

WaterCARD

Water Capacity Rating Diagnostic Questionnaire

March 2016



TO INTERVIEWER

- Some questions will be asked multiple times from different staff members as certain positions might provide different perspectives on the same subject. Please exercise best judgment in determining if a question has been exhausted or if you feel that another respondent can provide unique information.
- The order in which sections are addressed might also depend on staff availability.

- Questions reference the person(s) to be interviewed; Abbreviations:

MD Managing Director/Director/Head of Department

WQM Water quality manager

TS Technical staff

- It may be helpful to interview different staff separately to capture any differences in perspectives

QUESTIONNAIRE SETUP

- The “Main Question(s)” for each sub-category attempts to get at the most pertinent information although questions are intentionally broad to promote natural discussion. Please ensure that all topics in the “Additional questions” category are addressed to provide an accurate score.
- The “Main Findings” of each sub-category provides space to capture (1) the most relevant information in order to score (e.g. “They do not follow any national standards.”), and (2) for providing the score itself. Scoring of each sub-category is 0-3, “3” being the best possible score and “0” being the lowest. Please refer to the WaterCARD Tool for scoring definitions.
- An “Additional Notes” column provides space for supplemental notes and justification from the discussion.

ALL INTERVIEWEES

- Thank you once again for taking the time to participate in the Water Capacity Rating Diagnostic (or WaterCARD) assessment exercise. This tool assesses institutional strengths and weaknesses with respect to water quality monitoring focusing in order to accurately assess your water quality monitoring program. It focuses on five overarching categories determined to be key to successful monitoring:
1. Accountability 2. Staffing 3. Program Structure 4. Finance 5. Equipment and Services
- The assessment will take 1-2 days and will attempt to ask those questions specific to your role with regards to water quality monitoring.
- Relevant supporting documents will be requested.
- If sampling and testing is taking place we would like to observe these processes.
- (Request consent for the interview to be RECORDED)
- I would like to first start out by asking you about your role. Can you tell me about your role in the institution and how it specifically relates to water quality monitoring?

MD

- Please provide a brief overview (>10min) of your institution in terms of the following: (1) overall scope and responsibilities, (2) size/jurisdiction, (3) organizational structure (i.e. independent, semi-autonomous, sub-unit of a larger institution).
- This background will be helpful in addressing certain sections such as Procurement, Staff Recruitment, and Resources as certain areas might be under the control of another larger body (e.g. a County Health Department under the Ministry of Health).

PROGRAM STRUCTURE (1 OF 5)

1 SAMPLE COLLECTION (SECTIONS 3.4)

WQM

TS

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
<p>1. How often does your institution collect water samples for testing?</p> <p>2. Can you walk me through, in detail, your sample collection process (who, what, when, how)?</p>			
ADDITIONAL QUESTIONS	<p>1. Do you have established institutional testing targets for sampling frequency (e.g. x samples per month)? If so, what are the targets?</p> <p>2. Do you generally meet these testing targets?</p> <p>3. Do samples ever arrive too late to the lab/analysis location for processing?</p>		
REMINDER	Observe sample collection and processing and staff motivation		
HELPFUL HINTS	“Sample collection” refers to the collection of surface-water, groundwater, and associated quality-control samples.		

2 SAMPLING LOGISTICS (SECTION 3.5)

WQM

TS

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
<p>What form of transport is used to collect samples (e.g. walking, public transport, bicycle, motorbike, vehicle)?</p>			
ADDITIONAL QUESTIONS	<p>1. Is this transport available when needed?</p> <p>2. Is transport funding provided if needed? Or does staff have to use personal funds for transport?</p> <p>3. To what extent is staff able to collect samples from remote locations? Is this seasonal?</p>		

3 SAMPLING PLANS (SECTION 3.3),

WQM

TS

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
1. How do you determine the number of samples to be collected?			
ADDITIONAL QUESTIONS	1. Do you have an established sampling plan? Does this reflect testing targets? 2. Was the local context considered when developing targets? 3. Were national standards (or WHO Guidelines) considered when developing targets?		
REMINDER	Collect/observe sampling plans		
HELPFUL HINTS	<ul style="list-style-type: none"> • Sampling plans can be written or can be a set of procedures that is has been agreed upon and is known by all relevant staff. • “Local context” refers to such factors as the number of sampling points, point distribution, geographic variability, and water availability. • For water utilities, sampling should include network /distribution samples and also samples at the water treatment plant. 		

