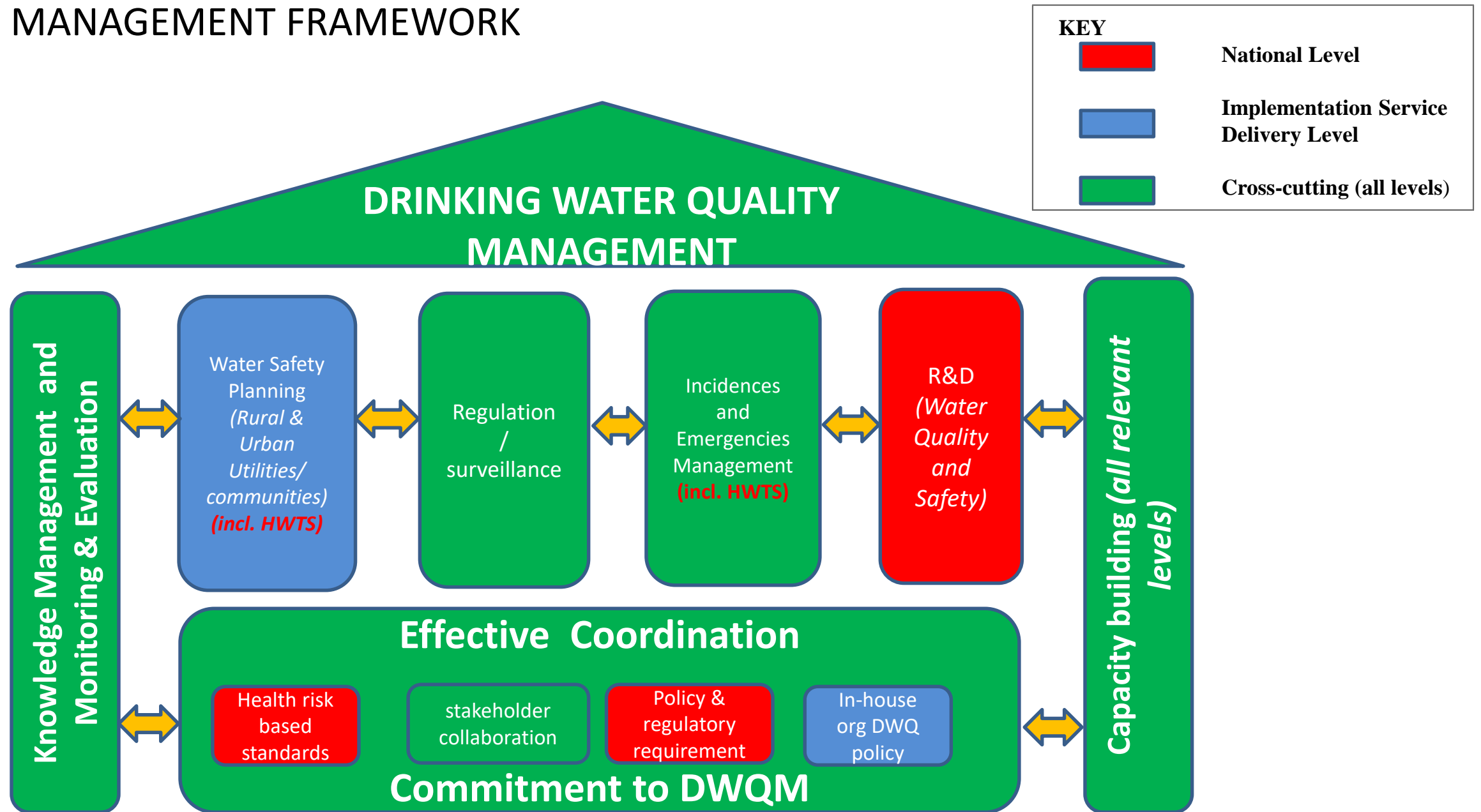


# Findings-Data

- The National Drinking Water Quality Standards (by GSA) do not provide risk-based approach as a requirement for the water supplier.
- **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.
- MMDAs have mandate to ensure water safety with coordination and support from regional and national relevant organisations
- The Disaster Management Plans at district level are not regularly updated and also most MMDAs do not have necessary emergency supplies in place
- Water quality of self-supplies, vendors and tanker water suppliers are not regulated, or effectively and consistently monitored.

