PH1B: Establish water quality regulatory compliance monitoring and reporting protocols

REGULATORY FUNCTION: **PUBLIC HEALTH** | **PH1B**

OBJECTIVE PH1

There are rules ensuring public health standards for safe drinking water and sanitation

ACTION CARD PH1B

ESTABLISH WATER QUALITY REGULATORY COMPLIANCE MONITORING AND REPORTING PROTOCOLS

COST: Low **FREQUENCY:** One time

TARGET GROUPS: Regulators, ministries of health, service operators

DESCRIPTION

Regulators perform this action primarily by supporting ministries of health (or other relevant authorities) in regulating drinking water quality, by monitoring compliance to defined standards on their behalf. In accordance, regulators convert their legislative guidance and directives into compliance monitoring and reporting protocols. These must specify transparent procedures for conducting, approving, and reporting various inspection activities related to drinking water, and protocols must clearly outline operators' obligations during auditing procedures. In addition to internal monitoring processes, ministries of health or other governmental institutions may also perform external inspections, for which different protocols are established.

EXPECTED OUTCOMES

- National regulators transpose clearly mandated public health norms and standards into the WASH sector.
- Service operators have clear protocols for water quality control.
- Consumers health is adequately protected.

EXAMPLE 1: KENYA

In **Kenya,** in light of the Water Act 2016, the Water and Sanitation Regulatory Board (WASREB) established guidelines on water quality and effluent monitoring, which state that water quality is one of the main indicators of the quality of service provided to consumers. Water quality has an impact on both public health and the aesthetic value of water as a consumable product. Section 47 of the Water Act 2002 requires WASREB to determine standards for the provision of water services to consumers. and to monitor compliance with established standards for the design, construction, operation, and maintenance of facilities for water services. For effective monitoring of water quality, both internal self-monitoring by water service providers and an independent monitoring by Water Service Boards (WSBs) and WASREB is necessary. For example, a principle in the WHO guidelines on water quality standards is that by service providers and an independent regulating body have separate monitoring roles. Independent monitoring can also be undertaken by the Ministry of Water and Irrigation (MW&I), Kenya Bureau of Standards (KEBS), Ministry of Health (MoH) and the National Environment Management Authority (NEMA). In this regard, water service providers are required to undertake their own monitoring of water quality as part of their quality assurance programmes and process control. Experience however, has shown that without clear instructions through guidelines, some providers tend to carry out an insufficient number of tests. Therefore, the purpose of the guidelines is as follows.

- Promote transparency in the methods of water quality monitoring employed by the water service providers, and thus build public confidence in service provision.
- Ensure through regular monitoring that the quality of water provided meets standards set by the Kenya Bureau of Standards.
- Create awareness among Water Services Boards and water service providers on water quality monitoring requirements.

- Ensure that all Water Services Boards and water service providers follow a systematic way of water quality monitoring to ensure uniformity.
- Ensure a minimum standard of water quality monitoring at acceptable costs, and create awareness among consumers that information regarding water quality will be made available by water service providers.

EXAMPLE 2: SINGAPORE

In **Singapore**, the Food Agency developed the Code of Practice on Drinking Water Sampling and Safety Plans in 2019. This outlines that sample(s) shall be collected at each entry point to the distribution system, or from such locations where drinking water is representative of its quality after treatment. The default frequency of sampling shall be at least once a year, except for certain parameters that should be monitored more frequently, based on relevant factors. Examples of parameters that may be monitored more frequently include boron for desalination membrane treatment plants, disinfection by-products for water supply systems with extensive distribution networks, heavy metals and pesticides if raw water for traditional water treatment systems is obtained from a source that is likely to be polluted by industrial or agricultural discharge, etc.

Depending upon raw water quality, water treatment programmes, and the type of distribution network used by providers, it is expected that certain parameters or contaminants are unlikely to be present in drinking water, or will be present only at concentrations much lower than prescribed standards for quality drinking water. Hence, water providers may propose sampling frequencies for certain parameters that are lower than the default frequency, or may propose not to sample drinking water for specific parameters or contaminants that are not of concern.

LINKS

WASREB Water Quality Guidelines: https://wasreb.go.ke/downloads/Water_Quality_&_Effluent_Monitoring_Guidelines.pdf

Singapore: https://www.sfa.gov.sg/docs/default-source/food-retailing/practices-and-guidelines/code-of-practice-on-drinking-water-sampling-and-safety-plans-sfa-apr-2019.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Developing compliance and reporting protocols for safe water supply requires technical and administrative capacities to understand the implications of non-compliance, in order to set the frequency of monitoring, and at what critical control points in the water supply process to monitor and for what parameters, including proxy (e.g. turbidity) and early warning indicators. It is also important to understand the resources required for monitoring and reporting, including the administrative capacity to receive and analyse large volumes of reports, to establish realistic protocols. Development partners and ministries of health could support regulators by organizing participatory workshops that set the scope of parameters, thresholds, and inspection protocols, based on desk reviews of the situation, and drawing on positive examples from similar contexts.