4 METHODS (SECTION 3.1)

WQM

TS

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
1. What water quality parameters do you test for? 2. Discuss the water quality testing method your institution uses for microbial testing (or another parameter listed) and how this was selected. 3. If you wanted to test for a new parameter how would you go about determining what method to use?			
ADDITIONAL QUESTIONS	1. How does the staff know how to select the methods, equipment, and consumables needed to meet their testing needs? 2. How comfortable are staff performing and interpreting the selected methods? (Also OBSERVE) 3. OBSERVE: Are procedures performed correctly? Do mistakes potentially compromise results? Provide details.		

4 CONTINUED ON NEXT PAGE



4 METHODS (SECTION 3.1) CONT.

WQM

TS

REMINDER

Observe testing and analysis and staff motivation

HELPFUL HINTS

- Here we are assessing whether the testing method is appropriate, considering the technical skill and experience of the staff (e.g. it would not make sense for staff with minimal experience to start using a method with that requires a high level of skill and experience).
- Use the observation checklist to help evaluate mistakes. For example, for microbial testing, examples of major mistakes that are likely to compromise results (leading to a score of 1): improper sterilization of sampling bottles or other testing equipment, improper use (or no use) of sodium thiosulfate, possibility that they are using the wrong reagents, lab space cleanliness is a serious concern, sucking with mouth in pipettes, incubator never calibrated.
- For microbial, examples of minor mistakes (leading to a score of 2): improper sterilization of hands or use of gloves, no sterilization of lab surfaces, lab cleanliness somewhat of a concern, or some other minor issue.

5 QUALITY CONTROL (SECTION 3.6)

WQM

TS

MAIN QUESTION(S):

MAIN FINDINGS

ADDITIONAL NOTES:

SCORE

Discuss any quality control your institution conducts with regards to water quality monitoring.

Note: Use checklist to evaluate QAQC.

ADDITIONAL QUESTIONS

1. Do you test blanks/negative samples? Do you test replicates? If so, how often?
2. What is done if unusual test results are found? Are there procedures to verify results?

HELPFUL HINTS

- Quality control procedures can be a formal written protocol or an agreed upon set of guidelines that the testing staff understand and follow consistently.

6 DATA MANAGEMENT (SECTION 3.7)

WQM

TS

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
Where, when and how do you compile and organize your test results?			
ADDITIONAL QUESTIONS	<ol style="list-style-type: none"> 1. Are results recorded in paper logbooks, scrap paper, digital files, in multiple formats, etc? 2. Is record keeping ad-hoc or systematic? 3. Can we see your testing results? OBSERVE: Can they readily access up-to-date information? 4. Is data shared with senior institutional managers? Is this regular? 		
HELPFUL HINTS	<ul style="list-style-type: none"> • “Senior institutional managers” refers to individuals not directly involved in water testing but have decision-making authority, such as the managing director of a water utility or a district medical officer of a health surveillance agency. • “Regular” sharing of data means that it is a normal practice, though there may be occasional interruptions in data sharing 		

7 ACTIONS (SECTION 3.8)

WQM

TS

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
<ol style="list-style-type: none"> 1. Describe an instance when a contaminated sample was discovered. What actions were taken? 2. Is this generally what happens when a contaminated sample is found? 			
ADDITIONAL QUESTIONS	<ol style="list-style-type: none"> 1. Who conducts these follow up actions? To what extent is all relevant staff familiar with these procedures? 2. When contamination is found, are these actions on an ad-hoc or regular basis? 3. Are follow up actions documented? OBSERVE 		
HELPFUL HINTS	<ul style="list-style-type: none"> • “Responds to water quality tests...” refers to the institution’s ability to take timely, efficient and effective corrective action(s) for contaminated (or ‘failed’) tests. This can include, but is not limited to: resampling area where contamination was found or educating consumers (at a household or community level) on household water treatment and water source protection. For water suppliers, this may also include increasing chlorine levels, flushing water lines, or making repairs. • Action procedures can be a formal written protocol or an agreed upon set of guidelines that staff understands and follows consistently. 		