# Linkages to National Programming - What has been done so far

DRINKING WATER QUALITY  
MANAGEMENT FRAMEWORK





# Linkages to National Programming

## Progress so Far

- Dissemination of NDWQMF
- Ghana Standards (Revised, 2016) – Ghana Standards Authority – towards making WSP a requirement for utilities (GS 786)
- Orientation of national level actors on NDWQMF & WSPs
- Incorporation of WSP implementation into National Medium Term Development Plan 2018-2021 Guidelines
- Drinking Water Coordination Committee - WSP implementation adopted as one of indicators – and also to improve coordination

## Planned

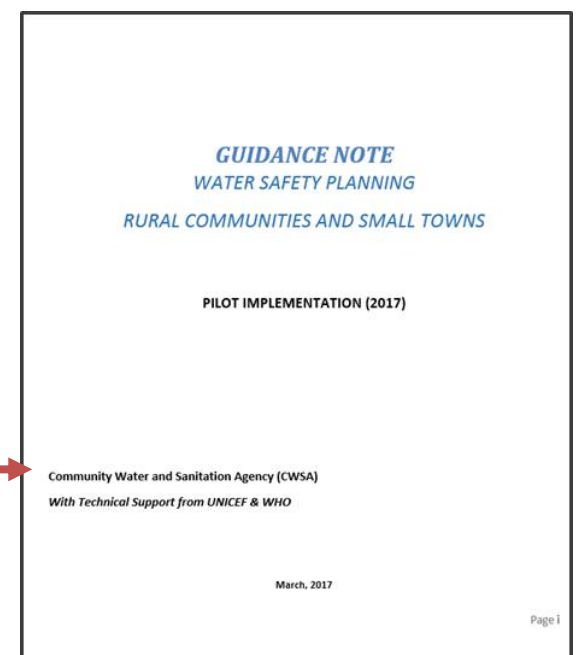
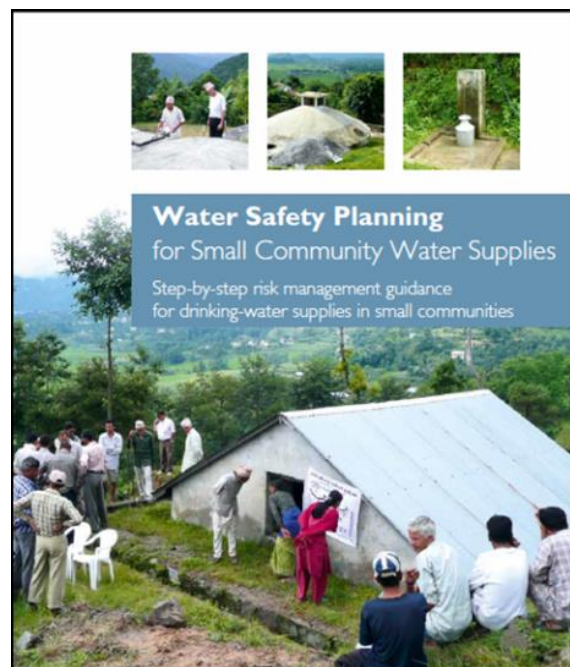
- Training of community level WSMTs
- HWTS Promotion at community level under RSMS (strategy roll-out)
- Decentralised capacity building (MMDA level)
- Enhancement of water supply management models for sustainability
- WSP training at tertiary education level
- Technical assistance at Ministerial level for WSP scale-up

# Key Initiatives (Planned/ Underway)

- Technical support to revive WSPs for Urban Water Systems – GWCL (National Utility)
- Pilot development of WSP in Disaster-Prone Communities (DPCs) - Led by WHO (Joint UN Project)– 12 Communities in 24 MMDAs
- Pilot under DGIS supported “Accelerating Sanitation and Water for All” (ASWA) Project – supported by UNICEF
  - 10 No. Limited Piped Water Schemes in collaboration with Community Water and Sanitation Agency (CWSA)
- Development of Guidance Document for WSP implementation for rural water subsector

# WSP: Tools and Processes

- National training of Rural Water Facilitating Agency (CWSA) and key partners (in collaboration with WHO)
- Initial tool developed by Safe Water Network (SWN) for pilot implementation and guidance document for DPC programme (based on WHO Guidance Documents)- WSP Manual & Water Safety Planning for Small Community Water Supplies
- Tool adapted with technical assistance from WHO and UNICEF (Final Draft at-hand)



# Lessons Learnt

- DWQMF has provided a focus for the coordinating of drinking water quality management
- Coordinating Committee established has the potential of being the rallying point for the Agenda
- Buy –in at the highest political level is key to focus, drive institutional reforms and resource allocation
  - Link initiative to political priorities
- Regulatory capacity (including enforcement of standards) is key