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
<p>1. How often do you find that the water samples are contaminated (or exceed standards)?</p> <p>2. Do you believe that your results provide sufficient information about water quality? Explain.</p>			
<p>ADDITIONAL QUESTIONS</p>	<p>1. Are most of your samples either all positive or all negative? If so, what are you able to do with this information?</p> <p>2. Are you able to use results to guide water safety management (as discussion above under 'Actions')?</p> <p>3. Are your results sufficient for reporting to relevant authorities? If not, explain. (For example, authorities may specify specific testing methods or indicators, such as <i>E.coli</i>/100mL?</p>		
<p>REMINDER</p>	<p>Collect/observe water quality test results</p>		
<p>HELPFUL HINTS</p>	<ul style="list-style-type: none"> • Consider results for all types of water quality tests—microbial, physical, chemical, etc.— and the extent to which results are able guide local water safety management and adequate for reporting to relevant authorities. • Sample volumes should be per 100mL for bacteriological testing. Lower samples volumes (such as 50mL, 10mL or 1 mL) that do not detect contamination cannot ensure that contamination would not exist per 100mL. 		

EQUIPMENT AND INFRASTRUCTURE (2 OF 5)

9 EQUIPMENT AND SUPPLIES (SECTION 5.1)

WQM

MD

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
<p>1. What type of equipment and consumables do you use for testing?</p> <p>2. Which distributor did you use to purchase? Where are they based? How did you find this distributor?</p>			
ADDITIONAL QUESTIONS	<p>1. Does the institution have easy access to distributors?</p> <p>2. Can institutions obtain what they need, or is this inhibited (by a limited product range, poor roads, long distances, etc)?</p>		
HELPFUL HINTS	<ul style="list-style-type: none"> • “Access” refers to (1) the availability of distributors, who provide the necessary products for sampling and testing and (2) the knowledge of the institution to know where and how to order from distributors. If distributors are international, the institution could still have adequate access to distributors if this does not inhibit their ability to obtain equipment and supplies. • A “distributor” is an entity that supplies goods to consumers. In this context, a distributor provides water quality products and services. 		

10 MAINTENANCE (SECTION 5.2)

WQM

TS

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
<p>1. Has there been a situation where an equipment item broke down or needed maintenance? Can you discuss what happens when equipment requires maintenance?</p> <p>2. Discuss how and when consumables are reordered.</p>			
ADDITIONAL QUESTIONS	<p>1. Is equipment maintenance ad-hoc or consistent?</p> <p>2. Is the tracking of consumables ad-hoc consistent? Does staff order consumables in advance or do they sometimes run out?</p>		

10 CONTINUED ON NEXT PAGE

10 MAINTENANCE (SECTION 5.2) CONT.

WQM

TS

REMINDER

OBSERVE maintenance protocol and consumable tracking, if available

HELPFUL HINTS

- “Maintain equipment” refers to ensuring the correct functioning of all necessary equipment at all times to allow for adequate sampling and testing. Proper and adequate maintenance services can be internal or an external entity that specializes in equipment maintenance (in many cases this the supplier of the product). The service should be available when and as needed and should not impede sampling or testing in any way.
- “Track consumables” refers to any system set in place that demonstrates to adequately manage the supply chain of all consumables necessary to ensure there is always ample, unexpired stock for adequate sampling and testing.

11 PROCUREMENT (SECTION 5.3)

WQM

PROCUREMENT DEPT.

MAIN QUESTION(S):

MAIN FINDINGS

ADDITIONAL NOTES:

SCORE

Can you talk about the procurement process for ordering monitoring equipment your institution uses? When was the last time you ordered something – take me through that process.

ADDITIONAL QUESTIONS

1. Note: Does the water quality manager understand the procurement process?
2. Note: Do things like multiple bids, multiple internal approvals, and other bureaucracies make the process slow and time consuming?
3. Are there different procedures for large pieces of equipment vs. smaller repeat purchases (such as consumables/reagents)?
4. Are there options for sole sourcing for smaller, repeat purchases?

OBSERVE

The documented procurement procedure, if available

HELPFUL HINTS

- “Small repeat orders” involve products like consumables and reagents that are used frequently. Purchasing small, repeat orders may be considered “efficient” if the process is fairly straightforward and timely. Smaller orders may go through a simplified procurement process (such as skipping steps of multiple bids or approvals) compared to large, more expensive orders that may require a longer approval process.
- “Sole source bidding” means that there is only one person or company that provides the specified product or service.

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
<p>Observe the space used for testing</p>			
<p>ADDITIONAL QUESTIONS</p>	<ol style="list-style-type: none"> 1. Is there dedicated space for water quality testing? 2. Is there electricity? When did it last go off? For how long? 3. Is there running water? How often is there water here? 		
<p>REMINDER</p>	<p>Observe testing facilities and equipment</p>		
<p>HELPFUL HINTS</p>	<ul style="list-style-type: none"> • “Dedicated space” can refer to any space with the purpose of laboratory preparation, testing and analysis activities; this does have to be a full laboratory. This might include a shared space with another laboratory (such as a public health laboratory where they conduct various types of testing, one of which is water). • “Reliable electricity” can infer reliable power coming from the mains or from a generator when the mains are off. 		

STAFFING (3 OF 5)

13 ROLES AND RESPONSIBILITIES (SECTION 2.2)

WQM

MD

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
Can you tell me everyone who is involved in the water quality monitoring program and what their specific responsibilities are (Note: will ask this question for both MD and WQ Manager to ensure all roles are covered)?			
ADDITIONAL QUESTIONS	<ol style="list-style-type: none"> 1. Including all departments: sampling, testing, leadership, procurement, finance 2. Are roles well defined? 3. Does staff have other responsibilities outside of water quality monitoring? Do other responsibilities hinder their performance? 4. Are staffing levels sufficient? 		
REMINDER	Observe organizational chart		
HELPFUL HINTS	<ul style="list-style-type: none"> • “Staffing levels” refers to the number of staff dedicated to monitoring activities. • “Competing priorities” refers to any responsibility that hinders the ability of the staff to conduct their monitoring duties. 		

14 KNOWLEDGE AND EXPERIENCE (SECTION 2.3)

WQM

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
How did the technical staff learn about water quality sampling and testing?			
ADDITIONAL QUESTIONS	<ol style="list-style-type: none"> 1. What practical experience have they had? 2. What education or qualifications did they receive? 3. How comprehensive is their theoretical knowledge (i.e., dilutions, multiple testing methods, data management, etc)? 		
HELPFUL HINTS	<ul style="list-style-type: none"> • “Practical experience” refers to the time that staff has dedicated to practicing and conducting testing (i.e. hands-on experience). • “Theoretical knowledge” is generally obtained by time in a classroom dedicated to learning all necessary aspects of water quality monitoring, either as part of formal academic work or a training / workshop. • This questions refers to the key staff involved in water quality analysis (such as a senior lab manager), not necessarily all staff involved in sampling and testing. 		

15 WATER QUALITY LEADERSHIP (SECTION 2.1)

MD

WQM

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
<p>MD / WQM:</p> <p>1. Who at your institution manages your water quality monitoring activities?</p> <p>2. Please tell me about their responsibilities.</p>			
ADDITIONAL QUESTIONS	<p>1. What do they do besides water quality monitoring?</p> <p>2. How does water quality fit into their other priorities? How much time do they spend on other activities compared to water quality monitoring?</p>		
OBSERVE	How much does the MD seem to prioritize water quality monitoring?		
HELPFUL HINTS	<ul style="list-style-type: none"> This question is assessing to what extent the institution's leadership prioritizing water quality monitoring. 'Leadership' refers to the water quality manager and also more senior leadership, such as the MD. 		

16 TRAINING (SECTION 2.4)

WQM

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
<p>What types of training activities are available to the staff?</p>			
ADDITIONAL QUESTIONS	<p>1. Do you have staff within your institution that act as trainers? If so, do they lead internal trainings? How often?</p> <p>2. Have they attended outside/external trainings? When/how often?</p> <p>3. Are there trainings procedures set in place?</p> <p>4. Are there training resources in place (such as funding, venue, trainers, etc), for either internal or external trainings?</p>		
HELPFUL HINTS	<ul style="list-style-type: none"> "Training" involves the participation in a training course program that provides practical and/or theoretical experience to staff regarding water quality monitoring procedures. Types of training activities include presentations, field sampling exercises, hands-on experience of water testing (such as total coliforms, E. coli, turbidity, pH, chlorine, etc), and water quality data interpretation and management. "External training" means training activities that are conducted off-site or are conducted by people outside of the institution. "Internal training" means training activities that are conducted within the institution and by a person within the institution. "Internal training procedures" do not necessarily have to be written to be considered "established." 		