# Challenges-Monitoring DWQ

- **Monitoring through nationwide surveys**
  - Quality control not consistently applied
  - Poor correlation of field results with laboratory results
    - Logistic challenges of sample transport
    - Challenges with compliance of laboratories with Quality Standards
  - Consistent application of field protocol
- **Monitoring by Routine M&E Systems**
  - Recurrent budgets for data collection and analysis – logistics, operational costs, documentation systems
  - Human capacity challenges at decentralised level (linked to above)
  - Performance based, linkages of data management systems at decentralised level to decision making

# Challenges- Data to Decision

- Changing of mindset of key agencies and general public through full dissemination, regulation and enforcement
- Response to findings - necessary changes to legislation, policy and institutional arrangements
- Response to findings - necessary changes to strategic plans, budget/ resource allocation and disbursements
- Coordination
- Pace of development/ adjustments of Sector Information System i.e. Routine Systems, complemented by Country Surveys – for further routine tracking, data analysis for further decision-making at the policy and operational levels and knowledge management

# Acknowledgements

- Ministry of Sanitation and Water Resources
- Ministry of Local Government and Rural Development
- National Planning Development Commission
- Office of the Head of Local Government Service
- World Health Organisation (Accra Office and HQ Geneva)
- UNICEF, Ghana and the Netherlands Government (DGIS)

A woman with dark skin and a joyful expression is carrying a large, black, cylindrical bucket balanced on her head. She is wearing a grey and white striped short-sleeved shirt. Her arms are raised, holding the rim of the bucket. The background is a dense field of green grass and foliage, with a large, light-brown rock formation visible on the left side. The text "Thank You" is overlaid in white on the bucket.

Thank  
You



# Informational Slides

# Experiences with rural water quality monitoring

- Protocol mentions twice a year. Wet season and dry season
- That was and still not happening consistently
- Due to operational challenges budgets etc
- So WSP provides that communities capture that under operational expenditure and do it consistently. This will then be confirmed with country surveys like DHS/MICS, GLSS

# RURAL PILOT – ENTRY POINTS FOR WSP

- **Easy Conceptual link**
- **WSMTs are mandatory – sustainability**
- **Service provider is responsible**
- **Community level action encouraged**
- **Possible integration with BCC initiatives – HWWS, HWTS etc.**

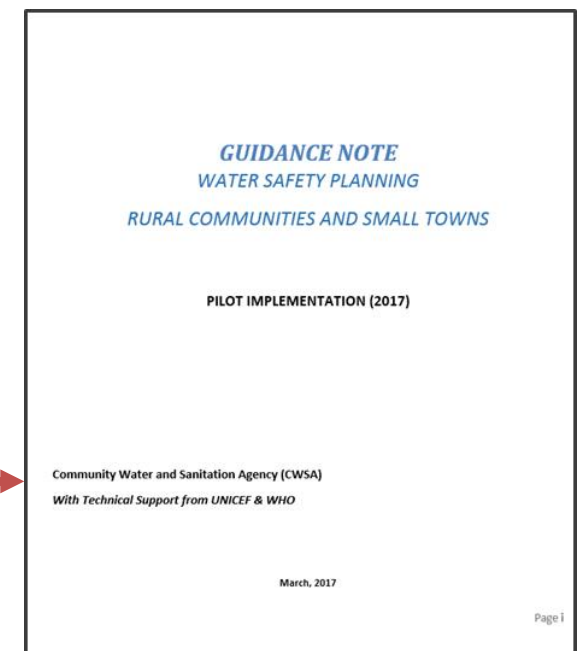
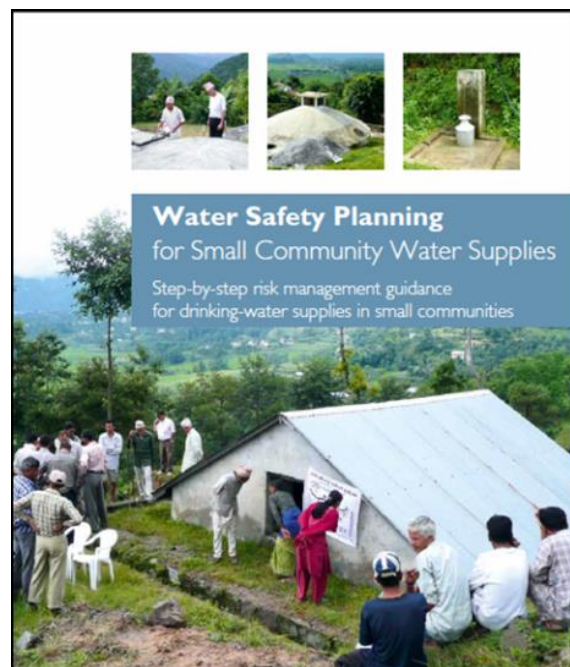