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
<ol style="list-style-type: none"> 1. Can you explain the overall mission of the organization and how it relates to water quality monitoring? 2. Can you discuss any situations where technical staff had other priorities besides water quality monitoring and how they handled it? 3. Can you discuss any strategies your institution has adopted for incentivizing staff or recognizing their work? 			
OBSERVE	<ol style="list-style-type: none"> 1. Does staff seem proud and positive about their work? 2. Has staff internalized the responsibility for water quality monitoring? 		
REMINDERS	<ol style="list-style-type: none"> 1. Observe current capacity (in terms of equipment, transport means, experience/training) vs. what level of testing they are conducting 2. Assessment of motivation should also be observed during sampling and testing 		
HELPFUL HINTS	<ul style="list-style-type: none"> • Both questioning and observation throughout the assessment will help provide an accurate score for this category. Does the institution acknowledge the importance of water quality monitoring (i.e., recognizes that water quality testing is important and should be prioritized)? How do the individuals and the institution perceive water quality monitoring? • The responsibility of water quality monitoring may be considered “internalized” if the staff have demonstrated that they understand the importance of water quality monitoring and believe it to be an important activity that should be prioritized. This may be influenced by whether the staff is incentivized for water quality testing (e.g. monetary incentives such as bonuses, opportunities for staff promotions, recognitions such as certificates or ‘employee of the month’ rewards, or other incentives). 		

18 STAFF STABILITY (SECTION 2.6)

WQM

MD

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
<p>1. Can you discuss the last time a staff member involved in water quality monitoring left the institution? Do you know why did they leave?</p> <p>2. What happened to water quality monitoring activities when this person left?</p> <p>3. How common is staff turnover?</p>			

ADDITIONAL QUESTIONS

1. Discuss staff turnover in general – Is it high, moderate, or low (some or minimal). Provide examples of why staff leave.
2. Does staff turnover interrupt monitoring activities?
3. Are there any procedures set in place for ensuring water quality monitoring activities are not affected by staff transitions? Explain.

HELPFUL HINTS

- “Staff turnover” refers to changes in staff, such as when a staff member decides to leave their position, or is moved to another position (such as a promotion or demotion). The categorical levels of “high,” “moderate,” “some,” and “minimal” turnover are according to the perception of the institution rather than a defined amount.
- This question should consider all staff that may affect water quality monitoring, including more senior managerial staff (such as MDs).

19 STAFF RECRUITMENT (SECTION 2.7)

WQM

MD

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
<p>Can you describe the last time you recruited a staff for your water quality monitoring program?</p>			

ADDITIONAL QUESTIONS

1. Is this in-line with your general process for recruitment? Explain.
2. Do you have any difficulties managing staff transitions? Explain.
3. Does your institution have on-the-job training procedures for new staff?

HELPFUL HINTS

- “Procedures” for staff recruitment and managing staff transitions can be written guidelines or an understood set of protocols the institution consistently follows.

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
<p>Describe the last major challenge your institution faced to adequate water quality testing (e.g. staff turnover, vehicle breakdowns, supply shortages, government changes). How was this situation managed?</p>			
<p>ADDITIONAL QUESTIONS</p>	<ol style="list-style-type: none"> 1. What are the most common risks or challenges to water quality testing? 2. How does your institution prevent these challenges / risks? What procedures are in place? OBSERVE any written procedures. 3. To what extent have these challenges/risks interrupted water quality testing? 		
<p>HELPFUL HINTS</p>	<ul style="list-style-type: none"> • Although risks to water quality monitoring are likely similar across institutions, there is no universal list and they can be any type of challenges. Each institution should have determined what the risks are that hinder their monitoring program and how best to address them. • “Procedures” for mitigating risks can be an actual written set of guidelines or an understood set of protocols the institution consistently follows. • If an institution hasn't been testing for long and hasn't experienced challenges yet, this may be skipped. 		

FINANCE (4 OF 5)

21 RESOURCES (SECTION 4.1)

FINANCE DEPT.

MD

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
How are your monitoring activities funded?			
ADDITIONAL QUESTIONS	<ol style="list-style-type: none"> 1. If you need to buy equipment or supplies, is there internal funding to do so? 2. Is this funding consistent or sporadic? 3. Is this funding sufficient to support regulatory requirements for monitoring (note: might have already been covered earlier)? 4. Are there any difficulties accessing internal funds? 		
HELPFUL HINTS	<ul style="list-style-type: none"> • “Institutional allocations for water quality monitoring” refers to any financial resources that are allocated specifically for the purpose of water quality monitoring. These can come from (1) government allocations, which can be directly allocated for monitoring activities or as part of a broader budget (2) internally generated revenue (e.g. tariffs from a municipal water supply), (3) external support (e.g. a donor organization). 		

22 BUDGETING (SECTION 4.2)

FINANCE DEPT.

WQM

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
Describe any budget for water quality monitoring your institutions has established.			
ADDITIONAL QUESTIONS	<ol style="list-style-type: none"> 1. Is there a specific budget for water quality monitoring? Or is this integrated into a larger budget (such as Operations & Maintenance or Water Management)? 2. If there is a specific budget, does it include distinct water quality monitoring activities (i.e., itemized budget)? 		
HELPFUL HINTS	<ul style="list-style-type: none"> • A “budget” is an allotment of money over a period of time for a certain activity, like water quality monitoring. 		

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
Describe any methods of bookkeeping/ accounting your institution employs to manage funds for water quality monitoring.			
ADDITIONAL QUESTIONS	<ol style="list-style-type: none"> 1. Are bookkeeping systems in place? 2. Are actuals to budgeted monitored? 3. How long is the process to make payments? 4. Are there internal controls to verify that payments are accurate and timely? 		
REMINDER	Observe budget and bookkeeping		
HELPFUL HINTS	<ul style="list-style-type: none"> • “Accounting” is the action of keeping a financial record. Proper accounting methods allow the institution to assess whether its’ budget is respected. 		

ACCOUNTABILITY (5 OF 5)

24 CONSUMERS (SECTION 1.3)

MD

WQM

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
<p>1. Have you shared water quality information with consumers or the community (or other relevant stakeholders)?</p> <p>2. Under what circumstances do you do so? How often/when did this last happen and why?</p>			
ADDITIONAL QUESTIONS	<p>1. Are data shared regularly or on an ad-hoc basis? Is this only when consumers request data/lodge complaints?</p> <p>2. What type of information is shared? (Data for both passing and failing tests?)</p>		
HELPFUL HINTS	<ul style="list-style-type: none"> • Most generally, a “consumer” refers to individuals or groups who are consuming the water itself (e.g. an individual paying for a private tap, a village with a borehole that is under the jurisdiction of the local public health office). • “Other relevant stakeholders” may include village leaders, community groups, local industries (that may affect water quality by releasing effluent into the environment), and other groups. 		

25 REGULATORY AUTHORITIES (SECTION 1.2)

MD

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
<p>Has your institution ever submitted water quality data to regulatory authorities? If so, who? How often, and when was the last time you did so?</p>			
ADDITIONAL QUESTIONS	<p>1. Is data submitted regularly (such as monthly or quarterly), or more of an ad-hoc basis?</p> <p>2. Do you have a standard submission format for submitting water quality data? Do you always use this format?</p>		
REMINDER	Request water quality data submitted in a standard format		
HELPFUL HINTS	<ul style="list-style-type: none"> • A “regulatory authority” is considered to be any external entity that has a mandate to ensure the institution is testing according to national standards established by the government and/ or the regulatory body. This includes, but is not limited to, an independent or semiautonomous regulator or a government ministry or sub-branch most likely associated to water and/or health. • “Standard submission formats” are reporting tools developed either by the regulatory authority or the institution used to submit the testing data. These have generally found to be electronic-based formats (e.g. Word, Excel, data entry database), although they can be paper-based, and can include different testing information based on the time period in which the report is submitted (i.e. monthly or quarterly). These reports can also be part of a larger report including other information. 		