- **Possible integration with BCC initiatives**
- **Community level action encouraged**
- **Easy Conceptual link**
- **Benefit from natural Leader initiative/movement**

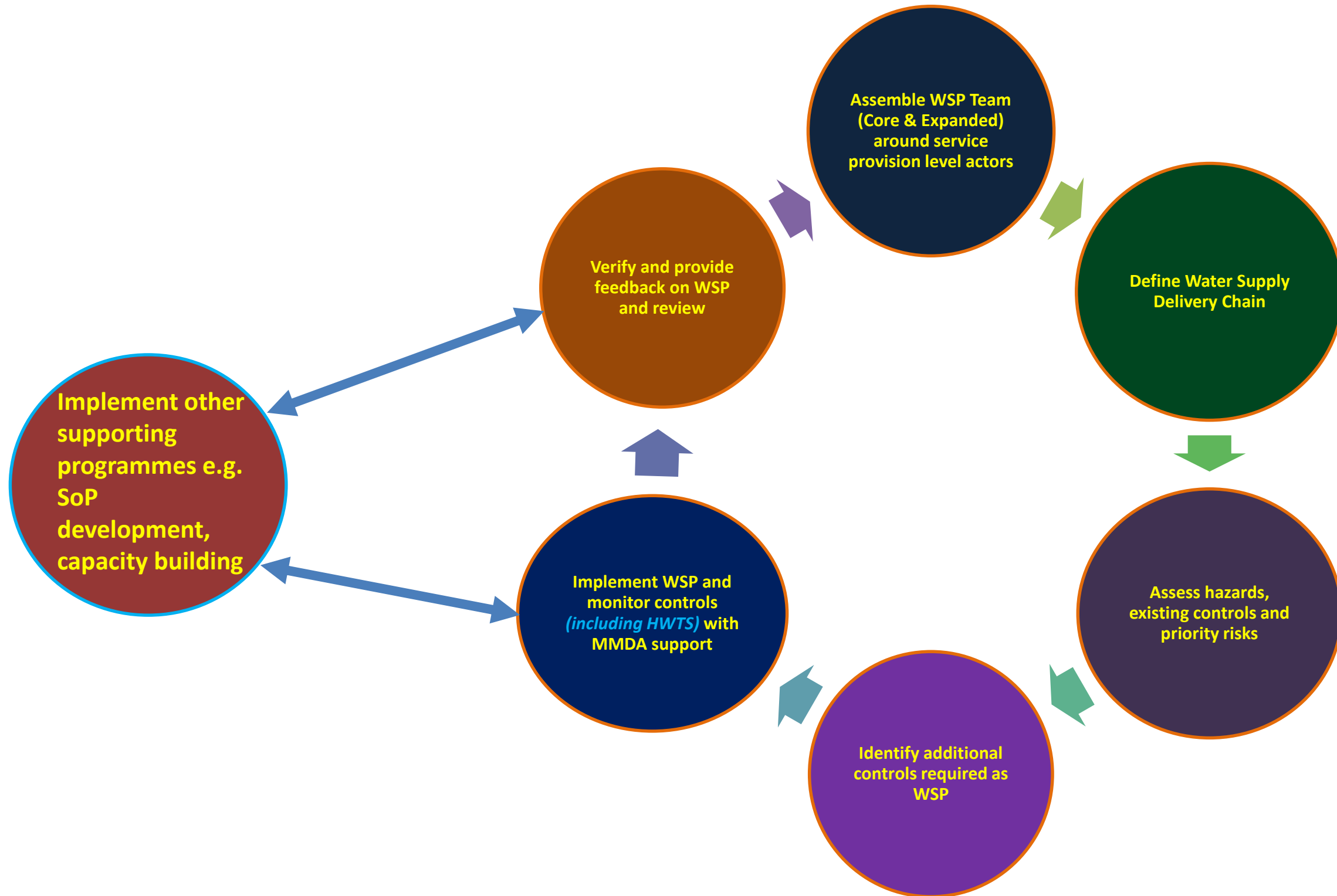


# WSP: Tools and Processes

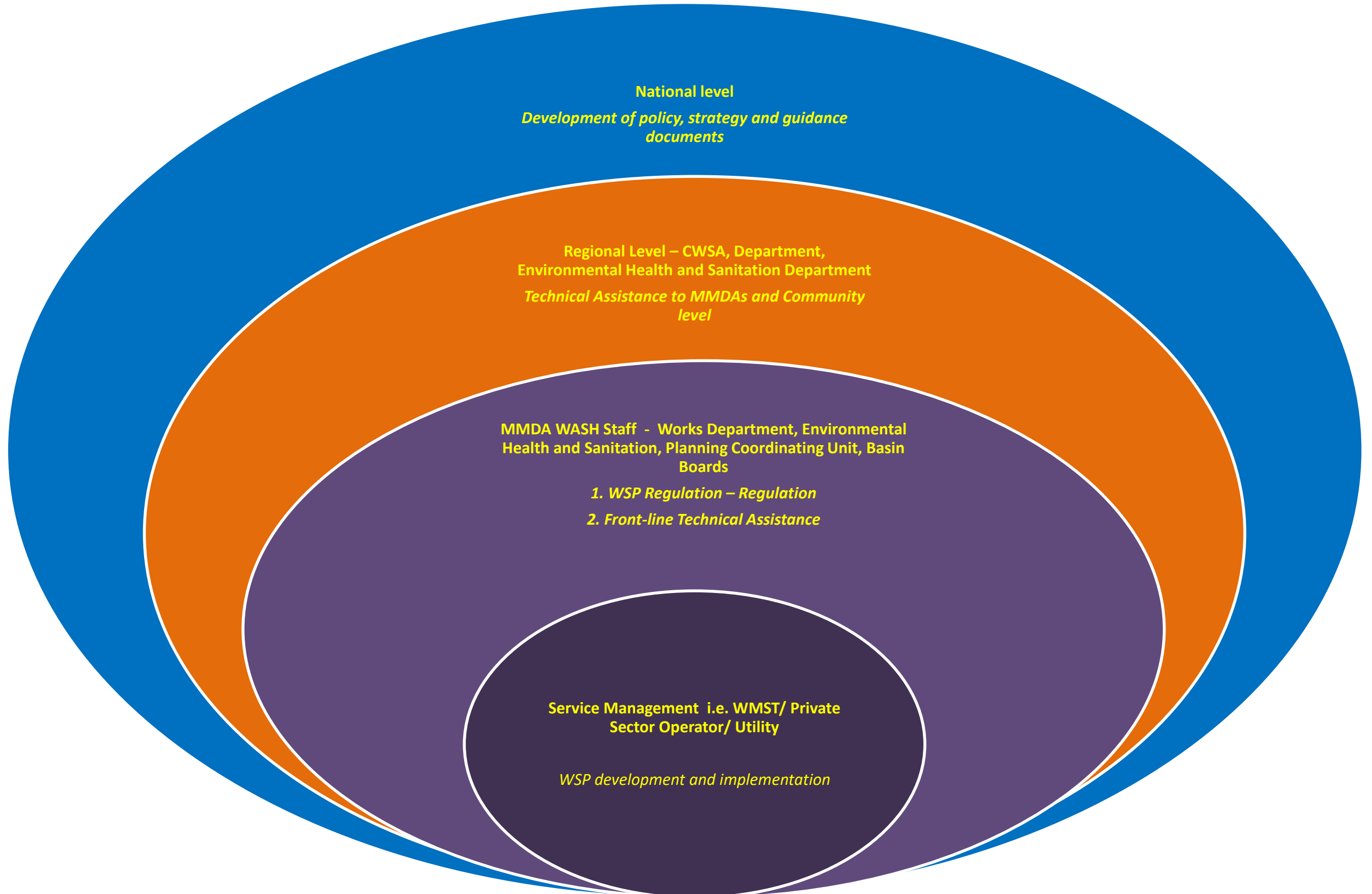
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# MODEL FOR PILOT



# ROLES AND RESPONSIBILITIES



# Lessons Learnt

- **Lessons**
- Pending implementation – DPC, SWN, CWSA Pilot
- Appropriate emphasis on Water Quality Monitoring within the process – DPC implementation
- Ownership at community/ service management level – use of Operational Expenditure (Opex) – mainstream into sustainable service model
- Regulation capacity is key
- **Indicators of Success**
- Development of realistic & functional incremental WSPs – *as first attempt*
- Actual plan implementation
- Effectiveness of review mechanism - regulation
- ***HWTS uptake in communities***
- **Challenges ( mainly envisaged)**
- Sustainability – *anchored in WSMT level & effective regulation*
- MMDA level regulation capacity – *technical assistance from CWSA & UNICEF*
- Recurrent Operational Budgets at MMDA level (*linked to regulation issue*)