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
<p>Do you receive any feedback from the regulatory authority (e.g. regulator, ministry of water or health) on your water quality monitoring activities?</p>			
<p>ADDITIONAL QUESTIONS</p>	<ol style="list-style-type: none"> 1. If so, can you tell me about the last time you received feedback? 2. How often do you receive feedback? 3. Are you penalized if you do not report or do not meet guidelines? What incentive does the regulatory authority give you to perform water quality monitoring? Are these consequences (incentives/penalties) regular or ad-hoc? 4. Scoring/benchmarking: Do you know if you are scored/benchmarked based on your water quality monitoring activities (such as compared to other water utilities or districts)? How much does this affect your overall score? 		
<p>REMINDER</p>	<p>Note: an external entity might know better</p>		
<p>HELPFUL HINTS</p>	<ul style="list-style-type: none"> • The regulatory body, not the institution, is being rated in this situation. If feedback is provided, it may include: <ul style="list-style-type: none"> • “feedback without consequences” (such as summaries of results, for a score of 1), • “some level of consequences” (i.e., informal/ad-hoc incentives or penalties, such as benchmarking performance in an annual sector report, for a score of 2) • “formal incentives or penalties” (such as fines for inadequate testing, for a score of 3). • This incentivizing should not be confused with the incentives the institution may employ internally to motivate staff (assessed under 2.5 Motivation). 		

MAIN QUESTION(S):	MAIN FINDINGS	ADDITIONAL NOTES:	SCORE
Does your country have national standards for drinking water quality?			
ADDITIONAL QUESTIONS	<p>1. If standards exist, do these include</p> <ul style="list-style-type: none"> • Approved testing methods • Contamination limits • Frequency of testing and sampling numbers <p>2. If no standards exist, is there a government (or other) agency that is responsible for setting drinking water quality standards?</p>		
REMINDER	Request copy of standards (Note: External entity might know better)		
HELPFUL HINTS	<ul style="list-style-type: none"> • The national standards, not the institution, are being rated in this question. A “standard” is a level of quality or attainment that is determined by a government agency. A standard is part of a law, ordinance, or regulation. Failure to comply with any standard constitutes a violation of the law, ordinance, or regulation and is subject to enforcement action by the corresponding regulatory agency. • Water quality standards are applicable to all types of testing – physical, chemical, and microbiological. Guidance documents should not be considered when assessing the existence of national standards. 		

Table 1. Questionnaire Summary

**question order follows the WaterCARD tool

Section	Observation Necessary?	Documentation to be collected / observed (if applicable)	Suggested interviewee(s)
ACCOUNTABILITY			
1.1 Standards	n/a	National standards	MD
1.2 Regulatory Authorities	n/a	WQ results standard format	MD
1.3 Consumers	n/a		MD, WQM
1.4 Enforcement	n/a		MD
STAFFING			
2.1 Water Quality Leadership	n/a		MD, WQM
2.2 Roles and Responsibilities	n/a	Organizational chart	MD, WQM
2.3 Knowledge and Experience	n/a		WQM
2.4 Training	n/a		WQM
2.5 Motivation	n/a		MD, WQM
2.6 Staff Stability	n/a		MD, WQM
2.7 Staff recruitment	n/a		MD, WQM
2.8 Risk Management	n/a		MD, WQM
PROGRAM STRUCTURE			
3.1 Methods	YES		WQM, TS
3.2 Results	n/a	Testing results	WQM, TS
3.3 Sampling Plans	YES	Sampling plan(s)	WQM, TS
3.4 Sample Collection	YES		WQM, TS
3.5 Sampling Logistics	YES		WQM, TS
3.6 Quality Control	YES	Quality control plan	WQM, TS
3.7 Data Management	YES		WQM, TS
3.8 Actions	n/a		WQM, TS
PROGRAM FINANCES			
4.1 Resources	n/a		Finance Dept., MD
4.2 Budgeting	n/a		Finance Dept., WQM
4.3 Accounting	n/a	WQ monitoring budget and bookkeeping	Finance Dept., WQM
EQUIPMENT AND INFRASTRUCTURE			
5.1 Equipment & Supplies	n/a		MD, WQM
5.2 Maintenance	n/a	Maintenance procedures	WQM, TS
5.3 Procurement	n/a	Procurement procedures	WQM, Procurement Dept.
5.4 Infrastructure	YES		WQM, TS



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